Characteristics of included studies	With anxiety (DSM IV)		
Study ID	**Gupta 2013**		
Study reference	Gupta K, Mamidi P. A pilot study on certain yogic and naturopathic procedures in generalized anxiety disorder. International Journal of Research in Ayurveda and Pharmacy. 2013;4(6):858-61.		
Study design	RCT	quasirandomised	Alternate allocation to groups
Author affiliation	The authors are affiliated with a university and hospital in India		
Source of funds	No support received		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	Outpatient wing of a university hospital		
Country(s) / region	India		
Enrolment period	Not reported		
Length of treatment, follow up (months)	3 week intervention, no follow up		
Description of population	*N=*	*Description*	
# participants	12	Generalised anxiety disorder by **DSM IV criteria**	
details	*Inclusion criteria:* DSM IV diagnosed GAD, 20 to 60 years old *Exclusion criteria:* substance induced GAD, GAD associated with major organic and psychotic disorders		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	
Intervention	6	Yoga: 3 weeks, 7x 60 min sessions per week. The yoga protocol included prayer, loosening exercises, asanas (yoga poses) and pranayamas (breathing exercises). The protocol allowed patients to alter the exercises according to their body's flexibility, convenience and stamina.	
Comparator #1 (control)	--	--	
Comparator #2 (other)	6	Naturopathy: 3 weeks, 14x 30 min sessions per week (one session each morning and afternoon). The intervention consisted of a massage of the full body followed by steam (in the morning session), diaphragmatic breathing and acupressure (in the evening session).	
Comparator #3 (other)	--	--	
Co-interventions	--	--	
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	

Characteristics of included studies	With anxiety (DSM IV)				
Study ID	**Gupta 2013**				
Is the comparator clearly inactive?	No	Comparison= other	Naturopathy as comparator		
Outcome measure (description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Anxiety symptom severity	Baseline, post treatment	Hamilton Anxiety Rating Scale	14 items scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56. Higher score indicates more severe anxiety.
Outcome 2	NA	--	--	--	--
Outcome 3	NA	--	--	--	--
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--

Characteristics of included studies	With anxiety (DSM IV)				
Study ID	**Gupta 2013**				
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Outcome 14	NA	--	--	--	--
Method of analysis					
Statistics	Data presented as mean difference and standard deviations. Unpaired t-test to analyse results.				
Population analysed	Intent-to-treat	Not specified but intention to treat is interpreted.			
Missing data	No loss to follow up reported.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Concerns due to issues with the randomisation process and some concerns regarding the outcome measurement.				

Characteristics of included studies	With anxiety (Hamilton)		
Study ID	**Han 2015**		
Study reference	Han Y, Duan F, Xu R, Wang Y, Zhang H. Functional exercise in combination with auricular plaster therapy is more conducive to rehabilitation of menopausal women patients with anxiety disorder. International Journal of Clinical and Experimental Medicine. 2015;8(11):21173-9.		
Study design	RCT	quasirandomised	No mention of randomisation method or allocation concealment
Author affiliation	The authors are affiliated with a university in China		
Source of funds	Not reported		
Declared interests of study authors	The authors disclosed no conflict of interest		
Setting / provider	Community		
Country(s) / region	China		
Enrolment period	Not reported		
Length of treatment, follow up (months)	12 week intervention, 3 months follow up		
Description of population	*N=*	*Description*	
# participants	45	Menopausal women with anxiety disorder	
details	*Inclusion criteria:* **mild or moderate anxiety based on Hamilton Anxiety Rating Scale**, 40 to 50 years old, experiencing menopause *Exclusion criteria:* receiving other treatment, serious anxiety disorder, phsyical disease, mental illness and personality disorder, unwilling to participate		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	
Intervention	15	Yoga: 12 weeks, yoga 14x 30 min sessions per week + auricular plasty for 12 weeks (one in the morning and one in the evening each day). The exercise is delivered by DVD, focusing on meditation and breathing., 20 mins.	
Comparator #1 (control)	15	Auricular plaster therapy: 180 days. Each acupoint is pressed 20 times, each time lasting 20 mins. Ears are posted alternatively every 3 days. Using a medicine tape attached with Vaccaria seeds on the sensitive points, the forced exercised on the ear plaster is limited to that the patients can bear.	
Comparator #2 (other)	15	Yoga, no auricular plaster therapy: 12 weeks, 14 x 30 min sessions each week (one in the morning and one in the evening each day). The exercise is delivered by DVD, focusing on meditation and breathing.	
Comparator #3 (other)	--	--	
Co-interventions	--	--	
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Professional yoga instructor is specified

Characteristics of included studies	With anxiety (Hamilton)				
Study ID	**Han 2015**				
Is the comparator clearly inactive?	No	Comparison= other	Auricular plasty is comparator. Comparison of Yoga + Auricular plaster therapy vs Auricular plaster therapy		
Outcome measure (description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Anxiety symptom severity	Baseline, post treatment	Hamilton Anxiety Rating Scale	14 items scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56. Higher score indicates more severe anxiety.
Outcome 2	Secondary	Anxiety cure	Baseline, post treatment	Hamilton Anxiety Rating Scale reduction rate	Reduction rate >75% = cured 50-75% = obvious improvement 25-50% = effective <25% = no effect
Outcome 3	Secondary	HRQoL - Physical function	Baseline, post treatment	Generic Quality of Life Inventory 74	5 questions, with a 100-point scoring system. Higher score represents better physical state.
Outcome 4	Secondary	HRQoL - Mental function	Baseline, post treatment	Generic Quality of Life Inventory 74	5 questions, with a 100-point scoring system. Higher score represents better mental state.
Outcome 5	Secondary	Anxiety recurrence	Post treatment, 3 month follow up	Interview	Interview at 3 months to observe recurrence of anxiety
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--

Characteristics of included studies	With anxiety (Hamilton)				
Study ID	**Han 2015**				
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Outcome 14	NA	--	--	--	--
Method of analysis					
Statistics	Data expressed as mean and standard deviation. Dunnett t-test is used for pairwise comparison. T-test to compare the effect within group before and after treatment. Chi-squared test to compare the count data. P<0.05 is significant.				
Population analysed	Intent-to-treat	Not specified but intention to treat is interpreted.			
Missing data	No loss to follow up reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Concerns due to lack of information in multiple domains. Minimal/no information provided regarding randomisation, allocation concealment, deviations, analysis method or missing data. Self-reported outcome by non-blinded participants is considered possibly subject to bias.				

Characteristics of included studies	With anxiety (not specified)	
Study ID	**Parthasarathy 2014**	
Study reference	Parthasarathy S, Jaiganesh K, Duraisamy. Effect of integrated yoga module on selected psychological variables among women with anxiety problem. West Indian Medical Journal. 2014;63(1):78-80.	
Study design	RCT	Randomisation using sealed envelope technique
Author affiliation	The authors were affiliated with universities and colleges in India	
Source of funds	Not reported	
Declared interests of study authors	Not reported	
Setting / provider	Tertiary care centre	
Country(s) / region	India	
Enrolment period	Not reported	
Length of treatment, follow up (months)	8 week intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	45	Anxiety disorder
details	*Inclusion criteria:* not reported *Exclusion criteria:* not reported	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	NR	Yoga: 8 weeks, ?x 45 min sessions per week. The yoga module consisted of asanas and pranayamas.
Comparator #1 (control)	NR	Control: no intervention
Comparator #2 (other)	NR	Integrated yoga module: 8 weeks, ?x 45 min sessions per week. The integrated yoga module included Sitilikarana vyayama, suryanamaskar, asanas, pranayama and yoga nidra practices.
Comparator #3 (other)	--	--
Co-interventions	--	--
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	With anxiety (not specified)				
Study ID	**Parthasarathy 2014**				
Is the comparator clearly inactive?	Yes	Comparison= control	One comparator is no intervention		
Outcome measure (description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Trait anxiety	Baseline, post intervention	Taylor Manifest Anxiety Scale	A test of anxiety as a personality trait. Score ranges 1-38 with higher score indicating worse anxiety.
Outcome 2	Primary	Frustration	Baseline, post intervention	Reaction to Frustration Scale	40 items and measures frustration in 4 modes - aggression, resignation, fixation and regression.
Outcome 3	NA	--	--	--	--
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--

Characteristics of included studies	With anxiety (not specified)				
Study ID	**Parthasarathy 2014**				
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Outcome 14	NA	--	--	--	--
Method of analysis					
Statistics	Analysis of covariance				
Population analysed	Other (provide details)	Not reported			
Missing data	Not reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Concerns due to due to lack of information in multiple domains. Minimal/no information provided regarding randomisation, allocation concealment, deviations, analysis method or missing data. Self-reported outcome by non-blinded participants is considered possibly subject to bias.				

Characteristics of included studies	Symptoms of depression and/or anxiety	
Study ID	**Armat 2020**	
Study reference	Armat, M. R., Emami Zeydi, A., Mokarami, H., et al. 2020. The impact of laughter yoga on depression and anxiety among retired women: a randomized controlled clinical trial. Journal of women & aging, 1-12. IRCT20180523039804N1	
Study design	RCT	Randomised using computer-generated random numbers
Author affiliation	The authors were affiliated with universities in Iran	
Source of funds	This work was supported by the North Khorasan University of Medical Sciences [IR.NKUMS.REC.1397.011]	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community	
Country(s) / region	Iran	
Enrolment period	Not reported	
Length of treatment, follow up (months)	8 week intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	62	Retired women with symptoms of depression and/or anxiety
details	*Inclusion criteria:* aged 0-70, mild to moderate depression (BDI 10-19) mild to moderate anxiety (BAI 8-26), capable of performing laughter yoga, not engaged in regular physical exercise, not taking antidepressants and/or antianxiety medications and/or cognitive behavioural therapy *Exclusion criteria:* incidence of abnormal health event during the study, complaining of discomfort during the exercises, non-attendance at more that 4 sessions, failure to continue the program	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	31	Laughter yoga: 8 weeks, 2x 90 min sessions per week. Laughter yoga exercises included appreciation laughter, yoga poses, meditation and breathing. Before starting the main LY exercises, a 10 min warm-up and deep breathing were done.
Comparator #1 (control)	31	Control: usual activities
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	--	--
Is practitioner/ instructor certified?	Yes	Include in subgroup A

Characteristics of included studies	Symptoms of depression and/or anxiety				
Study ID	**Armat 2020**				
Is the comparator clearly inactive?	Yes	Comparison= control			
Outcome measure (description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Depression	Baseline, week 4, week 8	Beck Depression Inventory	Total score 0-63, higher score means more severe symptoms
Outcome 2	Not specified	Anxiety	Baseline, week 4, week 8	Beck Anxiety Inventory	Total score 0-63, higher score means more severe symptoms
Outcome 3	NA	--	--	--	--
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--

Characteristics of included studies	Symptoms of depression and/or anxiety				
Study ID	**Armat 2020**				
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Outcome 14	NA	--	--	--	--
Method of analysis					
Statistics	Repeated measures ANOVA. 0.05 was considered statistically significant. Follow-up analyses of simple effects were employed, using multiple independent sample t-tests, and paired sample t-tests with Bonferroni corrections.				
Population analysed	Other (provide details)	As treated. Two participants crossed over from the control to the intervention group after randomisation and were analysed with the intervention group. ITT analysis was conducted to test the impact of this, but the results were not presented.			
Missing data	Using 'linear treand at point' missing values were imputed with predicted values. Four pariticpants were lost to follow-up (3 in the LY group and 1 in the control group).				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High risk of bias due to inappropriate switching of pariticpants from the control to the intervention group. Analysis assessing the impact of this was conducted but not presented. Missingness in the outcome data could plausibly relate to the effect of the intervention.				

Characteristics of included studies	Symptoms of anxiety (SCARED)	
Study ID	**Bazzano 2018**	
Study reference	Bazzano AN, Anderson CE, Hylton C, Gustat J. Effect of mindfulness and yoga on quality of life for elementary school students and teachers: results of a randomized controlled school-based study. Psychol. 2018;11:81-9.	
Study design	RCT	Randomisation conducted using an online platform
Author affiliation	One university and one community organisation in the USA	
Source of funds	Not reported	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	School	
Country(s) / region	Louisiana, USA	
Enrolment period	OCT 2016 - FEB 2017	
Length of treatment, follow up (months)	8 week intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	52	Children with **symptoms of anxiety screened using the Screen for Child Anxiety Related Emotional Disorders Scale**
details	*Inclusion criteria:* School children screened positive for symptoms of anxiety using the Screen for Child Anxiety Related Emotional Disorders (SCARED) scale *Exclusion criteria:* --	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	20	Yoga Ed: ? weeks, 10x 40 min sessions total. Yoga Ed is an evidence-based curriculum for utilising yoga in the classroom. The sessions included breathing exercises, guided relaxation and several Vinyasa and Ashtanga poses appropriate for the age group.
Comparator #1 (control)	32	Control: care as usual including counselling and other activities, led by the school social worker.
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	Teachers received a 1-hour professional development session to introduce a yoga curriculum that could be integrated into their classroom activities.	
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Symptoms of anxiety (SCARED)				
Study ID	**Bazzano 2018**				
Is the comparator clearly inactive?	No	Comparison= other			
Outcome measure (description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Life satisfaction	Baseline, mid-point (after the initial yoga period), post-intervention (after all participants had received the intervention)	Brief Multidimensional Students' Life Satisfaction Scale-Peabody Treatment Progress Battery	5 domains, 6 questions. Higher scores indicate greater satisfaction.
Outcome 2	Not specified	Quality of life	Baseline, mid-point (after the initial yoga period), post-intervention (after all participants had received the intervention)	Paediatric Quality of Life Inventory (PedsQL)	23 questions. Scores range from 0-100. Higher scores represent lower frequency of problems in a given domain.
Outcome 3	NA	--	--	--	--
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--

Characteristics of included studies	Symptoms of anxiety (SCARED)				
Study ID	**Bazzano 2018**				
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Outcome 14	NA	--	--	--	--
Method of analysis					
Statistics	Differences in frequencies assessed with Pearson's Chi-squared test except where Fischer's exact test was indicated Differences in means for continuous variables assessed using t-test. Changes in outcome scores were computed at both the mid-point and end-point of the study Generalised Estimating Equations used to model the repeated measurement of continuous scores, allow for assessing change in exposure status of students when they receive the intervention p value of <0.05 considered significant				
Population analysed	Intent-to-treat	All subjects analysed according to their assigned group regardless of adherence to the intervent			
Missing data	No loss to follow up reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	As participants in the yoga group were more likely to report that they were 'excited' to participate in yoga, and they self-reported their outcomes, it is considered likely that the outcome would be biased in favour of the experimental condition.				

Characteristics of included studies	Symptoms of anxiety and/or depression (DASS-21)		
Study ID	**de Manincor 2016**		
Study reference	de Manincor, M., Bensoussan, A., Smith, C. A., et al. 2016. Individualized Yoga for Reducing Depression and Anxiety, and Improving Well-Being: A Randomized Controlled Trial. Depression and Anxiety, 33, 816-828. de Manincor, M. 2017. Yoga as a treatment for anxiety and depression and improving well-being. Australian and New Zealand Journal of Psychiatry, 51 (1 Supplement 1), 85. ACTRN12613000178741		
Study design	RCT	crossover trial	Randomised using computer-generated random numbers
Author affiliation	The authors were associated with a single university in Australia		
Source of funds	No funding other then standard higher degree support funding from WSU was provided for this study		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	Community		
Country(s) / region	NSW, Australia		
Enrolment period	FEB 2013 - MAR 2014		
Length of treatment, follow up (months)	6 week intervention, 6 week follow up (after crossover)		
Description of population	*N=*	*Description*	
# participants	107	Adults with at least mild depression and/or anxiety	
details	*Inclusion criteria:* Aged 18-65, ability to speak, read, write English, generally healthy and able to be involved in the yoga program, medication and professional mental assistance unchange for at least 3 months, DASS-21 score demonstrating at least mild depression (score 10-27) or anxiety (score 8-19) *Exclusion criteria:* Any serious injury, medical or psychological disorder likely to preclude completeion og the trial, frequent alcohol or recreational drug use, already undertaking yoga, DASS-21 score in the normal range or extremely severe range		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	
Intervention	53	Yoga: 6 weeks, 4x 1hr individual sessions total + home practice	
Comparator #1 (control)	54	Control: waitlist	
Comparator #2 (other)	--	--	
Comparator #3 (other)	--	--	
Co-interventions	--	--	
Is practitioner/ instructor certified?	Yes	Include in subgroup A	

Characteristics of included studies	Symptoms of anxiety and/or depression (DASS-21)				
Study ID	**de Manincor 2016**				
Is the comparator clearly inactive?	Yes	Comparison= control			
Outcome measure (description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Mental health	Baseline, 6 weeks, 12 weeks	DASS-21 (Total)	Depression, anxiety and stress subscales.
Outcome 2	Primary	Depression	Baseline, 6 weeks, 12 weeks	DASS-21 (Depression)	Scores range 0-42. Higher score is worse. 3.9 points is MCID.
Outcome 3	Primary	Anxiety	Baseline, 6 weeks, 12 weeks	DASS-21 (Anxiety)	Scores range 0-42. Higher score is worse. 3.3 points is MCID.
Outcome 4	Primary	Stress	Baseline, 6 weeks, 12 weeks	DASS-21 (Stress)	Scores range 0-42. Higher score is worse.
Outcome 5	Secondary	Psychological distress	Baseline, 6 weeks, 12 weeks	Kessler Psychological Distress Scale (K10)	Scores range 10-50. Higher score indicated greater distress.
Outcome 6	Secondary	Emotional function	Baseline, 6 weeks, 12 weeks	SF-12 (mental component)	Higher score indicates greater QoL.
Outcome 7	Secondary	Physical function	Baseline, 6 weeks, 12 weeks	SF-12 (physical component)	Higher score indicates greater QoL.
Outcome 8	Secondary	Psychological wellbeing	Baseline, 6 weeks, 12 weeks	Scale of Positive and Negative Experience - Positive	Scores range 6-30. Higher score indicates greater positive experience.
Outcome 9	Secondary	Psychological wellbeing	Baseline, 6 weeks, 12 weeks	Scale of Positive and Negative Experience - Negative	Scores range 6-30. Higher score indicates greater negative experience.
Outcome 10	Secondary	Psychological wellbeing	Baseline, 6 weeks, 12 weeks	Flourishing Scale	Scores range 8-56. Higher score is better.

Characteristics of included studies	Symptoms of anxiety and/or depression (DASS-21)				
Study ID	**de Manincor 2016**				
Outcome 11	Secondary	Resilience	Baseline, 6 weeks, 12 weeks	Connor-Davidson Resilience (2-item)	Scores range 0-8. Higher score is better.
Outcome 12	Secondary	Exercise	Each yoga session	Health Activities Questionnaire	Not scored.
Outcome 13	Secondary	Treatment expectations	Baseline	Credibility Expectancy Questionnaire - Credibility scale	Higher score indicates greater credibility of intervention.
Outcome 14	Secondary	Treatment expectations	Baseline	Credibility Expectancy Questionnaire - Expectancy scale	Higher score indicates greater expectancy of intervention.
Method of analysis					
Statistics	Effect of intervention tested using between-groups ANCOVA, adjusted for pre-intervention score. P <0.05 was statsitically significant. Influential data identified using Cook's distance and trimmed. Effect of changes in treatment as usual was tested using ANCOVA, including adjustments for changes in TAU. Clinical significance was analysed using number of people who scored within the normal range after the intervention.				
Population analysed	Intent-to-treat	ITT approach is specified.			
Missing data	Missing data imputed with LOCF.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns relating to the rate of missing data and the self-reported outcome by non-blinded participants.				

Characteristics of included studies	Symptoms of Anxiety (Hamilton)	
Study ID	**Shaikh 2013**	
Study reference	Shaikh S, Kumar S. A Comparative Study between Relaxation Technique versus 12 Moves of Yoga on Anxiety in Young Adults - A Randomized Clinical Trial. Indian Journal of Physiotherapy & Occupational Therapy. 2013;7(2):202-6.	
Study design	RCT	Random number table, participants picked a card to receive their group assignment
Author affiliation	The authors were affiliated with a university in India	
Source of funds	Not reported	
Declared interests of study authors	Not reported	
Setting / provider	Community	
Country(s) / region	India	
Enrolment period	AUG 2011 - JAN 2012	
Length of treatment, follow up (months)	7 day intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	30	Students with **symptoms of anxiety, screened using Hamilton Anxiety Rating Scale**
details	*Inclusion criteria:* 18-22 years old, healthy individual, free of medical problems, complaint of anxiety, experiencing stress *Exclusion criteria:* on medication, undergoing psychological or anxiety disorder, musculoskeletal injury.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	15	Yoga: 7 days, 1x 75 min session per day. The yoga intervention consisted of 12 moves of yoga including controlled breathing and yoga poses. The moves were demonstrated by a therapist.
Comparator #1 (control)	--	--
Comparator #2 (other)	15	Relaxation: 7 days, 1x 75 min session per day. The relaxation group received exercises per Ost's Method.
Comparator #3 (other)	--	--
Co-interventions	--	--
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Symptoms of Anxiety (Hamilton)				
Study ID	**Shaikh 2013**				
Is the comparator clearly inactive?	No	Comparison= other	Comparator is relaxation training		
Outcome measure (description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Anxiety symptom severity	Baseline, post intervention	Hamilton Anxiety Rating Scale	14 items scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56. Higher score indicates more severe anxiety.
Outcome 2	NA	--	--	--	--
Outcome 3	NA	--	--	--	--
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--

Characteristics of included studies	Symptoms of Anxiety (Hamilton)				
Study ID	**Shaikh 2013**				
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Outcome 14	NA	--	--	--	--
Method of analysis					
Statistics	Wilcoxon signed rank test was used to find the difference between the two groups. Mann-Whitney U test was used to find the difference within groups. Significance level was P=0.001.				
Population analysed	Intent-to-treat	ITT is specified			
Missing data	Not reported. Assumed no loss to follow up.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns due to the lack of blinding of participants and the self-reported outcome. As participants in both groups received an 'active' intervention, it is not considered likely that there would be a differential reporting of outcomes.				

Characteristics of included studies	Depression (clinical)	
Study ID	**Bressington 2019**	
Study reference	Bressington, D., et al. (2019). "Feasibility of a group-based laughter yoga intervention as an adjunctive treatment for residual symptoms of depression, anxiety and stress in people with depression." Journal of Affective Disorders 248: 42-51. NCT03163940	
Study design	RCT	Online external randomisation service
Author affiliation	Hong Kong Polytechnic University, Coventry University and Chiniese University of Hong Kong	
Source of funds	The study was funded by Hong Kong Polytechnic University Departmental General Research Funds (Grant number: G-UAB6).	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Psychiatric hospital	
Country(s) / region	Hong Kong	
Enrolment period	August 2017 to March 2018	
Length of intervention / follow up (months)	4 wk intervention, 3 month follow up	
Description of population	*N=*	*Description*
# participants	50	Clinical depression (diagnosed by a psychiatrist)
details	*Inclusion:* Male or female aged 18-60 years, diagnosed with and being treated for a depressive disorder as confirmed by a psychiatrist, baseline residual depressive symptoms of > 15 DASS - in addition to anxiety (DASS >) and/or stress, not receiving any other yoga, psychosocial or humour based intervention (or within the preceding three months), currently receiving anti-depressents with no plans to change medication, able to speak chinese or english, written consent *Exclusion:* History of bipolar or schizophrenia, physical health problems, co-morbidiity of another chronic physical and/or mental health problem (learning disability, substance misuse and organic brain disease), receiving any talking therapies at re-cuitment or throughout the study period	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Depression (clinical)				
Study ID	**Bressington 2019**				
Intervention	23	Laughter yoga: 4 wks, 2x 45 minutes sessions per wk. Each session included the four essential steps of laughter yoga composed of (1) warm up exercises (e.g. clapping and body movement, (2) deep breathing exercises, (3) childlike playfulness and (4) laughter exercises (e.g. greeting laughter, lion laughter and other self-created laughter exercises, and closing cheers).			
Comparator #1 (control)	27	Control (no intervention)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Usual routine community mental health care (including medications)				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	certified laughter yoga trainer		
Is the comparator clearly inactive?	Yes	Comparison= control	No intervention		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depression	Baseline, end of treatment (4 wks) and 3 mos (follow up)	Depression Anxiety Stress Scale (DASS-21)	21 items - each ranked on a 4-point likert scale (0-3). Higher score is worse.
Outcome 2	Primary	Anxiety	Baseline, end of treatment (4 wks) and 3 mos (follow up)	Depression Anxiety Stress Scale (DASS-21)	22 items - each ranked on a 4-point likert scale (0-3). Higher score is worse.
Outcome 3	Primary	Stress symptoms	Baseline, end of treatment (4 wks) and 3 mos (follow up)	Depression Anxiety Stress Scale (DASS-21)	23 items - each ranked on a 4-point likert scale (0-3). Higher score is worse.

Characteristics of included studies	Depression (clinical)				
Study ID	**Bressington 2019**				
Outcome 4	Secondary	Physical wellbeing	Baseline, end of treatment (4 wks) and 3 mos (follow up)	Short Form 12 item Health Survey (SF12v2)	PCS-12 composite score. Higher score is better.
Outcome 5	Secondary	Mental wellbeing	Baseline, end of treatment (4 wks) and 3 mos (follow up)	Short Form 12 item Health Survey (SF12v2)	MCS-12 composite score. Higher score is better.
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Mann Whitney U Test and Chi-Square/Fisher Exact Test were used for comparisons of demographic/clinical characteristics and outcome measures between the two groups at baseline. Outcome analysis was performed on an intention to treat basis by comparing the changes in the outcomes from baseline to two post-tests between groups using Generalized Estimating Equations (GEE) with identity link function and AR(1) correlation structure for the repeated measures. All statistical tests were two-sides and the significance level was set at 5%.				
Population analysed	Intent-to-treat	ITT approach is specified			
Missing data	19/23 (83%) randomised to yoga completed the intervention, all 27 in control completed intervention (1 lost at 3 months follow up)				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (clinical)
Study ID	**Bressington 2019**
Summary (descriptive)	Domain 1 was assessed to have some concerns of bias, as participants were not blinded to allocation concealment and in domain 4, participants self-reported subjective outcomes.

Characteristics of included studies	Depression (clinical)		
Study ID	**Falsafi 2016**		
Study reference	Falsafi, N. (2016). "A Randomized Controlled Trial of Mindfulness Versus Yoga: Effects on Depression and/or Anxiety in College Students." Journal of the American Psychiatric Nurses Association 22(6): 483-497.		
Study design	RCT	Computer generated, stratified randomisation	
Author affiliation	University of North Coralina		
Source of funds	Richard Corbett Grant		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	Councelling centers at colleges and universities		
Country(s) / region	USA		
Enrolment period	Over two semesters - Fall 2014 and spring 2015		
Length of intervention / follow up (months)	8 wk intervention, 4 wk follow up		
Description of population	*N=*	*Description*	
# participants	90	Depression and/or anxiety in college students	
details	*Inclusion criteria:* Aged > 19 years, diagnosis of depression and/or anxiety. *Exclusion criteria:* Diagnosis of thought disorder, bipolar disorder, boaderline personality disorder, engaged in active substance abuse and/or dependent, severe disability, already practicing yoga, mindfulness meditation, or those who had attened four classes in such practice within the preceding year		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Falsafi 2016**				
Intervention	30	Yoga: 8 wks, 75 minutes per wk, based on Hatha yoga. In addition to encouraged 20 minutes of daily at home practice. A typical yoga class includes a short meditation, a series of streches to prepare the body, poses and postures, and a period of relaxation at the end of the session.			
Comparator #1 (control)	30	Control (usual care) (medication and psychotherapy)			
Comparator #2 (other)	30	Mindfulness: 8 wks, 75 minutes per wk, including self-compassion. In addition to encouraged 20 minutes of daily at home practice. A typical midfulness meditation consists of focusing full attention on the breath as it flows in and out of the body, allowing one to observe his/her thoughts as they arise in the mind without dwelling on them.			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Psychiatric clinical nurse specialists, who is also a certified yoga instructor		
Is the comparator clearly inactive?	Yes	Comparison= control	Two control groups, one received no intervention.		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Depression	Baseline, wk 4, wk 8 (post) and wk 12 (follow up)	Beck Depression Inventory (21 items)	Self-reported questionaires
Outcome 2	Not specified	Anxiety	Baseline, wk 4, wk 8 (post) and wk 12 (follow up)	Hamilton Anxiety Scale (14 items)	14 items scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56. Higher score indicates more severe anxiety.
Outcome 3	Not specified	Stress symptoms	Baseline, wk 4, wk 8 (post) and wk 12 (follow up)	Study-Life Stress Inventory (51 items)	Self-reported questionaires

Characteristics of included studies	Depression (clinical)				
Study ID	**Falsafi 2016**				
Outcome 4	Not specified	Mindfulness	Baseline, wk 4, wk 8 (post) and wk 12 (follow up)	Congitive and Affective Mindfulness Scale-Revised (12 items)	Self-reported questionaires
Outcome 5	Not specified	Self-compassion	Baseline, wk 4, wk 8 (post) and wk 12 (follow up)	Self-compassion Scale (26 items)	Self-reported questionaires
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Multivariate analysis of variance (with appropriate follow up comparisons) was used to compare mean scores on repeated measures in each group. P values less than .05 (2-sided) were defined as statically significant. The Bonferroni correction was used to reduce the possibility of obtaining “significant” results that may have occurred by chance alone.				
Population analysed	Intent-to-treat	mITT interpretted. Only those who completed follow up measurements were included in the analysis.			
Missing data	67/90 participants completed the entire study. 26% of participants did not complete the study. Reasons for drop out are provided. No analysis to account for missing data is presented.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (clinical)
Study ID	**Falsafi 2016**
Summary (descriptive)	Some concerns due to lack of information regarding allocation concealment, the large proportion of missing data, and the authors don't report if the trial was blinded, and there is a possiblity that assessment of the outcome could have been influence by knowledge of the intervention received.

Characteristics of included studies	Depression (clinical)		
Study ID	**Janakiramaiah 2000**		
Study reference	Janakiramaiah, N., et al. (2000). "Antidepressant efficacy of Sudarshan Kriya Yoga (SKY) in melancholia: A randomized comparison with electroconvulsive therapy (ECT) and imipramine." Journal of Affective Disorders 57(1-3): 255-259.		
Study design	RCT	quasirandomised	No mention of how the randomisation sequence was generated
Author affiliation	National Institute of Mental Health and Neuro Sciences, India		
Source of funds	No information		
Declared interests of study authors	No information		
Setting / provider	Hospital inpatients		
Country(s) / region	India		
Enrolment period	Not reported		
Length of intervention / follow up (months)	4 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	45	Melancholic depression (>=17 HDRS)	
details	*Inclusion criteria:* Consenting inpatients of DSM-IV melancholic depression, scoring >17 on the Hamilton depression rating scale, never treated for the current episode, medically fit *Exclusion criteria:* Not reported		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Janakiramaiah 2000**				
Intervention	15	Sudarshan Kriya yoga (SKY): 4 wks, 6x ~45 min sessions per wk (minimum) Rhythmic hyperventilation at different. rates of breathing (three sequential components interspersed with normal breathing). The procedure closes with a period of about 10–15 min of Yoga Nidra (tranquil state) in a supine position.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	15	Imipramine (IMN): 150 mg at night			
Comparator #3 (other)	15	ECT: 4 wks, 3x ? Min sessions per wk, with a stimulus at 60 mC			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	well-trained art of living foundation yoga teacher		
Is the comparator clearly inactive?	No	Comparison= other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Depression	Baseline, wk 1, wk 2, wk 3 and wk 4 (end of treatment)	Beck Depression Inventory	Higher score is worse
Outcome 2	Not specified	Depression	Baseline, wk 1, wk 2, wk 3 and wk 4 (end of treatment)	Hamilton Depression Rating Scale	17 items scored on a 3 or 5 point scale. Higher score indicates worse depressive symptoms.
Outcome 3	NA	--	--	--	--

Characteristics of included studies	Depression (clinical)				
Study ID	**Janakiramaiah 2000**				
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	ANOVA and repeated-measured ANOVA to examine changes in scores over the four wk period				
Population analysed	Intent-to-treat	ITT is interpretted			
Missing data	No drop outs or missing data reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (clinical)
Study ID	**Janakiramaiah 2000**
Summary (descriptive)	D1 was assessed to have some concerns of bias due to lack of information regarding allocation concealment and randomisation sequence generation, in domain 4 author report the study was not blinded and D5 there was no pre-specificed analysis plan

Characteristics of included studies	Depression (clinical)		
Study ID	**Kinser 2013**		
Study reference	Kinser, P. A., et al. (2013). "Feasibility, Acceptability, and Effects of Gentle Hatha Yoga for Women With Major Depression: Findings From a Randomized Controlled Mixed-Methods Study." Archives of psychiatric nursing 27(3): 137-147.		
Study design	RCT	Computer generated random numbers	
Author affiliation	University of Virginia		
Source of funds	This publication was made possible by grant number 5-T32-AT000052 from the National Center for Complementary and Alternative Medicine (NCCAM).		
Declared interests of study authors	No information		
Setting / provider	Community		
Country(s) / region	United states		
Enrolment period	May to August 2011		
Length of intervention / follow up (months)	8 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	27	Major depressive disorder or dysthymia (women)	
details	*Inclusion criteria:* women with MDD or dysthymia confirmed by M.I.N.I neuropsychatric interview, moderate - severe depression > 10 on PHQ *Exclusion criteria:* Suicdality, psychosis or mania, physical condition making yoga difficult, hospitalisaition or surgery in the preceding month, changes in anti-depressant medication over the last months or expected changes in enrollment period, regular yoga or meditation practice longer than 1 months within the past 5 years, non-english speaking		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Kinser 2013**				
Intervention	15	Hatha Yoga: 8 wks, 1x 75 min sessions per wk + daily home practice. The yoga intervention included intention setting, pranayama, asana, guided meditation and relaxation.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	12	Health education: 8 wks, 1x 75 min session per wk. Each wk had a specific theme such as heart health, bone health, and others.			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Experienced yoga teacher		
Is the comparator clearly inactive?	No	Comparison= other	Attention control (health education)		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Depression severity	Baseline, 2 wks, 4 wks, 6 wks, 8 wks	Patient Health Questionnaire (PHQ-9)	Total score range from 0 to 27. 0–4= minimal depression, 5–9 = mild depression, 10–14 moderate depression, 15–19 = moderately severe depression, ≥20 = severe depression.
Outcome 2	Not specified	Perceived Stress	Baseline, 2 wks, 4 wks, 8 wks	Percieved Stress Scale (PSS-10)	Items ranked on a 5-point Likert scale; scores range from 0–40 with the higher score corresponding to a higher perceived stress level
Outcome 3	Not specified	Anxiety	Baseline, 2 wks, 4 wks, 8 wks	State-trait Anxiety Inventory	4 point likert scale

Characteristics of included studies	Depression (clinical)				
Study ID	**Kinser 2013**				
Outcome 4	Not specified	Rumination	Baseline, 2 wks, 4 wks, 8 wks	Rumination Responses Scale (10 items)	4-point likert scale (1=almost never to 4=almost always)
Outcome 5	Not specified	Psychological distress	Baseline, 2 wks, 4 wks, 8 wks	Brief Symptom Inventory	5-point Likert scale (0=not at all, 4=extremely)
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Baseline group differences in demographic and baseline study variables were analyzed using independent t-tests for continuous variables and chi-square tests for categorical variables; assumptions of univariate normality and homogeneity of variance were met, using Fisher's test of skewness and Levene's test. To determine if there were differences over time by group, separate multilevel models were used to estimate differences in the slopes between the groups for the measures of depression, stress, anxiety, rumination, and interpersonal sensitivity/hostility.				
Population analysed	Per protocol	Participants who did not complete the allocated intervention were excluded from the analysis			
Missing data	18/27 completed the study				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Depression (clinical)
Study ID	**Kinser 2013**
Summary (descriptive)	D1 and D3 were judged to have some concerns of bias and D2 was judged to have high risk of bias. D1 had some concerns due to lack of information regarding allocation concealment. D2 has high risk of bias due to the substantial rate of deviations which were uneven between groups. D3 had some concerns due to the large proportion of missing data

Characteristics of included studies	Depression (clinical)		
Study ID	**Kumar 2019b**		
Study reference	Kumar, S., et al. (2019). "Effect of adjunct yoga therapy in depressive disorders: Findings from a randomized controlled study." Indian Journal of Psychiatry 61(6): 592-597.		
Study design	RCT	Computer generated random numbers	
Author affiliation	Mahatma Gandi Medical College and Research Institute, Centre for Yoga Therapy Education and Research		
Source of funds	No financial support		
Declared interests of study authors	No conflicts of interest		
Setting / provider	Hospital inpatients		
Country(s) / region	Louisiana, USA	Computer-generated random numbers	
Enrolment period	March 2017 to April 2018		
Length of intervention / follow up (months)	30 day intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	87	Major depressive disorder	
details	*Inclusion criteria:* > 18 years, consented, admitted to the department of psychiatry with a current depressive disorder (based on DSM-5 criteria) *Exclusion criteria:* Psychosis, severe cognitive impairment, intellectual disability, requiring elctrocovulsive therapy, not willling for in-patient care or yoga therapy		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Kumar 2019b**				
Intervention	44	Yoga: ? wks, 5x 45 min sessions per wk, minimum 20 sessions total. No further description provided.			
Comparator #1 (control)	43	Control (no intervention)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Usual care (anti-depressants, counselling)				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified yoga instructor		
Is the comparator clearly inactive?	No	Comparison= other	provide details		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Depression	Baseline, day 10, day 30 (end of treatment)	Montgomery-Asberg and Depression Scale (MADRS)	
Outcome 2	Not specified	Depression	Baseline, day 10, day 30 (end of treatment)	Hospital Anxiety Depression Scale	
Outcome 3	Not specified	Anxiety	Baseline, day 10, day 30 (end of treatment)	Montgomery-Asberg and Depression Scale (MADRS)	

Characteristics of included studies	Depression (clinical)				
Study ID	**Kumar 2019b**				
Outcome 4	Not specified	Anxiety	Baseline, day 10, day 30 (end of treatment)	HADS	
Outcome 5	Not specified	Depression severity	Baseline, day 10, day 30 (end of treatment)	Clinical Gloval Impression (CGI)	
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Independent t-test was used for continuous variables and Chi-square test for categorical variables to study the difference between the two groups in terms of sociodemographic and clinical variables. Fall in the scores of MADRS and HADS at 10th day (baseline to 10th day) and 30th day (baseline to 30th day) were calculated. Independent t-test was applied to assess for significant difference between groups in terms of fall in MADRS and HADS scores at 10th day and 30th day. Group difference in the fall of MADRS and HADS scores from 10th day to 30th day was also analyzed				
Population analysed	Per protocol	Participants who were discharged from hospital were excluded from the analysis			
Missing data	7 exlcuded (4 from yoga and 3 from conttol) as they got discharged				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Depression (clinical)
Study ID	**Kumar 2019b**
Summary (descriptive)	D1 had some concerns due to lack of information regarding allocation concealment. D2 had high risk of bias due to inappropriate method of analysis. D3 had high risk of bias due to the inappropriate exclusion of participants who were dishcharged, which is considered to be highly likely related to the outcome.

Characteristics of included studies	Depression (clinical)		
Study ID	**Uebelacker 2017** Uebelacker, L. A., et al. (2017). "Adjunctive yoga versus health education for persistent major depression: a randomized controlled trial." Psychological Medicine 2017 Sep;47(12):2130-2142.		
Study reference	Uebelacker L, Tremont G, Gillette L, Epstein-Lubow G, Strong D, Abrantes A, et al. Adjunctive hatha yoga vs. health education for persistent major depression: A randomized controlled trial. BMC Complementary and Alternative Medicine Conference: World Congress Integrative Medicine and Health. 2017;17(Supplement 1). NCT01384916		
Study design	RCT	1:1 computer program	
Author affiliation	Butler Hospital, Alpert Medical School of Brown University, Rhode Island Hospital, Eyes of the World Yoga Centre, University of California		
Source of funds	National Institute of Nursing Research		
Declared interests of study authors	2 authors have a conflict of interest reported		
Setting / provider	Psychiatric hospital		
Country(s) / region	NSW, Australia		
Enrolment period	JUL 2011 - JUN 2014		
Length of intervention / follow up (months)	10 wk intervention, 6 month follow up		
Description of population	*N=*	*Description*	
# participants	122	Major depressive disorder	
details	*Inclusion criteria:* Met MDD criteria within the prior 2 years (DSM-IV), QIDS score >8 (mild) and <17 (moderate), no history of bipolar, schizophrenia, psychotic symptoms, no current hazardous drug or alcohol use, no suicidal ideation or behavou requiring immedaite attention, currently taking anti-depressants at a dose with demonstrated effetiveness for at least 8 wks, no change in medicaiton in the previous 4 wks and no plans ot change during the intervention, psychtherapy, therapy frequency had not changed in the past 6 wks, medically cleared for moderate physical exericse, not pregnancy or planing, no morethan four yoga, thai chi, mindfullnes-based stress reduction or edication classess in the previous year, had not practised yoga wkly for 8 wks or more in the previous 5 years, no wkly meditation, fluent in English, aged >18 yrs *Exclusion criteria:* NR		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Uebelacker 2017**				
Intervention	63	Hatha yoga: 10 wks, 1-2x 80 min sessions per wk. Classes included breathing exercises and seated meditation, warm-ups and half sun salutations, standing postures, seated postures, an inversion and a twist, relaxation, and wrap-up			
Comparator #1 (control)	--	--			
Comparator #2 (other)	59	Health education: 10 wks, 1-2x 60 min sessions per wk. The clases covered topics including alcohol, nicotine, and caffeine, being a smart patient, brain diseases, cancer prevention, diabetes, nutrition, germs, colds and the flu, physical activity, sleep, pain, causes of depression and protecting your heart			
Comparator #3 (other)	--	--			
Co-interventions	Regular anti-depressant medication				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Yoga instructors were registered yoga teaqchers with the yoga alliance		
Is the comparator clearly inactive?	No	Comparison= other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depression symptoms	Baseline, mid (3.3, 6.6 wks), end of treatment (10 wks). Followup 3 and 6 months (telephone)	Quick Inventory of Depression Symptomatology	Scores of 6–10 = mild depression symptoms , 11–15 = moderate depression symptoms, and scores 16 or greater = severe or very severe symptoms.
Outcome 2	Secondary	Depression severity	Baseline, mid (3.3, 6.6 wks), end (10 wks). Followup 3 & 6 months (telephone)	PHQ-9	Scores range from 0 to 27, with higher scores corresponding to more symptoms.
Outcome 3	Secondary	Social functioning	Baseline 1, 10 wks (end of treatment), follow up 3 & 6 months (telephone)	WHO-DAS II	Scores range from 0 to 20 on 'Getting along with people', with higher scores indicating more disabiltiy

Characteristics of included studies	Depression (clinical)				
Study ID	**Uebelacker 2017**				
Outcome 4	Secondary	Work and role functioning	Baseline 1, 10 wks (end of treatment), follow up 3 & 6 months (telephone)	WHO-DAS II	Scores 0 to 32 on 'Life activities,' with higher scores indicating more disability
Outcome 5	Secondary	Physical pain	Baseline, mid (3.3, 6.6 wks), end (10 wks). Followup 3 & 6 months (telephone)	SF-20	Scores range from 0 to 100, with higher scores indicating better health.
Outcome 6	Secondary	Physical functioning	Baseline, mid (3.3, 6.6 wks), end (10 wks). Followup 3 & 6 months (telephone)	SF-20	Scores range from 0 to 100, with higher scores indicating better health.
Outcome 7	Secondary	General health perception	Baseline, mid (3.3, 6.6 wks), end (10 wks). Followup 3 & 6 months (telephone)	SF-20	Scores range from 0 to 100, with higher scores indicating better health.
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	We summarized variables using descriptive statistics, and compared differences between treatment groups (yoga v. HLW) using either a $\chi 2$ test or t test. As a general strategy, we included outcome assess ments from all randomized participants in linear mixed effects (LME) models assessing continuous out comes with a dummy coded index included in each model to represent treatment assignment. Because par ticipants with missing covariates (n = 5) or fewer than two follow-up assessments for the primary outcome (n = 10) would be removed from LME models, we used a multiple imputation approach to ensure inclusion of all allocated cases (n = 122).				
Population analysed	Intent-to-treat	ITT, all participants randomised were included in the analysis, regardless of whether or not they completed the intervention			
Missing data	18/122 participants (15%) did not complete the wk 10 assessment. Multiple imputation approach to ensure inclusion of all allocated cases.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (clinical)
Study ID	**Uebelacker 2017**
Summary (descriptive)	Some concerns for bias in D1. Authors state that they wer eunable to keep participants blinded to treament allocation (hence allocation sequence was not concealed), however authors further describe that allocation concealment with all behavioural internvetionals is challenging.

Characteristics of included studies	Depression (clinical)		
Study ID	**Prathikanti 2017**		
Study reference	Prathikanti, S., et al. (2017). "Treating major depression with yoga: A prospective, randomized, controlled pilot trial." PLoS ONE 12 (3) (no pagination)(e0173869). Prathikanti S. Treating major depression with yoga: Research overview and results of university of California, San Francisco randomized controlled pilot trial. Global Advances in Health and Medicine. 2018;7:159.		
Study design	RCT	Prospective cohort	Stratified block randomisation
Author affiliation	University of California San Francisco, Cornell University, Johns Hoskins University. Veterans Affairs Long Beach Healthcare System, Svastha Yoga Therapy Program		
Source of funds	1) Mental Insight 1) Foundation 435299-86871-01, 2) Pritzker Family Foundation 556501-41743, and 3) Mt. Zion Health Fund P0035738.		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	UCSF Osher Center for Integrative Medicine		
Country(s) / region	US		
Enrolment period	MAY - OCT 2010		
Length of intervention / follow up (months)	8 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	38	Major depressive disorder	
details	*Inclusion criteria:* mild - moderate major depression (as per BDI, scoreing 14-28), > 18 years, consent, sufficient english proficiency *Exclusion criteria:* substance misuse, other psychiatric illnesses, currently on anti-depressant medication, currently in psychtherapy, currently practicing yoga, insufficient english, scheduling conflict, subthreshold mood symptoms		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Prathikanti 2017**				
Intervention	20	Hatha Yoga: 8 wks, 2x 90 min sessions per wk. The yoga sessions comprised of breathing techniques, mindful body postures, and final deep relaxation pose			
Comparator #1 (control)	--	--			
Comparator #2 (other)	18	Control (education): 8 wks, 2x 90 min sessions per wk. Yoga history modules designed to control for non-specific mood benefits of the intervention, from factors such as attention from study personnel, peer interaction, time spent away from routine activities			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified yoga instructor and RN		
Is the comparator clearly inactive?	No	Comparison= other	provide details		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depression severity	Baseline, wk 2, wk 4, wk 6, wk 8 (end treatment)	Beck Depression Inventory	Higher score is worse
Outcome 2	Secondary	Self-efficacy	Baseline, wk 8 (end of treatment)	General Self-Efficacy Scale (GSES)	Higher score is better
Outcome 3	Secondary	Self-esteem	Baseline, wk 8 (end of treatment)	Rosenberg Self-Esteem Scale	Higher score is better

Characteristics of included studies	Depression (clinical)				
Study ID	**Prathikanti 2017**				
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	The main analysis of depression severity, measured by BDI scores, used an intent-to-treat approach and incorporated data from all randomized participants regardless of adherence to protocol or premature dropout. We estimated and tested a random-effects generalized least squares (GLS) regression model for depression severity, using BDI scores obtained at baseline, 2 wks, 4 wks, 6 wks, and 8 wks. BDI scores were modeled as correlated within participants, but independent between participants. Data imputation by last observation carried forward.				
Population analysed	Intent-to-treat	ITT is specified			
Missing data	15/20 (75%) yoga, 10/18 (56%) control dropped out from control. Last observation carried forward used to impute missing data.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (clinical)
Study ID	**Prathikanti 2017**
Summary (descriptive)	Some concerns related to missing outcome data and self-reported outcome by non blinded participants

Characteristics of included studies	Depression (clinical)		
Study ID	**Ravindran 2020**		
Study reference	Ravindran, A. V., et al. (2020). "Breathing-focused Yoga as Augmentation for Unipolar and Bipolar Depression: A Randomized Controlled Trial: Le yoga axe sur la respiration comme traitement d'appoint pour la depression unipolaire et bipolaire: Un essai randomise controle." Canadian Journal of Psychiatry. NCT00482482		
Study design	RCT	crossover trial	Computer number generator 2:1. Blinded investigator performed the randomisation
Author affiliation	Centre for Addiction and Mental Health, Toronto; University of Toronto; native Child and Family Services, Toronto		
Source of funds	Family of a patient with depression		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	Hospital		
Country(s) / region	US		
Enrolment period	Not reported		
Length of intervention / follow up (months)	16 wk intervention, 2x 8 wk periods, no follow up reported		
Description of population	*N=*	*Description*	
# participants	72	Unipolar and bipoloar depression	
details	*Inclusion criteria:* age 18-70 yrs, met MDD DSM-IV criteria, dysthymia or bipolar disorder >12 & <24 on MADRS, diagnosis confirmed by Mini International Neuropsychiatric Interview *Exclusion criteria:* current manic/hypomanic/mixed state, history of nonmood psychosis (e.g., schizophrenia, schizoaffective disorders), substance dependence within the previous 6 months, initiation of structured psychotherapy within the previous 3 months, existing yoga practice (see Note 1), risk of suicidality, and presence of medical conditions or physical limitations		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Ravindran 2020**				
Intervention	53	Yoga: 8 wks, 2x 1.5 hour sessions per wk; then crossover to psychoeducation (8wks, 2x 1.5 hr sessions). Yoga focused on cyclical breathing and breathe control (pranayamas) and included Ujjayi and Kapalabhati techniques (Cyclical breathing). Individuals begin by breathing 40 to 60 breaths per minute, then 60 to 80 breaths per minute, and finish with 80 to 100 breaths per minute. This is repeated 3 times to complete 1 round. A full cyclical breathing program consists of 5 rounds. In the study protocol, participants gradually worked their way up to 5 rounds. Other components of the yoga intervention included postures and guided meditation.				
Comparator #1 (control)	--	--			
Comparator #2 (other)	19	Psychoeducation: 8 wks per intervention, twice per wk, for 1.5 hour sessions; then crossover to Yoga education on symptoms and treament of biplar depression, interpersonal communication, stress and problem management, coping strategis, community resoces, relapse prevention, dealing with medical and legal system			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	taught by an instructor trained in Bangalore, India		
Is the comparator clearly inactive?	No	Comparison= other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depression	Baseline, wk 8 (end of first intervention), wk 16 (end of second intervention)	Montogomery-Asberg Depression Rating Scale	Higher score is worse
Outcome 2	Secondary	Depression	Baseline, wk 8 (end of first intervention), wk 16 (end of second intervention)	Hamilton Depression Rating Scale	17 items scored on a 3 or 5 point scale. Higher score indicates worse depressive symptoms.
Outcome 3	Secondary	Depression	Baseline, wk 8 (end of first intervention), wk 16 (end of second intervention)	Clinical Global Impressoin Scale	Higher score is worse

Characteristics of included studies	Depression (clinical)				
Study ID	**Ravindran 2020**				
Outcome 4	Secondary	Depression	Baseline, wk 8 (end of first intervention), wk 16 (end of second intervention)	Beck Depression Inventory	Higher score is worse
Outcome 5	Secondary	Perceived stress	Baseline, wk 8 (end of first intervention), wk 16 (end of second intervention)	Perceived Stress Scale (PSS)	Higher score is worse
Outcome 6	Secondary	Life satisfaction	Baseline, wk 8 (end of first intervention), wk 16 (end of second intervention)	Quality of Life Satisfaction Enjoyment Scale	Higher score is better
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	We conducted an intent-to-treat (ITT) analysis assessing mean changes (MC) from baseline to 8 wks for each intervention and mean differences (MD) between yoga and psychoeducation on all primary (MADRS) and secondary outcome measures (HAMD, CGI, BDI, QLESQ, PSS). To complete the ITT analysis, we carried forward the lastobservation for participants who withdrew. A separate analysis for completers of the first trial arm was also conducted. MC between time points were determined using paired t tests. MD between interventions were assessed using analysis of covariance with Bonferroni adjusted post hoc comparisons while controlling for baseline.				
Population analysed	Intent-to-treat	ITT is specified for the primary time point (first intervention period)			
Missing data	40% dropped out of study between baseline and wk 8. Last observation carried forward in data analysis. Some reasons for drop out are provided.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Depression (clinical)
Study ID	**Ravindran 2020**
Summary (descriptive)	High risk of bias in D3 due to the large proportion of missing data that was considered likely related to the outcome

Characteristics of included studies	Depression (clinical)		
Study ID	**Sarubin 2014**		
Study reference	Sarubin, N., et al. (2014). "The influence of Hatha yoga as an add-on treatment in major depression on hypothalamic-pituitary-adrenal-axis activity: A randomized trial." Journal of Psychiatric Research 53(1): 76-83.		
Study design	RCT	Quasi-randomised	
Author affiliation	University Regenbrg, Munich; Max-Planck-Institute of Psychiatry, Munich; Ludwig-Maximillian-University, Munich;		
Source of funds	Grant from AstraZeneca Germany		
Declared interests of study authors	2 authors reported conflict of interest with AstraZenca, who supported the study		
Setting / provider	Hospital		
Country(s) / region	Germany		
Enrolment period	AUS 2009 - FEB 2012		
Length of intervention / follow up (months)	5 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	60	Major depressive disorder according to DSM-IV criteria	
details	*Inclusion criteria:* diagnosed by experienced and trained psychiatrist using DSM-IV. Patients had to score a Hamilton depression rating scale sum score of minimum 18 on the 21-item version (HAMD-21). *Exclusion criteria:* Major neurological or other medical disorders, addiction, or other comorbid psychiatric disorders or suicidality. Pregnancy. Use oral steroid hormones or hormonal replacement. Pre-treatment with quetiapine, quetiapine extended release, ESC, citalopram, fluoxetine (long half-life), mood stabilizers, and antipsychotics within the last 35 days before entering the study or known intolerance or lack of response to quetiapine fumarate and/or ESC. Use of any of the cytochrome P450 3A4 inhibitors or inducers in the 14 days preceding enrolment, or the use of monoamine oxidase inhibitors or other serotonergic drugs (e.g. triptans) in the 14 days preceding enrolment, or intake of oral anticoagulants in the 14 days preceding enrolment or a history of bleeding disorders. For at least 3 days before the first DEX/CRH test no psychotropic drugs with the exception of zopiclone (up to 7.5 mg per day) in case of sleep difficulties and lorazepam (up to 2 mg per day) in case of inner tension and anxiety were allowed.		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Sarubin 2014**				
Intervention	30	Hatha yoga: 5 wks, 60 minutes per wk			
Comparator #1 (control)	30	Control (no intervention)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Quetiapine fumerate (QXR) 300 mg/day or Escitalopram (ESC) 10 mg/day: 8 of 22 patients in the yoga group were randomized to QXR, while 14 patients received ESC medication. In the control group (n = 31) 14 patients were treated with ESC, 17 received QXR.				
Is practitioner/ instructor certified?	No	Include in subgroup B	Supervised by physical therapist		
Is the comparator clearly inactive?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary/Secondary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depression	Baseline, day 0, day 4, day 7, day 14, day 21, day 28 and day 25 (end of treatment)	Hamilton Depression Rating Scale	21 items scored on a 3 or 5 point scale. Higher score indicates worse depressive symptoms.
Outcome 2	Primary	HPA activity	Baseline, wk 1, wk 5 (end of treatment)	DEX/CRH-test	NR
Outcome 3	NA	--	--	--	--

Characteristics of included studies	Depression (clinical)				
Study ID	**Sarubin 2014**				
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Analyses were performed using repeated measurement ANOVAs (rmANOVAs) for the subsamples of cortisol-suppressors vs. cortisol non-suppressors, cortisol-improvers vs. cortisol-non-improvers and clinical responder vs. non-responder. A separate analysis for clinical response was carried out by Chi-Square-Tests and rmANOVAs, whereas COR AUC values (within-subject-factor) and categorization in response vs. non-response (between-subject-factor) were used to estimate differences in the complete sample as well as in the database splitted subsample of yoga and control group.				
Population analysed	Other (provide details)	The study mentions the ITT set, however it does not appear that this is the set which was analysed. While N=30 participants were allocated to each of yoga and control the number of drop outs from each arm is unclear, and N=31 participants were analysed in the control group, raising concerns of an as-treated analysis approach.			
Missing data	Final analysis included N=22 participants who received yoga and N=31 participants who received control. The allocation of participants throughout the study is unclear.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Depression (clinical)
Study ID	**Sarubin 2014**
Summary (descriptive)	High risk of bias due to the inappropriate method of analysis (as treated) which did not include a large proportion of participants in the yoga group

Characteristics of included studies	Depression (clinical)		
Study ID	**Sharma 2005**		
Study reference	Sharma, V. K., et al. (2005). "Effect of Sahaj Yoga on depressive disorders." Indian Journal of Physiology and Pharmacology 49(4): 462-468. Sharma VK, Das S, Mondal S, Goswami U, Gandhi A. Effect of Sahaj Yoga on neuro-cognitive functions in patients suffering from major depression. Indian Journal of Physiology and Pharmacology. 2006;50(4):375-83.		
Study design	RCT	Quasi-randomised. No mention of allocation concealr	
Author affiliation	Vardhaman Mahavir Medical College, Lady Hardinge Medical College		
Source of funds	Not reported		
Declared interests of study authors	Not reported		
Setting / provider	Outpatient		
Country(s) / region	India		
Enrolment period	Not reported		
Length of intervention / follow up (months)	8 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	30	Major depressive disorder	
details	*Inclusion criteria:* 18 - 45 years utilizing the services lady hardinge medical college department of psychiatry, diagnosis of MDD according to DSM-IV, at least 6 years formal education, had not been treated for the current episode of depression. *Exclusion criteria:* history of previous or current organic disease, past history or current evidence of substance dependence, epilepsy or mental retardation, unwilling/unable to participate Drop out criteria: withdrawal of consent, xacerbation of symptoms/emergence of newer symptoms		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Sharma 2005**				
Intervention	15	Sahaj Yoga Meditation: 8 wks, 3x 30 min sessions per wk. Participants practiced meditation in a quiet, well illuminated room sitting in comfortable posture. If a thought came to the mind, they were instructed to simply witness it but not flow deeper into it.			
Comparator #1 (control)	15	Control (no intervention)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Conventional antidepressant treatment				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Sahaj trained yoga instructor		
Is the comparator clearly inactive?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Depression	Baseline, 8 wks (end of treatment)	Hamilton rating scale for depression	17 items scored on a 3 or 5 point scale. Higher score indicates worse depressive symptoms.
Outcome 2	Not specified	Anxiety	Baseline, 8 wks (end of treatment)	Hamiltion rating scale for anxiety	13 variables on a 5-point scale
Outcome 3	NA	--	--	--	--

Characteristics of included studies	Depression (clinical)				
Study ID	**Sharma 2005**				
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	For each group, mean and standard deviation of the scores were calculated. Intergroup mean differences in Age, Hamilton Rating Scale for Depression, Hamilton Rating Scale for Anxiety were tested for significance by using Students' 't' test. For intra-group comparisons of HAM-D & HAM-A, paired 't' test was used.				
Population analysed	Intent-to-treat	ITT is interpretted			
Missing data	No drop outs reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (clinical)
Study ID	**Sharma 2005**
Summary (descriptive)	Some concerns due to lack of information regarding the randomisation process, and nonblinded outcome assessment

Characteristics of included studies	Depression (clinical)		
Study ID	**Sharma 2015a**		
Study reference	Sharma, A., et al. (2015). "The efficacy of a comprehensive yogic intervention on major depression-a randomized pilot study with inflammatory biomarkers." Neuropsychopharmacology 1): S500. Sharma A, Barrett MS, Cucchiara AJ, Gooneratne NS, Thase ME. A breathing-based meditation intervention for patients with major depressive disorder following inadequate response to antidepressants: A randomized pilot study. Journal of Clinical Psychiatry. 2017;78(1):e59-e63. NCT02616549		
Study design	RCT	Blocked randomsied procedure	
Author affiliation	University of Pennsylvania School of Medicine		
Source of funds	American Psychiatric Association/Substance Abuse and Mental Health Services Administration Minority Fellowship Program and the Indo-American Psychiatric Association. Financial support for CTRC personnel supported by Grant Number UL1TR000003 from the National Center for Advancing Translational Sciences (NCATS) of the National Institutes of Health (NIH).		
Declared interests of study authors	One author declared various grants and advisory roles for pharmaceutical companies. The other authors declared no conflicts of interest.		
Setting / provider	University of Pennsylvania Presbyterian Hospital Clinical and Translational Research Center		
Country(s) / region	US		
Enrolment period	OCT2014 - DEC 2015		
Length of intervention / follow up (months)	8 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	25	Major depressive disorder	
details	Inclusion criteria: > 18 years, diagnosed with single or recurrent on psychotic episode of MDD according to Diagnostic and Statistical Manual of Metal Disorders (DSM-IV-TR) criteria, on stable (> 8 wkS) dose of an anti-depressant, which they wer required to continue for the additional 8 wks without change, Hamilton Depression Rating Scale (HDRS-17) > 14 at baseline Exclusion criteria: Bipolar disorder, psychosis, substabce abuse, attention-deficit hyperactivity disorder, pregnancy, epilepsy or initiating psychotherapy and/or yoa and medication programs		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Sharma 2015a**				
Intervention	13	Sudarshan Kriya Yoga: 1 wk, 6x 3.5 hour sessions -> 7 wks 1x 1.5 hour sessions per wk + 20 min daily home practice. SKY includes a serios of sequential, rhythm-specific breathing exercises that bring practitioners into a restful meditative state			
Comparator #1 (control)	12	Control (waitlist)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Antidepressant medication				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	SKY instructors from the Art of Living Foundation and the International Association of Human values		
Is the comparator clearly inactive?	Yes	Comparison= control	Wait list (i.e. offered yoga treatment following completion of the study)		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depression	Baseline, 1 month, 2 months (end of treatment)	Hamilton depression rating scale-17	17 items scored on a 3 or 5 point scale. Higher score indicates worse depressive symptoms.
Outcome 2	Secondary	Depression	Baseline, 1 month, 2 months (end of treatment)	Beck Depression Inventory	Blinded clinical raters
Outcome 3	Secondary	Anxiety	Baseline, 1 month, 2 months (end of treatment)	Beck Anxiety Inventory	Blinded clinical raters

Characteristics of included studies	Depression (clinical)				
Study ID	**Sharma 2015a**				
Outcome 4	Secondary	Suicidal ideation	Baseline, 1 month, 2 months (end of treatment)	Columbia-Suicide Severity rating scale	Blinded clinical raters
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	The primary efficacy endpoint was change in HDRS-17 score from baseline to 2 months. After verifying a normal distribution in the data ("car" and "MASS" package from R), the primary analysis was conducted by fitting a mixed effects linear model with an autoregressive variance covariance structure ("nlme" R package). The model included one between-subjects factor (group), one within-subjects factor (time) and their interaction (group-by-time) as fixed effects terms. Subject was included as the random effects term. The same mixed effects model was applied for evaluation of key secondary efficacy measures (BDI and BAI). Multiple comparisons were evaluated using Tukey's test ("multcomp" R package) to adjust for multiplicity and maintain type I error at 0.05 (2-tailed).				
Population analysed	Intent-to-treat	ITT analysis specified. Completer sample also available. The ITT analysis was conducted using last observation carried forward (LOCF). The completer analysis comprised all patients who had an evaluation for HDRS-17 total score at baseline and ≥ 1 evaluation after the baseline visit.			
Missing data	3 participants in the yoga group discontinued due to nonadherence (n=2) or a protocol deviation (n=1) involving a medication change. No drop outs in the control group were noted.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (clinical)
Study ID	**Sharma 2015a**
Summary (descriptive)	Some concerns of bias due to lack of information on allocation concealment and self-reported outcomes by non-blinded participants

Characteristics of included studies	Depression (clinical)		
Study ID	**Tolahunase 2018b**		
Study reference	Tolahunase, M. R., et al. (2018). "Yoga- and meditation-based lifestyle intervention increases neuroplasticity and reduces severity of major depressive disorder: A randomized controlled trial." Restorative Neurology and Neuroscience 36(3): 423-442. CTRI/2014/09/007532		
Study design	RCT	Computer generated random numbers	
Author affiliation	All India Institute of Medical Sciences		
Source of funds	ICMR (grant number 54/3/GER2014NCD11)		
Declared interests of study authors	No conflicts of interest		
Setting / provider	Health clinic		
Country(s) / region	India		
Enrolment period	April 2015 to September 2016		
Length of intervention / follow up (months)	12 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	58	Major depressive disorder	
details	*Inclusion criteria:* 19-50 years old, MDD diagnosed with DSM-5 criteria and on routine drg treatment for at least six months *Exclusion criteria:* Severe depression (BDI-II > 45), co-orbid neuropsychiatric and chonric medical conditions - including bipolar, hypertension, diabetes mellitus and secondary co0morbid depression		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Tolahunase 2018b**				
Intervention	29	Yoga: 12 wks, 5x 120 min sessions per wk. The yoga intervention consisted of a set of postures, breathing exercises and meditation.			
Comparator #1 (control)	29	Control (no intervention)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Routine drug therapy				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	specalised yoga instructors		
Is the comparator clearly inactive?	Yes	Comparison= control	routine drug treatment only		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depression	Baseline, wk 12 (end of treatment)	Beck Depression Inventory	NR
Outcome 2	Secondary	Neuroplasticity biomarkers	Baseline, wk 12 (end of treatment)	Venous blood samples	BDNF;
Outcome 3	Secondary	mind-body communicative biomarkers	Baseline, wk 12 (end of treatment)	Venous blood samples	sirtin 1, cortisol, IL-6, DHEAS;

Characteristics of included studies	Depression (clinical)				
Study ID	**Tolahunase 2018b**				
Outcome 4	Secondary	cellular health bio marker - oxidative stress	Baseline, wk 12 (end of treatment)	Venous blood samples	reactive oxygen species & total antioxidant capacity
Outcome 5	Secondary	DNA damage marker	Baseline, wk 12 (end of treatment)	Venous blood samples	8OH2dG
Outcome 6	Secondary	telemore metabolism	Baseline, wk 12 (end of treatment)	Venous blood samples	telomerase activity and length
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Method of analysis					
Statistics	We used chi-square test and Fisher's exact test to compare categorical characteristics at baseline; we used student's t-test to compare normally distributed continuous variables and the Wilcoxon rank-sum test to compare nonparametric continuous data. Within group changes over time (pre- to post-intervention) were evaluated using paired t-tests for continuous variables, or Wilcoxon signed rank test for continuous variables without normal distribution. Between-group differences over time were assessed using independent samples t-test. Mixed factorial design ANOVA was used to assess gender differences. Multiple regression was used to determine the change in which variables significantly explained the association and interaction of neuroplasticity and change in depression severity.				
Population analysed	Intent-to-treat	ITT approach is specified			
Missing data	90% of yoga and 97% of control completed the treatment				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (clinical)
Study ID	**Tolahunase 2018b**
Summary (descriptive)	Some concerns of bias due to self-reported outcomes by non-blinded participants

Characteristics of included studies	Depression (clinical)		
Study ID	**Tolahunase 2018a**		
Study reference	Tolahunase, M. R., et al. (2018). "5-HTTLPR and MTHFR 677C>T polymorphisms and response to yoga-based lifestyle intervention in major depressive disorder: A randomized active-controlled trial." Indian Journal of Psychiatry 60(4): 410-426. CTRI/2014/09/007532		
Study design	RCT	Dynamic allocation randomisation	
Author affiliation	All India Institute of Medical Sciences		
Source of funds	None reported		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	Health institute		
Country(s) / region	India		
Enrolment period	Not reported		
Length of intervention / follow up (months)	12 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	178	Major depressive disorder	
details	*Inclusion criteria:* Adults aged 20-60 years wit MDD according to the DSM-5 criteria. *Exclusion criteria* : Very severe depression (BDI > 50); other comorbid neuropsychiatric conditions (except for anxious distress that is commonly present with MDD); unstable chronic medical consitions; pregnancy and breastfeeding		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (clinical)				
Study ID	**Tolahunase 2018a**				
Intervention	89	Yoga: 12 wks, 5x 120 min sessions per wk. The yoga intervention consisted of a set of postures, breathing exercises and meditation. The first 2 wks were conducted in-person, with the remaining 10 wks being home practice			
Comparator #1 (control)	--	--			
Comparator #2 (other)	89	Drug therapy: Suitable SSRI - Escitlopram (5-20 mg/day), fluoxetine (20-40mg/day) and paroxetine (20-40mg/day) were used in 36, 24 and 29 patients, respectively; Adjustive medications were also prescribed for anxiety - clonazepm (0.25 mg twice daily) OR lorazepam (0.5mg 3 times per day) AND for sleep diphenhydramine (20-25 mg) OR zol[idem (5-10mg); asked to visit the hospital every 2 wks for follow-up coaching			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Registered, specalised yoga instructor		
Is the comparator clearly inactive?	No	Comparison= other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depression	Baseline, end of treatment (12-wks)	Beck Depression Inventory -II (21-items)	Higher scores reflect greater depressive symptoms; self-reported; BDI-II <9 = MDD remission
Outcome 2	Secondary	5-HTTLPR polymorphisms	Baseline, end of treatment (12-wks)	Blood samples	NR
Outcome 3	Secondary	MTHFR 677>T polymorphisms	Baseline, end of treatment (12-wks)	Blood samples	NR

Characteristics of included studies	Depression (clinical)				
Study ID	**Tolahunase 2018a**				
Outcome 4	--	--	--	--	--
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Method of analysis					
Statistics	An intent-to-treat analysis included all randomized participants (89 drugs, 89 yoga). Association of genotype with treatment remission (BDI-II score ≤9 at the end of 12-wk intervention) consisted of logistic regression adjusting for baseline characteristics. Assessment of genotype associated differential treatment effects was by including treatment by genotype interaction terms in the logistic regression model.				
Population analysed	Intent-to-treat	ITT is specified			
Missing data	34/178 participants (19%) did not complete the trial. The proportion was roughly balanced between groups. 70/89 (79%) of yoga and 74/89 (83%) completed the entire treatment phase. No analysis presented to adjust for missing data				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Depression (clinical)
Study ID	**Tolahunase 2018a**
Summary (descriptive)	Some concerns of bias due to missing outcome data that is considered likely related to the true value, and self-reported outcomes by non-blinded participants

Characteristics of included studies	Depression (bipolar)		
Study ID			
Study reference	Weinstock LM, Broughton MK, Tezanos KM, Tremont G, Gillette T, Uebelacker LA. Adjunctive yoga versus bibliotherapy for bipolar depression: A pilot randomized controlled trial. Mental Health and Physical Activity. 2016;11:67-73. http://dx.doi.org/10.1016/j.mhpa.2016.11.001		
Study design	RCT	Block randomisation, stratified by baseline depression severity	
Author affiliation	Brown university, Butler Hosptial, Rhode Island Hospital, Rhode Island; Columbia University, New York		
Source of funds	supported by the Depressive and Bipolar Disorders Alternative Treatment (DBDAT) Foundation. DBDAT had no further role in study design, in the analysis and interpretation of data, in the writing of this report, and the decision to submit the paper for publication.		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	Community		
Country(s) / region	USA		
Enrolment period	Not reported		
Length of intervention / follow up (months)	10 weeks, no followup		
Description of population	*N=*	*Description*	
# participants	18	Bipolar depression	
details	*Inclusion criteria:* 18 years or older, Bipolar I or II (DDSM-IV-TR criteria); Moderate level of depression (score >11 on QIDDS-C - clinician rating); 4 weeks stable therapy with community provider; medical clearance for exercise; sufficient English *Exclusion criteria:* current manic episode; presence of psychotic symtpoms in past 30-days; suicidal ideation severe enough to warrant inpatient hospitalisation; current hazarddous substance use (score 10 or more on AUDIT and/or 6 or more on DUDIT); pregnant/plan to become pregnant within 1 year; > 8 single sessions of yoga in the past 2 years		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (bipolar)				
Study ID					
Intervention	10	Hatha Yoga for Biploar Depression: 2 x 80 minute classes per week for 10 weeks. Yoga classes emphasized flowing through postures, mindfulness, and moderate physical activity. Each class consisted of: pranayama (breathing exercises); brief seated meditation; standing and floor postures (asanas); shavasana (relaxation); and homework assignment. Instructors emphasized 5 main themes: Balance, Observer-Self, Energy and Calm, Letting Go, and Loving kindness. Participants were also provided with a yoga mat and DVD for home practice, as well as a list of brief (e.g., 1 min, 5 min, 10 min, and 20 min long) suggestions for home practice				
Comparator #1 (control)	--	--			
Comparator #2 (other)	8	Copy of a publicly-available, self-help book for BD (Miklowitz, 2011). Participants were encouraged toreference the book for the 10 week duration of their study participation and to discuss any questions that arise from its use with their community clinician(s).			
Comparator #3 (other)	--	--			
Co-interventions	--	Treatment as usual			
Is practitioner/ instructor certified?	Yes	Include in subgroup A	an initial session with a yoga teacher to introduce the participant to yoga and discuss the importance of home practice.		
Is the comparator clearly inactive?	No	Comparison= other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depressive symptoms	Baseline, end of treatment (10 wks)	Quick Inventory of Depressive Symptomatology - Clinician rated	Range 0 to 27; 11 to 15 = moderate; 16 to 20 = severe; 21+ = very severe depression
Outcome 2	Secondary	Manic symptom severity	Baseline, end of treatment (10 wks)	Altman Self-Rated Mania scale	Brief 5-item measure; range 0 to 20
Outcome 3	Secondary	HRQoL, disease specific	Baseline, end of treatment (10 wks)	12-item Brief Quality of Life for Bipolar disorder	range 12 to 60

Characteristics of included studies	Depression (bipolar)				
Study ID					
Outcome 4	Secondary	Intervention accpetability	Baseline, end of treatment (10 wks)	Client Satisfaction Questionnaire-8	8 items; total score range 8 to 32 (higher is better)
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Method of analysis					
Statistics	Descriptive data were evaluated, and preliminary t-test and chisquare analyses were used to evaluate potential baseline differences between intervention groups. Any sociodemographic or clinical differences identified through this procedure were used as covariates in all subsequent analyses. Analysis of primary (depressive symptoms) and secondary (manic symptoms; selfreported quality of life) outcomes relied upon repeated measures ANOVA, comparing change in group (i.e., yoga vs. bibliotherapy) by time.				
Population analysed	modified ITT	outcome analyses included only those participants for whom endpoint data were available			
Missing data	1/10 in the yoga group and 3/8 in the self-help book group lost to followup (total 4/18 = 22.2%)				
INTERNAL VALIDITY					
Overall risk of bias (select from list)					

Characteristics of included studies	Depression (bipolar)
Study ID	
Summary (descriptive)	

Characteristics of included studies	Depression (postpartum)		
Study ID	**Buttner 2015**		
Study reference	Buttner MM, Brock RL, O'Hara MW, Stuart S. Efficacy of yoga for depressed postpartum women: A randomized controlled trial. Complementary therapies in clinical practice. 2015;21(2):94-100.		
Study design	RCT	Block randomisation with varying block size to ensure the PI could not predict allocation	
Author affiliation	The authors were affiliated with two universities in the USA		
Source of funds	Not reported		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	Community		
Country(s) / region	USA		
Enrolment period	Not reported		
Length of intervention / follow up (months)	8 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	57	Women with postpartum depression	
details	*Inclusion criteria:* score >=12 on the HDRS, residence within a 30-mile radius of the yoga studios, >=6 wks postpartum if delivery was complicated and/or required a C-section *Exclusion criteria:* psychiatric disorders (anorexia, bipolar disorder, personality disorders, psychosis), poorly controlled medical conditions		
Description of intervention/ comparator	n=	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (postpartum)				
Study ID	**Buttner 2015**				
Intervention	28	Vinyasa flow yoga: 8 wks, 2x 1 hour sessions per wk. The yoga class consisted of sun salutations, balancing, twisting, and relaxation poses. Participants were asked to practice at home at least once per wk.			
Comparator #1 (control)	29	Control (waitlist)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified yoga instructors with expertise in yoga for postpartum women		
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depression	Baseline, wk 2, wk 4, wk 6, post intervention (wk 8)	Hamilton Depression Rating Scale	17 items scored on a 3 or 5 point scale. Higher score indicates worse depressive symptoms.
Outcome 2	Secondary	Depression	Baseline, wk 2, wk 4, wk 6, post intervention (wk 8)	Patient Health Questionnaire (PHQ-9)	Score ≥10 is predictive of Major Deprssive Disorder
Outcome 3	Secondary	Depression	Baseline, wk 2, wk 4, wk 6, post intervention (wk 8)	Inventory of Depression and Anxiety Symptoms (IDAS)- General Depression subscale	Higher score is worse

Characteristics of included studies	Depression (postpartum)				
Study ID	**Buttner 2015**				
Outcome 4	Secondary	General wellbeing	Baseline, wk 2, wk 4, wk 6, post intervention (wk 8)	IDAS - Wellbeing subscale	Higher score is worse
Outcome 5	Secondary	Anxiety	Baseline, wk 2, wk 4, wk 6, post intervention (wk 8)	IDAS - Social Anxiety subscale	Higher score is worse
Outcome 6	Secondary	Anxiety	Baseline, wk 2, wk 4, wk 6, post intervention (wk 8)	IDAS - Traumatic Intrusion subscale	Higher score is worse
Outcome 7	Secondary	Anxiety	Baseline, wk 2, wk 4, wk 6, post intervention (wk 8)	IDAS - Panic subscale	Higher score is worse
Outcome 8	Secondary	HRQoL	Baseline, wk 2, wk 4, wk 6, post intervention (wk 8)	SF-36 (total)	Higher score is better
Method of analysis					
Statistics					
Population analysed	modified ITT	All enrolled participants were included in all analyses except one participant who did not receive the allocated intervention or provide data for the pre-treatment assessment (n=1)			
Missing data	6 dropouts (4 in yoga group, 2 in control) not related to trial context. To address missing data due to attrition/drop-out, pattern-mixture models for non-ignorable missing data were conducted [40,41] with the primary dependent variable (HAM-D), such that drop-out status was examined as a moderator of treatment effect, which did not vary as a function of attrition (t = -1.16; df = 51; p = 0.252).				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (postpartum)
Study ID	**Buttner 2015**
Summary (descriptive)	Some concerns relating to the self-reported outcomes by non-blinded participants and the lack of access to pre-specified statistical analysis plan.

Characteristics of included studies	Depression (sub-clinical)	
Study ID	**Chu 2017**	
Study reference	Chu, I. H., et al. (2017). "Effects of Yoga on Heart Rate Variability and Depressive Symptoms in Women: A Randomized Controlled Trial." Journal of Alternative and Complementary Medicine 23(4): 310-316.	
Study design	RCT	Computer generated random allocation
Author affiliation	Kaohsiung Medical University , National Taiwan Sport University	
Source of funds	Taiwan National Science Council Grant	
Declared interests of study authors	The authors declared no conflicts of interest	
Setting / provider	Community	
Country(s) / region	Taiwan	
Enrolment period	Not reported	
Length of intervention / follow up (months)	12 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	26	Women with mild to moderate depression
details	Inclusion criteria: Women aged 18-50 years, BMI < 30kg/m, mild - moderate depression (BDI-II 14-28), severe depression required pschiatrist approval (BDI II > 28), patients had to be sedentary (fwer than 3 times per wk Exclusion criteria: Pregnant or nursing, physical contraindications to exercise (orthopedic problems or heart disease)	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Depression (sub-clinical)				
Study ID	**Chu 2017**				
Intervention	13	Yoga: 12 wks, 2x 60 min sessions per wk. Each 60-min session consisted of 5 min of pranayama (breathing exercises), 5 min warm up, 40 min of asana (yoga pose) practice, and 10 min of savasana (meditation/relaxation). Yoga props, such as blocks and belts, were used in accordance with each participant's particular body type and needs.			
Comparator #1 (control)	13	Control (no intervention)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Regular anti-depressant was permitted (if taking > 3 wks prior to study enrollment)				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Experienced yoga instructor		
Is the comparator clearly inactive?	Yes	Comparison= control	provide details		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Heart rate variability	Baseline, wk 12 (end of treatment)	ECG	Blinded assessor;
Outcome 2	Primary	Depession	Baseline, wk 12 (end of treatment)	Beck Depression Inventory-II (21-items)	Self-report; Scores of 0–13 indicate minimal depression, 14–19 indicate mild depression, 20–28 indicate moderate depression, and 29–63 indicate severe depression
Outcome 3	Secondary	Perceived stress	Baseline, wk 12 (end of treatment)	Perceived Stress Scale (14-items)	Self-report; five-point scoring system, ranging from 0 to 4, with reverse scoring for seven positive items (i.e., items 4, 5, 6, 7, 9, 10, and 13)

Characteristics of included studies	Depression (sub-clinical)				
Study ID	**Chu 2017**				
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	This study had a two-group, pre–post design. Descriptive statistics were performed for baseline characteristics of the participants. The baseline values were checked for matching between the groups by the independent samples t-test and the chi-square test. Intent-to-treat analysis of all participants was conducted. Pre–post differences within groups and between groups were checked using separate repeated-measures analyses of variance (ANOVA). Age and baseline BDI-II score were added as covariates in all ANOVAs for HRV. The significance level (a level) was set at 0.05, and partial eta squared (Z2) was used as an indicator of effect size.				
Population analysed	Intent-to-treat	ITT is specified. Missing data were imputed by carrying forward the last recorded observation.			
Missing data	6/26 participants (23%) dropped out. Reasons for drop out include loss to follow up, disatisfaction with intervention, and discontinuing intervention. Last observation carried forward used to account for missing data. Those who discontinued did not differ on baseline characteristics compared to those who remained.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (sub-clinical)
Study ID	**Chu 2017**
Summary (descriptive)	Some concerns due to lack of information regarding allocation concealment, missing outcome data and self-reported outcomes by nonblinded participants

Characteristics of included studies	Depression (sub-clinical)		
Study ID	**Shahidi 2011**		
Study reference	Shahidi, M., et al. (2011). "Laughter yoga versus group exercise program in elderly depressed women: A randomized controlled trial." International Journal of Geriatric Psychiatry 26(3): 322-327.		
Study design	RCT	Quasi randomised	
Author affiliation	Allameg Tabatabai University, Imam Khomeini Hospital		
Source of funds	Not reported		
Declared interests of study authors	The authors declared no conflicts of interest		
Setting / provider	Community		
Country(s) / region	Iran		
Enrolment period	Not reported		
Length of intervention / follow up (months)	Not reported		
Description of population	*N=*	*Description*	
# participants	70	Elderly women with depression	
details	Inclusion criteria: Women aged 60-80, > 10 geriatric depression scale, Exclusion criteria: Not reported		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (sub-clinical)				
Study ID	**Shahidi 2011**				
Intervention	23	Laughter yoga: 10 sessions (unknown wks and session duration). It is assumed that the intervention is a fixed duration of wks.			
Comparator #1 (control)	24	Control (no intervention)			
Comparator #2 (other)	23	Exercise therapy: 10 sessions for 30 minute sessions (unknown wks). It is assumed that the intervention is a fixed duration of wks.			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	trained in LY		
Is the comparator clearly inactive?	Yes	Comparison= control	provide details		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Depression	Baseline, end of intervention (10 sessions)	Geriatric depression scale (30 items)	Divides individuals into without depression (0–9), moderately depressed (10–19), and severely depressed (20 and more).
Outcome 2	Not specified	Life pleasure	Baseline, end of intervention (10 sessions)	Diener life satisfaction scale (5 items)	7 degree likert scale
Outcome 3	NA	--	--	--	--

Characteristics of included studies	Depression (sub-clinical)				
Study ID	**Shahidi 2011**				
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Descriptive statistics were reported in tables and as mean +/- standard deviation or frequency and percentage. Main outcomes were presented as box plot graphs. Analysis of covariance was used for controlling the possible effect of pre-test scores. Bonferroni's test was used for multiple comparisons of scores among study groups. p value of less than 0.05 was considered significant.				
Population analysed	Intent-to-treat	Modified ITT, those who did not complete the study were not included in the analysis			
Missing data	10/70 participants (14%) did not complete the study				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Depression (sub-clinical)
Study ID	**Shahidi 2011**
Summary (descriptive)	Some concerns due to lack of information regarding allocation concealment, missing outcome data and self-reported outcomes by nonblinded participants

Characteristics of included studies	Depression (sub-clinical)		
Study ID	**Wahbeh 2019**		
Study reference	Wahbeh, H. and M. Nelson (2019). "iRest Meditation for Older Adults with Depression Symptoms: A Pilot Study." International journal of yoga therapy 29(1): 9-17.		
Study design	RCT	Quasi randomised	
Author affiliation	Institute of Noetic Sciences		
Source of funds	Mental Insight Foundation		
Declared interests of study authors	The authors declared no conflicts of interest		
Setting / provider	Community		
Country(s) / region	US		
Enrolment period	Not reported		
Length of intervention / follow up (months)	2 day intervention, 6 wk follow up		
Description of population	*N=*	*Description*	
# participants	30	Depression (older adults)	
details	Inclusion criteria: 55-90 years, baseline Center for Epidemiologic Studies Depression Scale score > 4, stable on medications for 6 wks prior and during the study, willing to learn and use technology, able to hear and understand instructions, willing to accept randomisation protocol Exclusion criteria: cognitive impairment (<30 on the modified telephone interview for cognitive status), significant acute medical illness (self-report), significant untreated depression as assessed by CESD (>35) and interview, stable participants under current care of MH professional, current daily meditatin priace for at least 30 days in the previous 6 months.		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Depression (sub-clinical)				
Study ID	**Wahbeh 2019**				
Intervention	15	Meditation program (based on Yoga Nidra meditation technique): Day 1 included morning (3hours) and afternoon (4 hours) sessions and an evening session (1 hour). Day 2 included morning and afternoon sessions (3 hours each). The iRest protocol consists of 10 components: (1) inner resource; (2) intention; (3) heartfelt desire; (4) body sensing/body scan; (5) breath awareness; (6) awareness of physical sensations; (7) sensing emotions, thoughts, and beliefs; (8 witnessing; (9) felt sense of joy; and (10) integration and actions taught through experience based guided meditations and dialogue. Home practice: 6 wks, 20 minutes per day, sessions consisting of Irest, guided meditations, vacaton, favourite music.				
Comparator #1 (control)	--	--			
Comparator #2 (other)	14	Vacation, 2 day retreat			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	NR		
Is the comparator clearly inactive?	Yes	Comparison= control	provide details		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depression	Baseline, end of intervention (2 days), end of follow up (6 wks)	Center for Epidemiologic Studies Depression Scale	
Outcome 2	Secondary	Mood	Baseline, end of intervention (2 days), end of follow up (6 wks)	The Positive an Negative Affect Schedule -10	
Outcome 3	Secondary	Sleep quality	Baseline, end of intervention (2 days), end of follow up (6 wks)	Pittsburgh Sleep Quality Index	

Characteristics of included studies	Depression (sub-clinical)				
Study ID	**Wahbeh 2019**				
Outcome 4	Secondary	Pain	Baseline, end of intervention (2 days), end of follow up (6 wks)	Pain numerical rating scae and brief pain inventory	9 item pain scale
Outcome 5	Secondary	Percieved stress	Baseline, end of intervention (2 days), end of follow up (6 wks)	Perceived Stress Scale	
Outcome 6	Secondary	Spirituality	Baseline, end of intervention (2 days), end of follow up (6 wks)	Spiritual Involvement and Beliefs Scale	
Outcome 7	Secondary	Mindfullness	Baseline, end of intervention (2 days), end of follow up (6 wks)	5-factor Mindfulness Questionnare and Applied Mindfulness Process Scale	
Outcome 8	Secondary	Heart rate variability	Baseline, end of intervention (2 days), end of follow up (6 wks)		
Method of analysis					
Statistics	Means and standard deviations are reported for each measure. Preliminary effects of iRest were evaluated with a repeated-measures analysis of variance conducted with each measure as the dependent variable, group assign ment as the independent variable, and visit number as the repeated-measures variable.				
Population analysed	Intent-to-treat	Modified ITT is interpretted			
Missing data	1 dropped out due to illness, did not attend the retreat				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (sub-clinical)
Study ID	**Wahbeh 2019**
Summary (descriptive)	Some concerns of bias arising from the lack of information in the randomisation process and the self-reported outcomes by nonblinded participants

Characteristics of included studies	Depression (sub-clinical)	
Study ID	**Whiddon 2011**	
Study reference	Whiddon J, Bazini A. The effects of Hatha yoga in the treatment of depression. Journal of Alternative Medicine Research. 2011;3(2):219-27. Whiddon J, Bazini A. The effects of Hatha yoga in the treatment of depression. Alternative medicine yearbook, 2011. Hauppauge, NY: Nova Biomedical Books; US; 2013. p. 263-74.	
Study design	RCT	quasirandomised
Author affiliation	The authors were affiliated with two universities in the USA	
Source of funds	Not reported	
Declared interests of study authors	Not reported	
Setting / provider	Community	
Country(s) / region	Florida,USA	
Enrolment period	Not reported	
Length of intervention / follow up (months)	8 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	26	Symptoms of mild, moderate or severe depression
details	Inclusion and exclusion criteria not reported	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Depression (sub-clinical)				
Study ID	**Whiddon 2011**				
Intervention	12	Hatha yoga: 8 wks, 3x 90 min sessions per wk. The Hatha yoga sessions incorporated pranayama, asana, savasana and dharana.			
Comparator #1 (control)	14	Control (waitlist)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Depression	Baseline, post-intervention (8 wks)	Beck Depression Inventory-II	Higher score is worse
Outcome 2	NA	--	--	--	--
Outcome 3	NA	--	--	--	--

Characteristics of included studies	Depression (sub-clinical)				
Study ID	**Whiddon 2011**				
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Statistical analysis plan not reported. Independent samples t-test used to report results.				
Population analysed	Intent-to-treat	ITT is interpretted. No mention of drop outs or exclusions.			
Missing data	No mention of drop outs or exclusions.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Depression (sub-clinical)
Study ID	**Whiddon 2011**
Summary (descriptive)	High risk of bias due to the lack of information provided regarding the randomisation process, and concerns regarding the self-reported outcome

Characteristics of included studies	Depression (sub-clinical)	
Study ID	**Woolery 2004**	
Study reference	Woolery A, Myers H, Sternlieb B, Zeltzer L. A yoga intervention for young adults with elevated symptoms of depression. Alternative Therapies in Health and Medicine. 2004;10(2):60-3.	
Study design	RCT	quasirandomised
Author affiliation	The authors were affiliated with a university in the USA	
Source of funds	NIH grant M01RR00080	
Declared interests of study authors	Not reported	
Setting / provider	Community, college	
Country(s) / region	USA	
Enrolment period	Not reported	
Length of intervention / follow up (months)	5 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	28	Mild depression (BDI 10-15)
details	*Inclusion* : mild depression (BDI 10-15), no current psychiatric diagnosis, no current treatment for any psychiatric condition, not already practicing yoga or other forms of complementary/alternative medicine, no medical contraindications to exercise, not suicidal, non-smokers, no current alcohol or substance abuse problems	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Depression (sub-clinical)				
Study ID	**Woolery 2004**				
Intervention	13	Iyengar yoga: 5 wks, 2x 1 hour sessions per wk. The classes emphasised postures that are supposed to alleviate depression, particularly back bends, standing poses and inversions. Classes ended with relaxation postures that opened the chest.			
Comparator #1 (control)	15	Control (waitlist)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified Iyengar yoga instructor specified		
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Depression	Baseline, post intervention (5 wks)	Beck Depression Inventory	Higher score is worse
Outcome 2	Not specified	Anxiety	Baseline, post intervention (5 wks)	Spielberger Trait Anxiety Inventory	Higher score is worse
Outcome 3	Not specified	Mood	Baseline, post intervention (5 wks)	Profile of Mood States	Higher score is worse

Characteristics of included studies	Depression (sub-clinical)				
Study ID	**Woolery 2004**				
Outcome 4	Not specified	Stress biomarker	Baseline, post intervention (5 wks)	Salivary cortisol	
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Independent t-tests conducted at baseline. Paired t-tests conducted within each group. A 2x3 repeated measures ANOVA GLM was conducted to test between-group difference over time.				
Population analysed	modified ITT	mITT is interpretted			
Missing data	3 subjects dropped out of the yoga group and 2 dropped out of the control group (18% total). No analysis for missing data is presented.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Depression (sub-clinical)
Study ID	**Woolery 2004**
Summary (descriptive)	Some concerns relating to the lack of information provided on the randomisation process, the missingness of outcome data, and the self-reported outcome by non-blinded participants

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), children	
Study ID	**Culver-2015**	
Study reference	Culver KA, Whetten K, Boyd DL, O'Donnell K. Yoga to Reduce Trauma-Related Distress and Emotional and Behavioural Difficulties Among Children Living in Orphanages in Haiti: A Pilot Study. J Altern Complement Med. 2015;21(9):539-45.	
Study design	QuasiRCT	
Author/s affiliation	Duke Global Health Institute, Duke University, Durham, NC. Centre for Health Policy, Duke University, Durham, NC. Terry Sanford Institute of Public Policy, Duke University, Durham, NC. Departments of Psychiatry and Paediatrics, Duke University Medical Centre, Durham, NC. Centre for Child and Family Health, Duke University, Durham, NC. *Present affiliation: University of San Francisco School of Law, San Francisco, CA.	
Source of funds	Funding from the Duke Global Health Institute supported this study	
Declared interests of study authors	None	
Setting / provider	Orphanage	
Country(s) / region	USA	
Enrolment period	Not reported	
Length of treatment and follow up (wks or mos)	8 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	61	Neurotic, stress-related (Post-traumatic stress disorder), children
details	*Inclusion:* Children age 7–17 years and residing in selected orphanages *Exclusion:* Severe cognitive or physical disability and/or illness, as determined by the institution director, that may restrict the ability to provide valid assent for study participation and any condition in which exercise could threaten the child's health	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), children				
Study ID	**Culver-2015**				
Intervention	34	Yoga sessions 45 min long, twice a wk for 8 wks. Every class included four main components: (1) warm-up sequence of poses and breathing techniques, (2) sequence of approximately 10 yoga poses, (3) game or story involving yoga poses, and (4) guided meditation			
Comparator #1 (control)	27	Aerobic dance classes 45 min long, twice a wk for 8 wks. Classes were structured with four main components: (1) warm-up dance and stretches, (2) approximately five aerobic dance routines, (3) dance-inspired game, and (4) cool-down. All sessions included a 10-minute water break.			
Comparator #2 (other)	15	Non-randomised wait list control			
Co-interventions	None reported.				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is practitioner/ instructor certified?	No	Comparison=other	Inactive comparator not randomised		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Trauma related symptoms	Baseline, end of treatment (wk 8)	UCLA PTSD-Reaction Index–children & adolescents –DSM IV (21-items)	Total score range from 0-80. Scores >35 meet full diagnostic criteria for PTSD. Score below 35 may have significant symptom-related distress and impairment to require clinical attention and treatment.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), children				
Study ID	**Culver-2015**				
Outcome 2	Not specified	Emotional function	Baseline, end of treatment (wk 8)	The Strengths & Difficulties Questionnaire (SDQ)	25 self-reported items to identify symptoms of psychopathology among individuals age 11–16 years. The total score range from 0-40
Outcome 3	NA	--	--	--	--
Outcome 4	NA	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), children				
Study ID	**Culver-2015**				
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), children				
Study ID	**Culver-2015**				
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Method of analysis					

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), children
Study ID	**Culver-2015**
Statistics	Statistical analyses were conducted by using Stata, means/ standard deviations were calculated for baseline and follow-up characteristics. Change scores were computed by subtracting post-treatment scores from pre-treatment scores. One-way analysis of variance followed by independent post hoc tests investigated baseline mean differences between groups. Linear regression analyses determined the significant predictors of variation in outcome variables. Confounding variables were included in the final adjusted model
Population analysed	Intent-to-treat mITT - patients with incomplete pre test, post test or lost to follow-up were excluded
Missing data	37/61 lost to follow up
INTERNAL VALIDITY	
Overall risk of bias (select from list)	High risk of bias in one or more key domains
Summary (descriptive)	A significant proportion of participants were lost to follow up which is likely to have influenced the final results. Participants were also aware of the intervention they were receiving, which could have influenced self-reported outcomes, which by nature involve some judgement. Finally data was analysed in accordance with the statistical analysis plan but there is no mention of whether it changed after study start.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans	
Study ID	**Davis 2020**	
Study reference	Davis LW, Schmid AA, Daggy JK, Yang Z, O'Connor CE, Schalk N, et al. Symptoms improve after a yoga program designed for PTSD in a randomized controlled trial with veterans and civilians. Psychological trauma : theory, research, practice and policy. 2020;20.	
Study design	RCT	
Author/s affiliation	Roudebush Veterans Affairs Medical Centre, Indianapolis, Indiana, Department of Biostatistics, Department of Psychiatry, Indiana University School of Medicine; Department of Occupational Therapy, Colorado State University; Heartland Yoga Therapy, Monrovia, Indiana; Department of Psychological Science, Ball State University;	
Source of funds	This work was supported by a Merit Review Award RX-001487-01 from the U.S. Department of Veterans Affairs Rehabilitation Research and Development Service	
Declared interests of study authors	None reported.	
Setting / provider	Research institution	
Country(s) / region	USA	
Enrolment period	Not reported	
Length of treatment and follow up (wks or mos)	16 wks (follow up after 28 wks)	
Description of population	*N=*	*Description*
# participants	212	Neurotic, stress-related (Post-traumatic stress disorder), veterans
details	*Inclusion:* 18 years or older, have a CAPS-5 confirmed PTSD diagnosis, and access to a working telephone *Exclusion:* presence of severe medical conditions in which yoga is contraindicated; active psychosis; active suicidal intent; moderate to severe cognitive impairment determined by the short Mini-Mental Status Examination; involvement in ongoing yoga classes and/or a regular home practice of yoga in the previous 3 months; or receiving ongoing medical or psychological treatment that included more than one hour wkly of relaxation and mind-body based stress reduction strategies that were related to yoga	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans				
Study ID	**Davis 2020**				
Intervention	108	Holistic yoga program (HYP), 90 min long, once a wk for 16 wks. Program was developed by a yoga therapist to primarily address the hyperarousal symptoms of PTSD and included components of Hatha Yoga, postures (asanas), breathing practices (pranayama), and relaxation. Class 1 of the 16-wk intervention was a one-on-one orientation session with the yoga therapist that introduced participants to yoga practices and familiarised participants with home practice supports that were given (DVD and an audio device, and handouts of figures depicting the sequence of yoga poses practiced in class). A yoga therapist provided assistants with initial and ongoing training specific to HYP. During each 90-minute class, a trained research assistant recorded whether or not each of the key elements of the intervention was included and provided the checklist to the teaching team.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	104	At each 90-minute class, participants participated in an activity and discussion relevant to the weekly topic and were given a summary handout on the weekly topic, for example, “Getting the Sleep You Need” and “Overcoming Barriers to Healthy Habits.” Each wellness class also included 20 min of walking as a group. 'WLP was designed primarily as an attention control, ie we matched the physical activity of the yoga program with low intensity walking in addition to didactics and discussion of wellness topics (Knock, Lazarick, & Davis, 2019). To further match HYP, WLP participants had a one-on-one orientation session with trained research assistants. The orientation session included an overview of the program, instructions for the pedometer given to each WLP participant to monitor weekly step counts, and completion of a wellness selfassessment.			
Co-interventions	None reported.				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	A yoga therapist provided assistants with initial and ongoing training specific to HYP. 'WLP was developed by a clinical psychologist who had special training in health psychology and is an RN (LD), and the two clinical psychologists (DL, HK) who taught the WLP classes had extensive trauma experience.		
Is practitioner/ instructor certified?	No	Comparison=other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	PTSD symptoms	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	Clinician Administered PTSD Scale (CAPS-5)	Self reported 30-item interview. Severity scores range from 0-4, with 0 being absent to 4 being extreme/ incapacitating.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans				
Study ID	**Davis 2020**				
Outcome 2	Primary	PTSD symptoms	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	PTSD Checklist (PCL-5)	The PCL-5 is a 20-item self-report measure that assesses the 20 DSM-5 symptoms of PTSD. Respondents are asked to rate how bothered they have been by each of 20 items in the past month on a 5- point Likert scale ranging from 0-4. Items are summed to provide a total severity score (range = 0-80).
Outcome 3	Secondary	Sleep quality/ satisfaction	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	Medical Outcomes Study Sleep Scale; Sleep Problems Index II (MOS)	A self-report using a 6-point scale (1=all the time, 6=none of the time) to rate the frequency of sleep issues on 9 of the 12 items (range from 0-100). Higher scores indicate more sleep problems.
Outcome 4	Secondary	Mental health stigma	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	Mental Health Stigma (STIGMA)	a 6-item scale that incorporated statements compiled from multiple sources and associated with stigma of mental health problems. Items are rated on a 5-point scale (1= agree strongly, 5= disagree strongly) and summed to yield a total score (range 6-36). Higher scores indicate higher perceived stigma.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans				
Study ID	**Davis 2020**				
Outcome 5	Secondary	Body awareness	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	Multidimensional Assessment of Interoceptive Awareness (MAIA)	32-item self-report measure that assesses interoceptive body awareness across 8 subscales (noticing, not-distracting, not-worrying, attention regulation, emotional awareness, self-regulation, body listening, and trusting). Items are rated on a 5-point scale (0=never, 5=always) and subscale scores are the mean of all subscale items. Higher scores indicate a higher level of awareness and emotion regulation.
Outcome 6	Secondary	Depression	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	Beck Depression Inventory-II (BDI-II)	a 21-item self-report measure of depressive symptoms. A total score is calculated by summing the values (0-3) of the endorsed statements (range 0-63), with higher scores indicating more depressive symptoms.
Outcome 7	Secondary	Anxiety	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	State-Trait Anxiety Inventory -State Subscale (STAI-S)	a 20-item self-report measure of state anxiety rated on a 4-point scale (1=not at all, 4=very much so). Items are summed to yield a total (range 20-80) with higher scores representing higher state anxiety
Outcome 8	Secondary	Spiritual well being	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	Functional Assessment of Chronic Illness Therapy-Spirituality (FACIT-SP)	a 12-item self-report measure that assesses spiritual well-being. Items are rated on a 5-point scale (0=not at all, 4= very much). We used the total score calculated by summing the totals of the two subscales, meaning/peace and faith (range 0-48). Higher scores indicate a higher level of spiritual well-being.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans				
Study ID	**Davis 2020**				
Outcome 9	Secondary	Self-kindness	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	Self-Compassion Scale-Short Form (SCS-SF)	a 12-item self-report measure of self-kindness rated on a 5-point scale (1= almost never, 5= almost always). Although there are 6 subscales (self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification), we used the recommended total which is the mean of all items.
Outcome 10	Secondary	Health-related quality of life	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	Medical Outcomes Study Short-Form (SF-20)	a 20-item self-report that assesses overall functioning and well-being in 6 domains (physical, role, social, mental health, health perceptions and pain). Scores for each domain are converted to a 0-100 range with higher scores indicating a higher level of functioning in each domain.
Outcome 11	Secondary	Self efficacy	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	New General Self-Efficacy Scale (NGSES)	an 8-item self-report measure of self-efficacy. Items are rated using a 5-point scale (1= strongly disagree, 5= strongly agree). The total score is a sum of all item responses and higher scores indicate greater self-efficacy
Outcome 12	Secondary	Anger	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	PROMIS – Short Form 5a (PROMIS SF5a)	a 5-item self-report measure of anger rated on a 5-point scale (1=never, 5=always) and yields a total score (range 5-25). Higher scores indicate greater anger.
Outcome 13	Secondary	Pain	Baseline, mid (8 wks), end of treatment (16 wks), and follow-up (28 wks)	Brief Pain Inventory (BPI)	4 items rated on a scale from 0 (no pain) to 10 (pain as bad as you can imagine). The Pain Interference subscale is comprised of seven items rated on a scale from 0 (does not interfere) to 10 (completely interferes). Both subscales yield a mean score, with higher scores indicting more severe pain or greater pain interference.
Method of analysis					

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans	
Study ID	**Davis 2020**	
Statistics	84% power to detect a 0.55 standard deviation (SD) difference in primary outcomes at treatment end based on a two-sided two-sample t test with Type I error set at 0.05. Mean and SD were reported for continuous variables and frequency and percent were reported for categorical data. Appropriate statistical tests (i.e., two-sample t test or chi-square test) were employed to identify any differences in baseline characteristics between treatment groups. For primary and secondary outcomes, the sample size, mean, and SD were presented based on the raw data at each time point. The constrained longitudinal data analysis model was adopted to compare the interventions' effects after adjusting for stratification variables of gender and veteran status. This model incorporates the baseline outcome as a dependent variable and also assumes a common baseline mean across the two groups. Based on the model, mean differences in change from baseline were estimated along with 95% confidence intervals (CIs) and p values. Cohen's d effect sizes were estimated for all outcomes for the primary end of treatment time point by using the estimated mean difference in change from the model divided by the pooled SD of change scores for that timepoint. As there were multiple secondary outcomes, reported p values were adjusted for multiple comparisons with the false discovery rate method at each post baseline time point.	
Population analysed	Other (provide details)	Participants who completed 7 or fewer HYP/WLP sessions or did not complete surveys were excluded. Not a protocol specified exclusion criterion.
Missing data	185/209 lost to follow up	
INTERNAL VALIDITY		
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias	
Summary (descriptive)	Details about concealing allocation sequence were not reported and the high number of patient lost to follow up may have been influenced by participants perception about the group to which they were assigned. Participants were also aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Finally data was analysed in accordance with the statistical analysis plan but there is no mention of whether it changed after study start	

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), mothers experiencing stillbirth
Study ID	**Huberty 2018**
Study reference	Huberty J, Matthews J, Leiferman J, Cacciatore J, Gold KJ. A study protocol of a three-group randomized feasibility trial of an online yoga intervention for mothers after stillbirth (The Mindful Health Study). Pilot and Feasibility Studies. 2018;4 (1) (no pagination)(12).
Study design	RCT
Author/s affiliation	Arizona State University, Colorado School of Public Health and University of Michigan Medical School
Source of funds	This research is supported through a grant from the National Institute of Health – National Centre for Complementary and Integrative Health (1R34AT008808). The funders had no role in the design or presentation of results.
Declared interests of study authors	There are no conflicts of interest to disclose
Setting / provider	Home-based
Country(s) / region	USA
Enrolment period	Not reported
Length of treatment and follow up (wks or mos)	12 wks (20 wk follow up)
Description of population	*N=* *Description*
# participants	40 Neurotic, stress-related (Post-traumatic stress disorder), mothers experiencing stillbirth
details	*Inclusion:* Experienced a stillbirth within the past 6 wks to 24 months, Clinical levels of posttraumatic stress symptoms (score of ≥33 on the Impact of Events Scale), ≥18 years of age, Resided in the U.S, Able to read/understand/speak English, Underactive (≤120 min/wk of moderate intensity physical activity), Willing to be randomized, Regular internet access via mobile phone, desktop/laptop computer, tablet etc, Answered "no" to all items on the PAR-Q (i.e., can participate in exercise safely) or given clearance by a doctor *Exclusion:* Unstable psychiatric condition (i.e., psychosis; suicidal ideation with plan), Pregnant at time of enrolment, Practiced yoga at least 60 min/wk, Scored 20–27 on the Patient Health Questionnaire-9 (i.e., severe depression), At risk for suicide based on follow-up phone assessment after positive screen (score of 1, 2, or 3 on the last question on the PHQ-9)
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), mothers experiencing stillbirth				
Study ID	**Huberty 2018**				
Intervention	30	Low dose yoga, 60 min long once a wk for 12 wks. The intervention was conducted via an online streamining platform (videos vary in length and were Hatha based) and included 12 videos developed for women who had experienced stillbirth and the remaining 48 videos were chosen form a library of existing yoga videos. Once participants were assigned to a group, the research team mailed the intervention group a package containing study information and directions, one yoga mat, two blocks (i.e., brick-shaped prop to assist in reaching the floor), and one yoga strap (i.e., long cloth to help increase range of motion).			
Comparator #1 (control)	30	High dose yoga involved 150min/wk for 12 wks. The intervention was conducted via an online streamining platform (videos vary in length and were Hatha based) and included 12 videos developed for women who had experienced stillbirth and the remaining 48 videos were chosen form a library of existing yoga videos. Once participants were assigned to a group, the research team mailed the intervention group a package containing study information and directions, one yoga mat, two blocks (i.e., brick-shaped prop to assist in reaching the floor), and one yoga strap (i.e., long cloth to help increase range of motion).			
Comparator #2 (other)	30	Stretch and tone, 60 min/wk for 12 wks. The research team developed 12, 30-min videos for the STC group prescription (produced and filmed by Udaya). These videos were developed by adapting a well-established evidence-based protocol specific for women who are underactive. Each video included a three-minute warm up and cool down, and a stretch or tone exercise for 1–2 sets of 20–45 s or 10–15 repetitions.			
Co-interventions	None reported.				
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is practitioner/ instructor certified?	No	Comparison=other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Distress (event-specific)	Baseline, end of treatment (12 wks), and follow-up (20 wks)	Impact of event scale	22 questions scored on a five-point Likert scale. Three subscales (i.e., avoidance, intrusion, hyperarousal). A total score ≥ 33 indicates the cut-off for a probable diagnosis for PTSD. Possible scores range from 0 to 88.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), mothers experiencing stillbirth				
Study ID	**Huberty 2018**				
Outcome 2	Secondary	Anxiety	Baseline, end of treatment (12 wks), and follow-up (20 wks)	State-trait anxiety inventory	a 20-item self-report measure of state anxiety rated on a 4-point scale (1=not at all, 4=very much so). Items are summed to yield a total (range 20-80) with higher scores representing higher state anxiety
Outcome 3	Secondary	Depression	Baseline, end of treatment (12 wks), and follow-up (20 wks)	Patient health Questionnaire-9	Commonly used to screen, diagnose, monitor, and measure the severity of depression. Scores range from 0 to 27 and cut-off scores of 5, 10, 15, and 20 indicate mild, moderate, moderately severe, and severe depressive symptoms, respectively.
Outcome 4	Secondary	Emotional and behavioural functioning (grief)	Baseline, end of treatment (12 wks), and follow-up (20 wks)	Perinatal grief scale (33-items)	Measures symptoms of grief after perinatal loss. Three subscales (i.e., active grief, difficulty coping, and despair) with higher scores indicating more intense perinatal grief. Possible scores range from 33 to 165

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), mothers experiencing stillbirth				
Study ID	**Huberty 2018**				
Outcome 5	Secondary	Emotional and behavioural functioning (self-compassion)	Baseline, end of treatment (12 wks), and follow-up (20 wks)	Self-compassion scale	Questionaire using a five-point Likert scale. The SCS consists of six subscales (self-kindness, self-judgment, common humanity, isolation, mindfulness, over-identified). A total score is calculated by taking the mean of each subscale and reverse scoring the negative subscale items and computing a total mean. Higher scores indicate higher levels of self compassion and possible scores range from 1 to 5.
Outcome 6	Secondary	Emotional function	Baseline, end of treatment (12 wks), and follow-up (20 wks)	Emotion regulation questionnaire	A 10- item scale used to measure an individual's tendency to regulate his or her emotions by two strategies: cognitive reappraisal and expressive suppression. Higher scores indicate greater use of emotional regulation strategies
Outcome 7	Secondary	Emotional and behavioural functioning (mindfulness)	Baseline, end of treatment (12 wks), and follow-up (20 wks)	Mindful attention awareness scale	A 15-item scale that measures the extent to which individuals are able to maintain awareness of present moment experience. uses a 6-point Likert scale, and the mean is computed to generate a total score. Higher scores indicate higher levels of mindfulness and possible scores range from 1 to 6.
Outcome 8	Secondary	Quality of life	Baseline, end of treatment (12 wks), and follow-up (20 wks)	Short-Form Health Survey (SF-12)	The physical health composite score was used in this study. Scores range from 0 to 100, with zero being the lowest level of health and 100 the highest.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), mothers experiencing stillbirth				
Study ID	**Huberty 2018**				
Outcome 9	Secondary	Sleep quality/ satisfaction	Baseline, end of treatment (12 wks), and follow-up (20 wks)	Pittsburgh Sleep Quality Index (PSQI)	A self-report questionnaire that assesses sleep quality over a 1-month time interval. 19 individual items, creating 7 components that produce one global score. The PSQI global score has a possible range of 0-21 points with a highest score representing higher dysfunction.
Outcome 10	NA	--	--	--	--
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Method of analysis					

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), mothers experiencing stillbirth
Study ID	**Huberty 2018**
Statistics	Descriptive analyses were performed for demographic characteristics using means and standard deviation of continuous data and frequencies and proportions of discrete data for each intervention group. One-way analysis of variance were conducted to examine between group differences on demographic characteristics. To test the preliminary efficacy of the trial, analysis of covariance analyses (ANCOVA) were performed for each of the outcome measures. Lastly, to investigate the dose of yoga activity related to changes in the outcome measures, multiple regression analyses were conducted using the pooled sample (i.e. no group stratification) for each outcome for all participants with baseline and post intervention data. ANCOVA analyses were conducted independently on each outcome while controlling for age, race, household income, education level, marital status, BMI, and the level of peer support received. Regression models were built using a hierarchical approach, adding demographic variables based on theoretical importance while considering multicollinearity indices. All analyses were conducted while applying appropriate adjustments to account for non-parametric data and multiple comparisons and effect sizes were computed using SPSS with a statistical significance threshold set at $p < .05$. Post-hoc analysis to determine required sample size to achieve statistical significance ($\alpha < 0.05$).
Population analysed	Intent-to-treat mITT - patients lost to follow up were excluded
Missing data	13/90 lost to follow up
INTERNAL VALIDITY	
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias
Summary (descriptive)	Dropping out may have been influenced by participants perception about the group to which they were assigned. Participants were also aware of the intervention they were receiving which could have influenced self-reported outcomes which by nature involve some judgement. Finally, data was analysed in accordance with the statistical analysis plan but there is no mention of whether it changed after study start.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)	
Study ID	**Jindani 2015**	
Study reference	Jindani FA, Khalsa GF. A Yoga Intervention Program for Patients Suffering from Symptoms of Posttraumatic Stress Disorder: A Qualitative Descriptive Study. J Altern Complement Med. 2015;21(7):401-8.	
Study design	RCT	
Author/s affiliation	Centre for Addiction and Mental Health (Toronto), Brigham and Women's Hospital (Harvard Medical School)	
Source of funds	None reported.	
Declared interests of study authors	The authors declared no potential conflict of interests with respect to the research, authorship, and/or publication of this paper	
Setting / provider	University	
Country(s) / region	Canada	
Enrolment period	Not reported	
Length of treatment and follow up (wks or mos)	8 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	80	Neurotic, stress-related (Post-traumatic stress disorder)
details	*Inclusion* **:** score above 57 on the PCL-17 and 18+ years of age *Exclusion* : regular contemplative practice, an inability to abstain from alcohol or substance 24 hours prior to class, or issues that would be a participant safety risk. No participants were denied study participation for reasons of safety or substance use	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Jindani 2015**				
Intervention	20	Kundalini Yoga (KY), 90 min long one a wk for 8 wks.KY is a comprehensive yoga style incorporating the traditional elements of yoga practice including postures and physical exercises, breathing techniques, meditation, cultivation of mind-body awareness, and deep relaxation. Each 90-minute yoga class in the 8-wk program consisted of the general class structure: active warm-up and loosening exercises, yoga postures and exercises, deep supine relaxation, yoga breathing techniques, meditation, and discussion of the physical, psychological, and philosophical principles of yoga. A 15-minute daily home practice was integrated into the 8-wk protocol.			
Comparator #1 (control)	20	Wait list control			
Comparator #2 (other)	--	--			
Co-interventions	None reported.				
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is practitioner/ instructor certified?	Yes	Comparison=control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	PTSD symptoms	Baseline, mid (not specified), end of treatment (8 wks)	The PTSD Checklist (PCL-17)	A validated 17-item self-report scale. A total symptom severity score (range = 17-85) can be obtained by summing the scores from each of the 17 items.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Jindani 2015**				
Outcome 2	Not specified	Emotional functioning	Baseline, mid (not specified), end of treatment (8 wks)	Resilience Scale (RS)	The 25-item Resilience Scale (RS) measures the degree of individual resilience. Scores range from 25 to 175 with higher scores indicative of higher resilience.
Outcome 3	Not specified	Mood state (positive and negative affect)	Baseline, mid (not specified), end of treatment (8 wks)	The Positive and Negative Affect Schedule (PANAS)	The Positive and Negative Affect Schedule (PANAS) is a 20-item psychometric scale that demonstrates relations between positive and negative personality traits. Scores can range from 10-50 for both the Positive and Negative Affect with the lower scores representing lower levels of Positive/Negative Affect and higher scores representing higher levels of Positive/Negative Affect.
Outcome 4	Not specified	Mindfulness	Baseline, mid (not specified), end of treatment (8 wks)	The 5-Facet Mindfulness Questionnaire (FFMQ) (39-items)	Self-report questionnaire assessing various aspects of mindfulness (e.g., observing, describing, being actively aware of present-moment experience, being nonjudgmental, and nonreactive focus). Each facet score ranges from 8 to 40, except for the non-reactive facet which ranges from 7 to 35. Higher scores indicate higher levels of mindfulness in terms of the scored facets.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Jindani 2015**				
Outcome 5	Not specified	Sleep quality/ satisfaction	Baseline, mid (not specified), end of treatment (8 wks)	The Insomnia Severity Index (ISI)	7 self-report items that measures evaluate the severity of sleep disturbance during the past 2 wks. The total score ranges from 0 to 28, where a higher score corresponds to more severe symptoms
Outcome 6	Not specified	Perceived stress	Baseline, mid (not specified), end of treatment (8 wks)	The Perceived Stress Scale (PSS)	Individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress.
Outcome 7	Not specified	Depression	Baseline, mid (not specified), end of treatment (8 wks)	Depression, Anxiety, and Stress Scale (DASS 21)	Maximum score is 63 for the 21-item DASS. A higher score on the DASS indicates greater severity or frequency of these negative emotional symptoms.
Outcome 8	Not specified	Anxiety	Baseline, mid (not specified), end of treatment (8 wks)	Depression, Anxiety, and Stress Scale (DASS 21)	Maximum score is 63 for the 21-item DASS. A higher score on the DASS indicates greater severity or frequency of these negative emotional symptoms.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Jindani 2015**				
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Method of analysis					

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)
Study ID	**Jindani 2015**
Statistics	The two groups were compared at baseline on all outcome variables using independent samples t-tests. The analyses were conducted using analysis of covariance (ANCOVA), which uses pre-test scores to statistically control for differences between the groups. Repeated-measures ANOVAs with three time-points (baseline, mid-treatment, and end-of-treatment) were also performed on all outcome variables and findings were similar to the ANCOVA.
Population analysed	Intent-to-treat mITT - patients lost to follow up were excluded
Missing data	30/80 lost to follow up
INTERNAL VALIDITY	
Overall risk of bias (select from list)	High risk of bias in one or more key domains
Summary (descriptive)	Details about concealing allocation sequence not reported. Also all participants who dropped out were in the intervention arm and missingness of this data likely impacted on the final results as a result of this imbalanced between groups. Participants were also aware of the intervention they were receiving which could have influenced self-reported outcomes which by nature involve some judgement. Finally no statistical analysis plan was provided.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)	
Study ID	**Martin 2015**	
Study reference	Martin EC, Dick AM, Scioli-Salter ER, Mitchell KS. Impact of a yoga intervention on physical activity, self-efficacy, and motivation in women with PTSD symptoms. Journal of Alternative and Complementary Medicine. 2015;21(6):327-32.	
Study design	RCT	
Author/s affiliation	Department of Behavioural Science (The University of Texas), Department of Psychology (Suffolk University), Women's Health Sciences Division (National Centre for PTSD) Veterans Affairs Boston Healthcare System, Department of Psychiatry (Boston University School of Medicine)	
Source of funds	None reported.	
Declared interests of study authors	No competing financial interests exist	
Setting / provider	University	
Country(s) / region	Louisiana, USA	
Enrolment period	Not reported	
Length of treatment and follow up (wks or mos)	12 wks (16 wk follow up)	
Description of population	*N=*	*Description*
# participants	38	Neurotic, stress-related (Post-traumatic stress disorder)
details	*Inclusion:* age 18–65 years, female sex, and having at least subthreshold PTSD, as indicated by the presence of at least one symptom in each criterion "cluster," or meeting criteria for at least two symptom clusters,14,32 as measured by the PTSD Symptom Scale–Interview (PSS-I) *Exclusion:* Participants who had taken a yoga class within the past 6 months, had a substance dependence problem in the past 3 months, had a recent change in psychiatric medication, or indicated a current suicide or homicide risk.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Martin 2015**				
Intervention	20	Yoga, 75 min long once a wk for 12 wks or twice wkly for 6 wks, depending on the participant's preference. The curriculum incorporated elements of trauma-sensitive yoga. While physical postures were a primary focus of the intervention, the program also integrated the yoga principle of kindness to self, as well as skill components of Dialectical Behaviour Therapy (e.g., mindfulness, emotion regulation, distress tolerance, and interpersonal effectiveness) throughout the physical sequences.			
Comparator #1 (control)	18	Wait list control			
Comparator #2 (other)	--	--			
Co-interventions	None reported.				
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is practitioner/ instructor certified?	Yes	Comparison=control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Exercise motivation	Baseline, end of treatment (12 wks), follow up (16 wks)	Behavioural Regulation in Exercise Questionnaire–2 (BREQ-2).	A 23-item measure of exercise motivation. The BREQ-2 has five subscales: motivation, external motivation, introjected motivation, identified motivation, and intrinsic motivation.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Martin 2015**				
Outcome 2	Not specified	Body awareness	Baseline, wkly, end of treatment (12 wks), follow up (16 wks)	Godin Leisure-Time Exercise Questionnaire (GLTEQ).	The GLTEQ assessed participants' wkly exercise behaviours other than the yoga class. It includes five items asking how often the respondent engaged in physical activity for each category of intensity: strenuous, moderate, and mild. The mean daily duration (in minutes) for each intensity category is calculated using activity frequencies and the amount of time spent in each activity presented as minutes/day.
Outcome 3	Not specified	Emotional and behavioural functioning (self-efficacy)	Baseline, end of treatment (12 wks), follow up (16 wks)	Transtheoretical model measure of self-efficacy for exercise (SEE)	18 items that measure self-effcacy with respect to exercise, with response options ranging from 0 (not at all confident) to 4 (completely confident). The items were averaged to obtain the overall SEE scores.
Outcome 4	--	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Martin 2015**				
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Martin 2015**				
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Method of analysis					

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)
Study ID	**Martin 2015**
Statistics	Descriptive statistics were calculated using PASW Statistics software, version 18 (SPSS Inc., College Station, TX) and are shown as mean (M) – standard deviation (SD). Growth curve models, using a multilevel framework to estimate change over time, were estimated using Mplus 6.0.41 The full intention-to-treat sample (n = 38) was included in the analyses. A time variable was created on the basis of the number of days since the baseline session, which was coded as 0 because measurement time points were not equidistant. Slope means were examined to determine whether outcomes changed significantly over time. The formula b (time)/SDraw which produces a measure of effect size analogous to Cohen d, was used to calculate the effect of group assignment on outcomes. b is the regression coefficient for the slope on group, time is the mean number of days since baseline at the 1-month follow-up assessment, and SDraw is the SD for the total sample at baseline.
Population analysed	Intent-to-treat ITT
Missing data	None reported
INTERNAL VALIDITY	
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias
Summary (descriptive)	Details about concealing allocation sequence not reported, Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement and data was analysed in accordance with the statistical analysis plan but there is no mention of whether it changed after study start

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)	
Study ID	**Quinones 2015**	
Study reference	Quinones N, Maquet YG, Velez DM, Lopez MA. Efficacy of a Satyananda Yoga Intervention for Reintegrating Adults Diagnosed with Posttraumatic Stress Disorder. International Journal of Yoga Therapy. 2015;25(1):89-99.	
Study design	RCT	
Author/s affiliation	Dunna Corporation (Colombia), Universidad de los Andes (Colombia)	
Source of funds	This work was financed by Fundación Bolivar Davivienda and Agencia Colombiana para la Reintegración (ACR)	
Declared interests of study authors	Not reported.	
Setting / provider	Los Andes University and the Colombian non-profit Dunna Corporation	
Country(s) / region	NSW, Australia	
Enrolment period	Not reported.	
Length of treatment and follow up (wks or mos)	16 wks (20 wks follow up)	
Description of population	*N=*	*Description*
# participants	100	Neurotic, stress-related (Post-traumatic stress disorder)
details	**Inclusion:** signing informed consent and a diagnosis of PTSD confirmed by a minimum total PCL-C score of 44 **Exclusion**: non-signature of the informed consent and absence of PTSD	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Quinones 2015**				
Intervention	50	Satyananda Yoga intervention, 45min lone twice a wk for 12 wks. Satyananda Yoga adapted to meet the needs and requirements of reintegrating persons affected by PTSD in Colombia. Each one-hour class included a component of asana (postures), pranayama (breathing techniques), yoga nidra (deep relaxation), and meditation techniques to facilitate the process of reconnecting body, mind, and emotions, and to develop acceptance of and trust in one's own self.			
Comparator #1 (control)	50	Wait list control			
Comparator #2 (other)	--	--			
Co-interventions	None reported.				
Is practitioner/ instructor certified?	No	Include in subgroup B			
Is practitioner/ instructor certified?	Yes	Comparison=control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	PTSD severity	Baseline, end of treatment (16 wks)	PTSD Checklist - Civilian Version (PCL-C)	A validated 17-item self-report scale. A total symptom severity score (range = 17-85) can be obtained by summing the scores from each of the 17 items.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Quinones 2015**				
Outcome 2	--	--	--	--	--
Outcome 3	--	--	--	--	--
Outcome 4	--	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Quinones 2015**				
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)				
Study ID	**Quinones 2015**				
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Method of analysis					

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder)
Study ID	**Quinones 2015**
Statistics	Data were analysed using IBM SPSS Statistics Version 22.0. Chi-square tests and t-tests were used to determine group comparability depending on each variable. Hypothesis tests at the 5% level (one-tailed tests) were performed to evaluate the differences (X2 and t-distribution for each arm, depending on the case). t-tests to establish the efficacy of yoga in improving PTSD symptoms. Cohen's d effect sizes were calculated, alongside the percentage of improvement, which is considered clinically significant above 12% in the context of mental health. Finally, regression analyses were performed to determine whether demographic variables influenced symptom recovery.
Population analysed	Intent-to-treat mITT - patients lost to follow up were excluded
Missing data	10/100 lost to follow up
INTERNAL VALIDITY	
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias
Summary (descriptive)	Details about concealing allocation sequence not reported and it is possible the enrolling investigator or the participant had knowledge of the forthcoming allocation. Participants were also aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Finally data was analysed in accordance with the statistical analysis plan but there is no mention of whether it changed after study start.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women	
Study ID	**Reddy 2013**	
Study reference	Reddy SM, Gerber MR, Mitchell KS. The effect of a yoga intervention on alcohol and drug abuse risk in veteran and civilian women with PTSD. Journal of General Internal Medicine. 2013;1):S200.	
Study design	RCT	
Author/s affiliation	Suffolk University, National Centre for PTSD, Department of Psychiatry (Boston University School of Medicine), Simmons College School of Social Word	
Source of funds	None reported	
Declared interests of study authors	None reported	
Setting / provider	University	
Country(s) / region	USA	
Enrolment period	April–June 2011	
Length of treatment and follow up (wks or mos)	8 wk (12 wks)	
Description of population	*N=*	*Description*
# participants	38	Neurotic, stress-related (Post-traumatic stress disorder), women
details	**Inclusion:** age 18–65 years and a positive on the Primary Care PTSD screen (PC-PTSD) **Exclusions:** anticipation in a yoga class within the past 6 months, substance-dependence problem in the past 3 months, recent change of psychiatric medication, and indication of current suicide or homicide risk	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women				
Study ID	**Reddy 2013**				
Intervention	20	Yoga (Kripalu) 75 min long once per wk for 12 wks or twice a wk for 6 wks, depending on participant preference. Participants were not allowed to switch from one group to the other once the intervention had begun. The style Kripalu is a form of hatha yoga that emphasizes the connections between mind and body and includes breathing and physical postures. Initial yoga classes began with simple poses that increased in difficulty over time. Participants were given ample instruction on modifications to the poses and informed that at any point they could break from the poses and simply sit and practice the accompanying breathing exercises. The yoga class also used guidelines for trauma sensitive yoga. Aspects of mindfulness, such as attending to thoughts and feelings, was also included.			
Comparator #1 (control)	18	Control. Participants met once per wk for 12 wks in groups of 4–5 to complete the same wkly questionnaires as yoga participants.			
Comparator #2 (other)	--	--			
Co-interventions	Information sheet about yoga for PTSD and local resources for psychotherapy and domestic violence and a list of VA services was provided to veterans				
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is practitioner/ instructor certified?	Yes	Comparison=control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	PTSD severity	Baseline, end of treatment (8 wks), follow up (12 wks)	PTSD Checklist-Civilian (PCL-C)	A validated 17-item self-report scale. A total symptom severity score (range = 17-85) can be obtained by summing the scores from each of the 17 items.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women				
Study ID	**Reddy 2013**				
Outcome 2	Not specified	Depression	Baseline, end of treatment (8 wks), follow up (12 wks)	The Centre for Epidemiological Studies-Depression Scale (CES-D) (20-items)	How often over the past wk an individual has experienced symptoms associated with depression, such as restless sleep, poor appetite, and feeling lonely. Scores range from 0 to 60, with high scores indicating greater depressive symptoms.
Outcome 3	Not specified	Anxiety	Baseline, end of treatment (8 wks), follow up (12 wks)	The State-Trait Anxiety Inventory (STAI) (20-items)	Self-report measure of state anxiety rated on a 4-point scale (1=not at all, 4=very much so). Items are summed to yield a total (range 20-80) with higher scores representing higher state anxiety
Outcome 4	--	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women				
Study ID	**Reddy 2013**				
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women				
Study ID	**Reddy 2013**				
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Method of analysis					

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women
Study ID	**Reddy 2013**
Statistics	Descriptive statistics were calculated using PASW Statistics version 18. Growth curve models (GCMs), using a multilevel framework, were estimated using Mplus 6.0. G.
Population analysed	Intent-to-treat mITT - assumed that patients lost to follow up were excluded
Missing data	12/38 lost to follow up
INTERNAL VALIDITY	
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias
Summary (descriptive)	Neither the group instructors nor participants were blinded to the randomisation. Participants were also aware of the intervention they were receiving therefore this could have influenced self-reported outcomes which by nature involve some judgement. Finally data was analysed in accordance with the statistical analysis plan but there is no mention of whether it changed after study start.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans	
Study ID	**Reinhardt 2018**	
Study reference	Reinhardt KM, Noggle Taylor JJ, Johnston J, Zameer A, Cheema S, Khalsa SBS. Kripalu Yoga for Military Veterans With PTSD: A Randomized Trial. Journal of clinical psychology. 2018;74(1):93-108.	
Study design	RCT	
Author/s affiliation	Brigham and Women's Hospital (Harvard Medical School), Emory University Lowell Vet Centre, Northeastern University, Kaiser Permanente	
Source of funds	None reported	
Declared interests of study authors	None reported	
Setting / provider	Hospital	
Country(s) / region	USA	
Enrolment period	Not reported	
Length of treatment and follow up (wks or mos)	10 wks	
Description of population	*N=*	*Description*
# participants	51	Neurotic, stress-related (Post-traumatic stress disorder), veterans
details	Inclusions: 18 years of age or older, PTSD diagnosis (per Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders Axis I Disorders, no more than one hour of current wkly mind–body practice and physical and psychological capability to undergo the yoga intervention Exclusions: none reported	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans				
Study ID	**Reinhardt 2018**				
Intervention	26	Kripalu Yoga 90 min long twice per wk for 10 wks. Each included a brief check-in, cantering and breathing exercises, 10–15 minutes of body warm-ups, 50–55 minutes of physical poses, breath work, and moving meditation, followed by 5–10 minutes of relaxation			
Comparator #1 (control)	25	Control (included self-selected individuals who continued to waitlist yoga and those who did not continue to waitlist yoga)			
Comparator #2 (other)		--			
Co-interventions	None reported.				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	All instructors had advanced training in Kripalu Yoga		
Is practitioner/ instructor certified?	Yes	Comparison=control	Wait list control		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	PTSD severity	Baseline, end of treatment (10 wks)	Clinician-Administered PTSD Scale (CAPS)	Self reported 30-item interview to assess PTSD symptoms. Severity scores range from 0-4, with 0 being absent to 4 being extreme/ incapacitating.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans				
Study ID	**Reinhardt 2018**				
Outcome 2	Primary	PTSD severity	Baseline, mid treatment (no specified), end of treatment (10 wks)	PCL-M	A self-report measure that assesses the 20 DSM-5 symptoms of PTSD. A total symptom severity score (range = 17-85) can be obtained by summing the scores from each of the 17 items.
Outcome 3	Primary	PTSD severity	Baseline, mid treatment (no specified), end of treatment (10 wks)	PCL-C	A validated 17-item self-report scale. A total symptom severity score (range = 17-85) can be obtained by summing the scores from each of the 17 items.
Outcome 4	Primary	Distress (event-specific)	Baseline, mid treatment (no specified), end of treatment (10 wks)	Impact of Events Scale-Revised (IES-R)	The IES-R was developed to reflect the criteria for PTSD per the Diagnostic Symptom Manual (DSM-IV-TR). The scale consists of 22 questions which are scored on a five-point Likert scale (0 = not at all, 1 = a little bit, 2 = moderately, 3 = quite a bit, 4 = extremely). There are three subscales (i.e., avoidance, intrusion, hyperarousal) and the sum of the three subscales scores comprise the total score. A total score ≥ 33 indicates the cutoff for a probable diagnosis for PTSD. Possible scores range from 0 to 88.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans				
Study ID	**Reinhardt 2018**				
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans				
Study ID	**Reinhardt 2018**				
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Method of analysis					

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), veterans
Study ID	**Reinhardt 2018**
Statistics	Completer analysis of baseline differences in the primary outcome (CAPS) were evaluated using a two-way analysis of variance (ANOVA) of completer status, group assignment, and interaction between the two. Changes were assessed for completers using within-subjects repeated measures analysis of variance (RM ANOVA), including a between-subjects factor. The between-subjects model factor was group and within-subjects factors were time (pre and post) and interaction of group by time. Tukey's HSD post hoc tests were conducted as warranted at baseline, mid treatment, and posttreatment. Statistical significance was alpha = 0.05. Effect sizes used η2 with Cohen's (1988) ranges of small 0.01, medium 0.06, and large 0.14. Data were collected at three hospitals within the Boston-area (preliminary, midpoint, post-, and post yoga data for some cohorts, all CAPS interviews) and at one Boston area yoga studio (mid-point, post-, and post-yoga data for some cohorts)
Population analysed	Intent-to-treat patients lost to follow up were excluded
Missing data	25/51 lost to follow up
INTERNAL VALIDITY	
Overall risk of bias (select from list)	High risk of bias in one or more key domains
Summary (descriptive)	Details about concealing allocation sequence not fully reported and it is possible the enrolling investigator or the participant had knowledge of the forthcoming allocation. Additionally, participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Finally, data was analysed in accordance with the statistical analysis plan but there is no mention of whether it changed after study start.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male veterans	
Study ID	**Seppala 2014**	
Study reference	Seppala EM, Nitschke JB, Tudorascu DL, Hayes A, Goldstein MR, Nguyen DT, et al. Breathing-based meditation decreases posttraumatic stress disorder symptoms in U.S. military veterans: a randomized controlled longitudinal study. Journal of traumatic stress. 2014;27(4):397-405.	
Study design	RCT	
Author/s affiliation	Centre for Compassion and Altruism Research and Education (Stanford), Department of Psychology (University of Wisconsin-Madison), Department of Psychiatry (University of Wisconsin-Madison), Department of Internal Medicine (University of Pittsburgh), Waisman Laboratory for Brain Imaging and Behaviour (University of Wisconsin-Madison), department of Psychology (University of Arizona)	
Source of funds	Funds were provided by Disabled Veterans of America Charitable Service Trust	
Declared interests of study authors	None reported.	
Setting / provider	University	
Country(s) / region	USA	
Enrolment period	Not reported.	
Length of treatment and follow up (wks or mos)	7 days (1 year follow up)	
Description of population	*N=*	*Description*
# participants	21	Neurotic, stress-related (Post-traumatic stress disorder), male veterans
details	*Inclusions* **:** male, 18 years of age or older, English fluency, and veteran with service in Afghanistan or Iraq. *Exclusions:* substance dependence, psychosis, or use of alpha or beta-blocking medications because of possible interference with psychophysiological measures.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male veterans				
Study ID	**Seppala 2014**				
Intervention	11	Sudarshan Kriya yoga 3 hours long everyday for 7 days. The exercises include four sequential, form- and rhythm-specific breathing components interspersed with normal breathing while sitting with eyes closed.			
Comparator #1 (control)	10	Wait list control			
Comparator #2 (other)		--			
Co-interventions	None reported.				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	Instructors were from Project Welcome Home Troops, unclear if they were certified		
Is practitioner/ instructor certified?	Yes	Comparison=control	Wait list control		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	PTSD severity	Baseline, end of treatment (7 days)	PCL-M	A self-report measure that assesses the 20 DSM-5 symptoms of PTSD. A total symptom severity score (range = 17-85) can be obtained by summing the scores from each of the 17 items.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male veterans				
Study ID	**Seppala 2014**				
Outcome 2	Secondary	Anxiety	Baseline, end of treatment (7 days)	The Mood and Anxiety Symptoms Questionnaire (MASQ)	A 77-item self-report questionnaire that assesses depressive, anxious and mixed symptomatology. Total score: Items are summed, yielding a range from 24 to 120. Higher scores indicate greater levels of positive affect.
Outcome 3	Secondary	Functional capacity/ physical functioning (startle)	Baseline, end of treatment (7 days)	Eye blink responses to 24 acoustic startle probes	(50 millisecond, 107 decibel white noise bursts with near-instantaneous rise and fall times administered through earbuds and presented at 18–25-second intervals) with illumination of the laboratory room switching between light and dark every four probes.
Outcome 4	Secondary	Physiological markers	Baseline, end of treatment (7 days)	Respiratory rate	BIOPAC respiration belt that was connected to a BIOPAC Systems amplifier and placed around participants' chest below the sternum.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male veterans				
Study ID	**Seppala 2014**				
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male veterans				
Study ID	**Seppala 2014**				
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Method of analysis					

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male veterans
Study ID	**Seppala 2014**
Statistics	One between-subjects factor (group) and one within-subjects factor (time) and their interaction were defined as fixed effects. Subject was defined as a random effect. Correlations were conducted to test the anticipated relationship between physiological startle, respiration, and PTSD symptoms. To estimate the magnitude of the active group's intervention effects relative to Time 1 above and beyond changes in the control group, between-group Cohen's d effect sizes were calculated using the difference scores per group. Analyses were conducted using two-tailed tests in SAS and STATISTICA 10.
Population analysed	Intent-to-treat: To address the issue of missing and unusable data, we implemented an intent-to-treat analysis using the maximum likelihood estimation. Linear mixed-effects models were used for all variables to test main effects of time (Time 1, Time 2, Time 3, Time 4), group (control, active), and group-by-time interactions as well as to account for within-subjects correlation
Missing data	3/21 lost to final follow up
INTERNAL VALIDITY	
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias
Summary (descriptive)	Unlikely that allocation sequence was concealed until participants were enrolled, participants were aware of the intervention they were receiving therefore this could have influenced self-reported outcomes which by nature involve some judgement and data was analysed in accordance with the statistical analysis plan but there is no mention of whether it changed after study start

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male	
Study ID	**Telles 2010**	
Study reference	Telles S, Singh N, Joshi M, Balkrishna A. Post traumatic stress symptoms and heart rate variability in Bihar flood survivors following yoga: A randomized controlled study. BMC Psychiatry. 2010;10 (no pagination)(18).	
Study design	RCT	
Author/s affiliation	Department of Yoga Research (India)	
Source of funds	Not reported.	
Declared interests of study authors	The authors declare that they have no competing interests	
Setting / provider	Research institution	
Country(s) / region	India	
Enrolment period	Not reported.	
Length of treatment and follow up (wks or mos)	7 days (no follow up)	
Description of population	*N=*	*Description*
# participants	22	Neurotic, stress-related (Post-traumatic stress disorder), male
details	*Inclusion:* Bihar flood survivors, normal health, not on medication, (readiness to be present for all assessments and to be assigned to either yoga or control group and no prior knowledge of yoga *Exclusion :* People are under going any kind of treatment or taking any kind of medication	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male				
Study ID	**Telles 2010**				
Intervention	11	Yoga for one hour once a day for a wk. The yoga class included loosening exercises (sithilikarana vyayama) for ten minutes, physical postures (asanas) for twenty minutes and breathing techniques (pranayamas) for twenty five minutes. These practices were followed by five minutes of guided relaxation in shavasana (corpse pose).			
Comparator #1 (control)	11	control (given the option to learn yoga if they wanted to)			
Comparator #2 (other)		--			
Co-interventions	None reported.				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	Yoga instructor, qualifications not specified		
Is practitioner/ instructor certified?	Yes	Comparison=control	Control (with the option of learning yoga)		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Anxiety	Baseline, end of treatment (7 days)	Visual analogue scale (0-100)	Self reported items measured on a scale from 0-100, where a higher score corresponds to more severe pain

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male				
Study ID	**Telles 2010**				
Outcome 2	Primary	Sleep disturbance	Baseline, end of treatment (7 days)	Visual analogue scale (0-100)	Self reported items measured on a scale from 0-100, where a higher score corresponds to more sleep disturbance
Outcome 3	Secondary	Physiological markers	Baseline, end of treatment (7 days)	Heart rate variability	A normal resting heart rate for adults ranges from 60 to 100 beats per minute.
Outcome 4	NA	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male				
Study ID	**Telles 2010**				
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male				
Study ID	**Telles 2010**				
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Method of analysis					

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), male	
Study ID	**Telles 2010**	
Statistics	Data were analysed using SPSS (Version 16.0). A repeated measures ANOVA (with Groups as the Between Subjects factor and Assessments as the Within Subjects factor) was performed. Pre-post comparisons were made using a t-test for paired data.	
Population analysed	Intent-to-treat	Included data for all randomised participants
Missing data	None.	
INTERNAL VALIDITY		
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias	
Summary (descriptive)	Judgement and data was analysed in accordance with the statistical analysis plan but there is no mention of whether it changed after study start	

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women & treatment resistant
Study ID	**Van Der Kolk 2014**
Study reference	Van Der Kolk BA, Stone L, West J, Rhodes A, Emerson D, Suvak M, et al. Yoga as an adjunctive treatment for posttraumatic stress disorder: A randomized controlled trial. Journal of Clinical Psychiatry. 2014;75(6):e559-e65.
Study design	QuasiRCT
Author/s affiliation	(Trauma Centre at Justice Resource Institute, National Child Traumatic Stress Network, Department of Psychiatry (Boston University School of Medicine), National Centre for PTSD and Department of Psychology (Suffolk University)
Source of funds	This study was supported by a grant from the United States National Centre for Complementary and Alternative Medicine (NCCAM).
Declared interests of study authors	None reported.
Setting / provider	Not reported.
Country(s) / region	USA
Enrolment period	Not reported.
Length of treatment and follow up (wks or mos)	10 wks
Description of population	*N=* *Description*
# participants	64 Neurotic, stress-related (Post-traumatic stress disorder), treatment resistant
details	*Inclusion:* Women between 18 and 58 years old, any race, chronic, treatment-unresponsive PTSD, an index trauma that occurred 12 or more years before initial interview, comorbid diagnoses of depression or panic disorder, which are common in subjects with PTSD, will be permitted *Exclusion:* Serious illness that is not stabilized based on the judgment of the PI, Psychological GAF < 40, bipolar disorders or obsessive-compulsive disorder or schizophrenia or any psychotic disorder will be excluded if they occurred any time prior to the primary traumatic episode, current psychotic disorder or established organic impairment (e.g., TBI), severe dissociation as measured by a DES score >25, women with active suicidal risk or active self-mutilation or aggressive behaviour toward others within the past year (as judged by the PI), substance dependence or abuse in the past 6 months as defined by DSM IV criteria and judged by the PI, any other condition that might interfere with the person's capacity to give informed consent or to adhere to the study protocol
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women & treatment resistant				
Study ID	**Van Der Kolk 2014**				
Intervention	32	Trauma-sensitive yoga classes for one hour once a wk for 10 wks. Trauma-informed yoga class incorporated the central elements of hatha yoga: breathing, postures, and meditation.			
Comparator #1 (control)	32	Women's Health Education for one hour once a wk for 10 wks. The class focused on active participation and support, and utilized an interactive teaching style to increase knowledge about different health areas and increase women's self efficacy to (1) seek medical services, (2) discuss issues around health with medical professionals, (3) normalize the experience of talking about potentially uncomfortable issues of the body, (4) use medical or body terminology, and (5) conduct and pursue self-care activities (e.g., breast self-examination, making food choices). Materials included workbooks, resource books, video recordings, informational games, charts, and diagrams.			
Comparator #2 (other)		--			
Co-interventions	None reported.				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	certified yoga professionals with master's and doctoral-level degrees in psychology		
Is practitioner/ instructor certified?	No	Comparison=other	Women's Health Education		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Emotional and behavioural functioning (PTSD severity)	Baseline, mid (5 wks), end of treatment (10 wks)	Clinician-Administered PTSD Scale (CAPS)	Self reported 30-item interview to assess PTSD symptoms. Severity scores range from 0-4, with 0 being absent to 4 being extreme/ incapacitating.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women & treatment resistant				
Study ID	**Van Der Kolk 2014**				
Outcome 2	Secondary	Functional capacity/ physical functioning (HR variability)	Baseline, mid (5 wks), end of treatment (10 wks)	HR variability	A normal resting heart rate for adults ranges from 60 to 100 beats per minute.
Outcome 3	Not specified	Brain activation	Baseline, mid (5 wks), end of treatment (10 wks)	brain activation (functional magnetic resonance imaging)	Functional magnetic resonance imaging (fMRI) measures the small changes in blood flow that occur with brain activity.
Outcome 4	Not specified	Depression	Baseline, mid (5 wks), end of treatment (10 wks)	BDI-II (Beck Depression Inventory)	a 21-item self-report measure of depressive symptoms. A total score is calculated by summing the values (0-3) of the endorsed statements (range 0-63), with higher scores indicating more depressive symptoms.

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women & treatment resistant				
Study ID	**Van Der Kolk 2014**				
Outcome 5	Not specified	PTSD severity	Baseline, mid (5 wks), end of treatment (10 wks)	Davidson Trauma Scale	The DTS is a 17-item self-report measure that assesses the 17 DSM-IV symptoms of PTSD. The DTS yields a frequency score (range: 0 to 68), severity score (range: 0 to 68), and total score (range: 0 to 136).
Outcome 6	Not specified	Emotional functioning	Baseline, mid (5 wks), end of treatment (10 wks)	Inventory of Altered Self Capacities	The IASC is a self-report measure of an individual's psychological functioning capacity in the areas of forming and maintaining meaningful relationships, maintain a stable sense of personal identity and self-awareness and modulate and tolerate negative affect. Respondents rate the frequency of occurrence of each symptom item on a 5-point scale from Never to Very Often over the prior 6 months.
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women & treatment resistant				
Study ID	**Van Der Kolk 2014**				
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Outcome 11	NA	--	--	--	--
Outcome 12	NA	--	--	--	--
Outcome 13	NA	--	--	--	--
Method of analysis					

Characteristics of included studies	Neurotic, stress-related (Post-traumatic stress disorder), women & treatment resistant
Study ID	**Van Der Kolk 2014**
Statistics	Cohen d values are reported as estimates of effect size with the convention of d=0.25, 0.50, and 0.80 being indicative of small, medium, and large effect sizes, respectively.
Population analysed	Intent-to-treat: Hierarchical linear and nonlinear modelling with restricted maximum likelihood estimation to conduct multilevel regression analyses to examine change over time in outcomes as a function of treatment condition. This approach allowed the authors to analyse the intention-to-treat sample without the use of missing data algorithms.
Missing data	4/64 lost to follow up
INTERNAL VALIDITY	
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias
Summary (descriptive)	Method of randomisation not specified, details about concealing allocation sequence not reported, the nature of the intervention precludes blinding participants/carers to their group assignment, participants were aware of the intervention they were receiving therefore this could have influenced self-reported outcomes, which by nature involve some judgement, data was analysed in accordance with the statistical analysis plan but there is no mention of whether it changed after study start

Characteristics of included studies	Insomia	
Study ID	**Afonso 2012**	
Study reference	Afonso RF, Hachul H, Kozasa EH, Oliveira Dde S, Goto V, Rodrigues D, et al. Yoga decreases insomnia in postmenopausal women: a randomized clinical trial. Menopause. 2012;19(2):186-93.	
Study design	RCT	Quasirandomised
Author/s affiliation	Universidade Federal de Sa˜o Paulo; Nu´cleo de Estudos em Sau´de Coletiva e da Famı´lia, Universidade Nove de Julho; and International Yoga Teachers Association, Sao Paulo, SP, Brazil.	
Source of funds	This work was supported by Associa0a˜o Fundo de Incentivo a` Psicofarmacologia, Funda0a˜o deAmparo a` Pesquisa do Estado de Sa˜o Paulo (FAPESP), FAPESP/Centros de Pesquisa, Inova0a˜o e Difusa˜o (98/143030-3 to S.T.), and Conselho Nacional de Desenvolvimento Cientı´fico e Tecnolo´gico.	
Declared interests of study authors	The authors declare no conflicts of interest, with the exception of Dinah Rodrigues, who developed the sequence of yoga exercises evaluated in this study and teaches it to woman in menopause.	
Setting / provider	Not reported	
Country(s) / region	Brazil	
Enrolment period	Not reported	
Length of treatment / follow up (wks or mos)	4 months (no follow up)	
Description of population	*N=*	*Description*
# participants	44	Insomnia (postmenopausal women)
details	*Inclusions:* Postmenopausal, literate women between the ages of 50 and 65 years with insomnia diagnosed by a specialist based on Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition criteria. They had had amenorrhea for 1 year or longer, had follicle-stimulating hormone levels equal to or greater than 30 mIU/mL, and had a body mass index lower than 30 kg/m2. *Exclusion:* uncontrolled clinical illnesses, such as systemic arterial hypertension, diabetes, and cancer; use of HT; use of psychotropic drugs; an apneahypopnea index greater than 15; and participation in psychological treatment of menopausal symptoms	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	15	Yoga sessions 60 minutes long 2 days a wk for 16 wks.The yoga sequence used was based on yogasana and some Tibetan techniques and is known as yoga HT for menopause. The technique uses stretching positions (asanas) along with strong and fast breathing, called bellows breathing (bhastrika). The practice ended with a directed relaxation.
Comparator #1 (control)	14	Passive stretching sessions 60 minutes long 2 days a wk for 4 wks. The volunteer would lie on a stretcher, first on her back and then on her stomach, and the main articulations in her body would be manipulated, with a soft stretching of the main muscles of those articulations. The passive stretching was performed by a physical therapist.
Comparator #2 (other)	15	Control (no intervention). All of the volunteers were invited to participate in the yoga class procedure after the study ended
Comparator #3 (other)	--	--
Co-interventions	Calcium (500mg ingested daily)	

Characteristics of included studies	Insomia				
Study ID	**Afonso 2012**				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Anxiety	Baseline, end of treatment (wk 16)	Beck Anxiety Inventory (0-7)	21 items that measures the severity of an anxiety. The total score ranges from 0 to 7, where a higher score corresponds to more severe anxiety
Outcome 2	Not specified	Depression	Baseline, end of treatment (wk 16)	Beck Depression Inventory (1-40)	21 self-report items that measures key symptoms of depression. The total score ranges from 1 to 40, where a higher score corresponds to more severe depression
Outcome 3	Not specified	Climacteric symptoms	Baseline, end of treatment (wk 16)	Kupperman Menopausal Index (0-44)	11 self-reported items that measures severity of menopausal complaints in women. The total score ranges from 0 to 44, where a higher score corresponds to more severe insomnia
Outcome 4	Not specified	Sleep quality/ symptoms	Baseline, end of treatment (wk 16)	Insomnia Severity Index (0-28)	7 self-report items that measures evaluate the severity of sleep disturbance during the past 2 wks. The total score ranges from 0 to 28, where a higher score corresponds to more severe symptoms
Outcome 5	Not specified	Quality of Life-disease specific	Baseline, end of treatment (wk 16)	Menopause-Specific QLQ (0-100)	24 self-report items that measures menopausal symptoms. The total score ranges from 0 to 100, where a higher score corresponds to more severe symptoms
Outcome 6	Not specified	Stress symptoms	Baseline, end of treatment (wk 16)	Inventory of Stress Symptoms for Adults	Self-report items which reports physical and psychological symptoms related to stress levels in the last 24 hours (alert phase), the last wk (resistance phase), or the last month. Unclear range of total score
Outcome 7	Not specified	Daytime functioning	Baseline, end of treatment (wk 16)	Epworth sleepiness scale (0-24)	8 self-report items that measured a patient's sleepiness. The total score ranges from 0 to 24, where a higher score corresponds to more severe symptoms
Method of analysis					
Statistics	Means and SDs were used to characterize the groups. A general linear model of repeated measures was used to investigate the effects on the scores of the questionnaires.				

Characteristics of included studies	Insomia
Study ID	**Afonso 2012**
Population analysed	Intent-to-treat — Modified (patients lost to follow up were excluded)
Missing data	17/61 participants lost to follow up
INTERNAL VALIDITY	
Overall risk of bias (select from list)	High risk of bias in one or more key domains
Summary (descriptive)	Randomisation sequence not specified, allocation sequence unlikely to be concealed, dropping out may have been influenced by participants perception abut the group to which they were assigned and drop outs were not balanced between groups, no information was provided on a pre-specified analysis plan and participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement

Characteristics of included studies	Insomia				
Study ID	**Sobana 2013**				
Study reference	Sobana R, Parthasarathy S, Duraisamy, Jaiganesh K, Vadivel S. The effect of yoga therapy on selected psychological variables among male patients with insomnia. Journal of Clinical and Diagnostic Research. 2013;7(1):55-7.				
Study design	RCT				
Author/s affiliation	Department of Physiology, Mahatma Gandhi Medical College and Research Institute, Puducherry, Southern India. Department of Yoga,Tamil Nadu Physical Education and Sports University, Chennai, Southern India.				
Source of funds	None				
Declared interests of study authors	None				
Setting / provider	Not reported				
Country(s) / region	India				
Enrolment period	Not reported				
Length of treatment / follow up (wks or mos)	8 wks (no follow up)				
Description of population	*N=*	*Description*			
# participants	40	Insomnia (men)			
details	*Inclusion:* Men with insomnia (defined as difficulty in initiating or maintaining sleep, or both" or the perception of a poor quality sleep) *Exclusion* : The patients who were on any sedative drugs or those who had other co morbid illnesses				
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*			
Intervention	20	Yoga sessions 90 minutes long once a day in the morning for 8 wks. Included practices were Prayer, Loosening Exercises (Sithilikarana Vyayama), Jalanet, Tadasasana, Vrikshasana, Ardha Padmasana, Padmasana, Vajrasana, Padahasthasana, Ardhakatichakrasana, Ardhachakrasana, Ardhakatichakrasana, Shalabasana, Vakrasana, Matsyasana, Anuloma Viloma, Nadishodana, Brahmar, Chakra Meditation, Makarasana and AUM Kar			
Comparator #1 (control)	--	--			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--	--	--	--	--

Characteristics of included studies	Insomia				
Study ID	**Sobana 2013**				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C Comparison= control			
Is there an inactive comparator?	Yes				
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Stress	Baseline, end of treatment (wk 8)	self-reported stress scale	Not reported
Outcome 2	Not specified	Self-confidence	Baseline, end of treatment (wk 8)	self-reported self confidence scale	Not reported
Outcome 3	--	--	--	--	--
Outcome 4	--	--	--	--	--
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Method of analysis					
Statistics	Comparative evaluations with the mean and SD were made by using the unpaired Student's "t" test.				

Characteristics of included studies	Insomia
Study ID	**Sobana 2013**
Population analysed	Intent-to-treat
Missing data	None.
INTERNAL VALIDITY	
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement

Characteristics of included studies	Insomia	
Study ID	**Tapas 2013**	
Study reference	Tapas B, Kanchan C, Sonali B, Asit PK, Ekta. Clinical evaluation of sirodhara and yoga therapy in management of chronic insomnia. International Research Journal of Pharmacy. 2013;4(6):78-80.	
Study design	RCT	Quasirandomised
Author/s affiliation	Universities/Hospitals in India	
Source of funds	Not reported	
Declared interests of study authors	Not reported	
Setting / provider	Hospital-based setting	
Country(s) / region	India	
Enrolment period	Not reported	
Length of treatment / follow up (wks or mos)	15 days (1 month follow up)	
Description of population	*N=*	*Description*
# participants	30	Insomnia
details	*Inclusions:* 18-60 years, chronic insomnia (at least 3 nights a wk for 1 month), sleep disturbance (or associated daytime fatigue) causes clinically significant distress or impairment in social, occupational or other important areas of functioning, patient is diagnosed on the basis of DSM-IV *Exclusion:* Sleep disturbance exclusively occur due to narcolepsy, breathing related sleep disorder, circadian rhythm sleep disorder or parasomnia, disturbance associated with a major depressive disorder (generalised anxiety disorder, delirium), disturbance due to direct physiological effects of a substance (e.g. drug abuse, medication) or a general medical condition	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	10	Yoga sessions were performed for 45 minutes once a day in the monrning for 15 days. The following asanas, pranayama, shatkarma, mudra were advised: Sarvangasana, Paschimottanasana, uttanasana, shashankasana, shavasana, bhramri pranayama
Comparator #1 (control)	--	--
Comparator #2 (other)	20	Sirodhara, tila taila sessions were perfomed for 45 minutes once a day in the monrning for 15 days
Comparator #3 (other)	--	--
Co-interventions		

Characteristics of included studies	Insomia				
Study ID	**Tapas 2013**				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C Comparison= other			
Is there an inactive comparator?	No				
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Daytime functioning	Baseline, end of treatment (day 15)	Epworth sleepiness scale (0-24)	8 self-report items that measured a patient's sleepiness. The total score ranges from 0 to 24, where a higher score corresponds to more severe symptoms
Outcome 2	Not specified	Cardiovascular	Baseline, end of treatment (day 15)	Blood pressure	Lower score means reduction in blood pressure
Outcome 3	Not specified	Sleep quality/ satisfaction	Baseline, end of treatment (day 15)	Quality of sleep (sleep diary)	Not reported
Outcome 4	Not specified	Wake time after sleep onset	Baseline, end of treatment (day 15)	Duration of sleep (sleep diary)	Higher number of hours means a longer duration of sleep
Outcome 5	Not specified	Mood/stress	Baseline, end of treatment (day 15)	Mental irritation	Not reported
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Method of analysis					
Statistics	Descriptive, student t-test etc.				

Characteristics of included studies	Insomia
Study ID	**Tapas 2013**
Population analysed	Intent-to-treat: No details provided, assumed mITT (patients lost to follow up were excluded)
Missing data	No information provided
INTERNAL VALIDITY	
Overall risk of bias (select from list)	High risk of bias in one or more key domains
Summary (descriptive)	Randomisation sequence not specified, allocation sequence unlikely to be concealed, no pre-specified analysis plan was provided, participants were aware of the intervention they were receiving therefore this could have influenced self-reported outcomes which by nature involve some judgement, no information provided of the number of participants lost to follow up

Characteristics of included studies	Headache disorders (migraine)	
Study ID	**John 2007**	
Study reference	John PJ, Sharma N, Sharma CM, Kankane A. Effectiveness of yoga therapy in the treatment of migraine without aura: a randomized controlled trial. Headache. 2007;47(5):654-61.	
Study design	RCT	Random number generator
Author affiliation	Authors were affiliated with a hospital and University in India	
Source of funds	NMPMedical Research Institute, Jaipur, Rajasthan, India	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community, headache clinic	
Country(s) / region	India	
Enrolment period	JAN 2005 - MAY 2005	
Length of intervention and follow up (months)	12 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	72	Migranes without aura
details	*Inclusion criteria:* 20 to 25 years with mirgane who have not had prophylatic medication for the previous 2 months, to have had no more than 15 atttacks in a months, milkd to moderate anxiety and depression *Exclusion criteria:* >15 migrane attacks, unstable medical and psychiatric consisions, pregnant women, headaches linked to menstruation, receiving another type of migrane treatment	
Description of intervention/comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	36	Yoga: 12 wks, 5x 60 min sessions per wk. The yoga group was taught a self-administered set of practices at the centre. Participants were given handouts of techniques to practice at the prodromal stage of migraine whenever possible. We chose an integrated approach of yoga therapy including yoga postures, breathing practices, Pranayama (yoga breathing), relaxation practices and meditation for 5 days a week for 60 minutes. Kriya (cleansing process) was taught once in a week with deep relaxation.
Comparator #1 (control)	36	Control (brief education): participants were contacted once a month for an educational session on migraine, its types, causes and triggering factors. Participants also received handouts that emphasizes self-care strategies such as avioding triggering factors.
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	Acute medications prescribed by neurologists	

Characteristics of included studies	Headache disorders (migraine)				
Study ID	**John 2007**				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Trainer yoga therapist		
Is the comparator clearly inactive?	Yes	Comparison= control	Brief education, considered sufficiently 'inactive'		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Headache frequency	Baseline, end of treatment (12 wks)	Questionnare/ diary	Estimated average number of total headaches days per wk
Outcome 2	Primary	Pain	Baseline, end of treatment (12 wks)	McGll Pain questionnaire (MPQ)	0 = no pain, 1 = mild, 2 = moderate, 3 = severe
Outcome 3	Primary	Headache intensity	Baseline, end of treatment (12 wks)	Numeric rating scale (0-10)	Higher is worse. Participants asked to rate their average, most severe and lowest headache
Outcome 4	Primary	Pain	Baseline, end of treatment (12 wks)	McGill Pain Questionnaire - Present Pain Index	1-10 intensity scale
Outcome 5	Secondary	Pain	Baseline, end of treatment (12 wks)	McGill Pain Questionnaire VAS	
Outcome 6	Secondary	Depression	Baseline, end of treatment (12 wks)	Hospital anxiety depression scale (HADS)	7 items scored from 0-3. Higher scores indicate higher depression.
Outcome 7	Secondary	Anxiety	Baseline, end of treatment (12 wks)	Hospital anxiety depression scale (HADS)	7 items scored from 0-3. Higher scores indicate higher anxiety.
Outcome 8	Secondary	Medication use	Baseline, end of treatment (12 wks)	Medication score	Not specified
Method of analysis					
Statistics	Baseline headache status versus status after the 12-wk intervention were compared within group using the t-test. We used the Mann Whitney U-test to compare the results from interventional measures between groups.				
Population analysed	Intent-to-treat	mITT is interpretted. Participants who did not provide follow up data were excluded from the analysis			

Characteristics of included studies	Headache disorders (migraine)
Study ID	**John 2007**
Missing data	7/72 participants (10%) did not complete the study. Withdrawals were approximately balanced between groups, and reasons for drop out are provided. No analysis for missing data is presented
INTERNAL VALIDITY	
Overall risk of bias (select from list)	High risk of bias in one or more key domains
Summary (descriptive)	High risk of bias due to the self-reported outcomes by nonblinded participants who are considered likely to be incentivised due to the fact that they paid to participate in the yoga course

Characteristics of included studies	Headache disorders (migraine)				
Study ID	**Kumar 2019a**				
Study reference	Kumar, A., et al. (2019). "Effect of yoga as add on therapy in migraine (contain): A randomized controlled study." Headache 59 (Supplement 1): 31-32. Kumar A, Bhatia R, Sharma G, Dhanlika D, Vishnubhatla S, Singh RK, et al. Effect of yoga as add-on therapy in migraine (CONTAIN): A randomized clinical trial. Neurology. 2020;94(21):e2203-e12. CTRI/2017/03/008041				
Study design	RCT	Computer generated with sealed opaque envelope to conceal allocation			
Author affiliation	Authors were affiliated with a Neurology and Biostatistics department and Medicine and Research centre in India				
Source of funds	No targetted funding reported				
Declared interests of study authors	The authors declared no relevant conflict of interest				
Setting / provider	Hospital outpatient clinic				
Country(s) / region	New Delhi, India				
Enrolment period	APR 2017 - AUG 2017				
Length of intervention and follow up (months)	3 month intervention, no follow up reported				
Description of population	*N=*	*Description*			
# participants	160	Episodic migraine			
details	*Inclusion criteria:* age 18-50 years, headache frequency > 4 per months but < 14 per month, residing in Delhi, no contraindications yoga therapy, no change of prophylatic drug therapy for 3 months and no change of dose for 1 month, consented *Exclusion criteria* : Enrolled in another trail, denied consent, other previous neurologic diseases.				
Description of intervention/comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*			
Intervention	80	Yoga: 1 month, 3x ? Min sessions per wk followed by 2 months, 5x ? Min sessions per wk at home. standardized integrated yoga module			
Comparator #1 (control)	80	Conventional medical therapy: acute and prophylatic medical therapy as deemed suitable by the neurologist			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--	--	--	--	--

Characteristics of included studies	Headache disorders (migraine)				
Study ID	**Kumar 2019a**				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	qualifed yoga therapist under supervision of yoga physicians		
Is the comparator clearly inactive?	Yes	Comparison= control	No intervention		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Headache frequency	baseline, mid (4 & 8 wks), end of treatment (12 wks)	Headache diary (self-reported)	higher scores indicating higher quality of life
Outcome 2	Primary	Headache intensity	baseline, mid (4 & 8 wks), end of treatment (12 wks)	Visual analogue scale	
Outcome 3	Primary	Headache specific disability-	baseline, mid (4 & 8 wks), end of treatment (12 wks)	HIT-6	
Outcome 4	Secondary	Headache specific disability-	baseline, mid (4 & 8 wks), end of treatment (12 wks)	Migrane disability Assessment (MIDAS)	
Outcome 5	Secondary	Medication use	baseline, mid (4 & 8 wks), end of treatment (12 wks)	Medication score	numbers of acute rescue pills used over the prophylactic drugs during the headache attacks
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Quantitative variables were compared using Student t test or Wilcoxon rank sum test as appropriate. Outcome variables such as headache frequency, headache intensity, HIT score, MIDAS, and pill count were compared at baseline and at 3 months. Both intention to treat (ITT) and per protocol (PP) analysis were carried out. Delta value in each arm for each measure was calculated and compared between groups using 2-group t test/Wilcoxon rank sum test. Difference between delta values within each group was expressed as mean with 95% confidence interval (CI) and as median with interquartile range. A p value of <0.05 was considered to be statistically significant.				
Population analysed	Other (provid	Intention to treat and per protocol analyses provided			

Characteristics of included studies	Headache disorders (migraine)
Study ID	**Kumar 2019a**
Missing data	46/160 participants (29%) did not complete the 3 month intervention period
INTERNAL VALIDITY	
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias
Summary (descriptive)	Some concerns due to the self-reported outcome by non-blinded participants, and lack of pre-specified analysis plan

Characteristics of included studies	Headache disorders (migraine & tension type)		
Study ID	**Latha 1992**		
Study reference	Latha, D. and K. V. Kaliappan (1992). "Efficacy of yoga therapy in the management of headaches." Journal of indian psychology 10(1-2): 41-47.		
Study design	RCT	Quasirandomised	Odd and even numbers, likely alternate allocation
Author affiliation	Authors were affiliated with a University in India		
Source of funds	Not reported		
Declared interests of study authors	Not reported		
Setting / provider	Not reported		
Country(s) / region	India		
Enrolment period	Not reported		
Length of intervention and follow up (months)	4 month intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	20	Migraine and tension headaches	
details	*Inclusion criteria:* Diagnosied by qualified physicians, do not suffer from any other chronic organic diseases, had not previously practiced any form of physical exercise, yoga, or meditation *Exclusion criteria:* None specified		
Description of intervention/comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	
Intervention	10	Yoga: 4 months, 2x ? Min sessions per wk (32 total). Participants were given individual training in the selected yoga postures and breathing techniques. Participants were instructed to practice daily and the need for inducing relaxation in the body and mind was emphasised.	
Comparator #1 (control)	10	Control (no intervention)	
Comparator #2 (other)	--	--	
Comparator #3 (other)	--	--	
Co-interventions	20	Continuted prescribed medication	

Characteristics of included studies	Headache disorders (migraine & tension type)				
Study ID	**Latha 1992**				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	First author provided training		
Is the comparator clearly inactive?	Yes	Comparison= control	No intervention		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Headache duration	Baseline, end of treatment (4 months)	Rating scale (no further information)	higher scores indicating higher quality of life
Outcome 2	Not specified	Headache intensity	Baseline, end of treatment (4 months)	Rating scale (no further information)	higher scores indicating higher quality of life
Outcome 3	Not specified	Headache frequency	Baseline, end of treatment (4 months)	Rating scale (no further information)	higher scores indicating higher quality of life
Outcome 4	Not specified	Somatization (stress level)	Baseline, end of treatment (4 months)	Questionnare	Consisted of three parts with eeach item on the questionnare rates on a 4 point scale (doesn't mention further details)
Outcome 5	Not specified	Medication use	Baseline, end of treatment (4 months)	Analgesic use	
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Difference in mean score before and after therapy was calculated, and significance was computed.				
Population analysed	Intent-to-trea ITT is interpretted				

Characteristics of included studies	Headache disorders (migraine & tension type)
Study ID	**Latha 1992**
Missing data	No drop outs reported, but it is unclear whether or not they occurred
INTERNAL VALIDITY	
Overall risk of bias (select from list)	High risk of bias in one or more key domains
Summary (descriptive)	The study is assessed at high risk of bias overall due to lack of information across multiple domains. In particular the quasi-randomised nature of the study and lack of baseline characteristics to compare is of concern.

Characteristics of included studies	Headache disorders (migraine)		
Study ID	**Naji-Esfahani 2014**		
Study reference	Naji-Esfahani, H., et al. (2014). "Preventive effects of a three-month yoga intervention on endothelial function in patients with migraine." International Journal of Preventive Medicine 5(4): 424-429. Boroujeni MZ, Marandi SM, Esfarjani F, Sattar M, Shaygannejad V, Javanmard SH. Yoga intervention on blood NO in female migraineurs. Adv Biomed Res 2015;4:259.		
Study design	RCT	computer generated	
Author affiliation	Authors were affiliated with an Iranian University		
Source of funds	Isfahan University of Medical Sciences and Department of Exercise Physiology, University of Isfahan		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	University		
Country(s) / region	Iran		
Enrolment period	APR 2012 - JUN 2012		
Length of intervention and follow up (months)	3 month intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	42	Female patients with migraines	
details	*Inclusion criteria:* All the patients were in menstrual age and have not had any experience of yoga training before. They also were under a same pharmacological treatment and did not have any other exercise during the treatment period *Exclusion criteria:* None specified		
Description of intervention/comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	
Intervention	21	Yoga: 12 wks, 3x 75 min sessions per wk. The yoga program was chosen from Hatha yoga. It included asanas, pranayama, and relaxation. Asanas largely deal with the positions which were related to the head and neck part although lower extremity exercises, arms and shoulders were also involved. Eye-related exercises, Pawanmuktasana, pre-pranayama and pranayama, Standing-sitting and lying out screw position, Palming, Neti exercises and Shavasana were kinds of exercises which were done under the supervision of the trainer. Surya namaskar was another part of a program which includes 12 positions itself and it is mainly used for warm up, Stretch, strength and flexibility increase.	
Comparator #1 (control)	21	Control (no intervention)	
Comparator #2 (other)	--	--	
Comparator #3 (other)	--	--	
Co-interventions	Medical treatment (medication)		

Characteristics of included studies	Headache disorders (migraine)				
Study ID	**Naji-Esfahani 2014**				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is the comparator clearly inactive?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Headache frequency	Baseline, end of treatment (12 wks)	Questionnaire	
Outcome 2	Not specified	Headache severity	Baseline, end of treatment (12 wks)	VAS	Each subject expresses her headache intensity on a 100-mm VAS that ranges from no pain (0) to very severe pain
Outcome 3	Not specified	Headache duration	Baseline, end of treatment (12 wks)	Questionnaire	
Outcome 4	Not specified	Blood nitric oxide level	Baseline, end of treatment (12 wks)	Griess reaction	
Outcome 5	Not specified	Headache specific disability	Baseline, end of treatment (12 wks)	Headache Impact Test (HIT-6)	Higher score indicates a greater impact of headache on the daily life of the respondent
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Independent t-test was used to compare the mean differences between groups before and after training. Difference of p<=0.01 was considered significant				
Population analysed	Intent-to-treat	Modified ITT, those lost to follow-up were excluded from the analysis			

Characteristics of included studies	Headache disorders (migraine)
Study ID	**Naji-Esfahani 2014**
Missing data	10/42 participants (24%) did not complete the study
INTERNAL VALIDITY	
Overall risk of bias (select from list)	High risk of bias in one or more key domains
Summary (descriptive)	High risk of bias in the dias due to missing outcome domain, as it is not clear if missing data is corrected for and participant in the control group dropped out for health realted reasons, as well as there being differences between the proportion of missing data between groups. There is also evidence of unreported results for some participants

Characteristics of included studies	Headache (tension-type)	
Study ID	**Sethi 1981**	
Study reference	Sethi, B. B., et al. (1981). "A comparative study of relative effectiveness of biofeedback and Shavasana (Yoga) in tension headache." Indian Journal of Psychiatry 23(2): 109-114.	
Study design	RCT	Quasirandomised
Author affiliation	Medical college in India	
Source of funds	Utter State Medical Research Council	
Declared interests of study authors	Not reported	
Setting / provider	Not reported	
Country(s) / region	Louisiana, USA	
Enrolment period	JUN 1980 - AUG 1980	
Length of intervention and follow up (months)	10 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	16	Tension headachce
details	*Inclusion criteria:* Age 16-45, high school education, Lucknow city resident, no associated major physical disorder, cooprerative and motivated for 3 months of treatment, headache diagnosis consistent with muscular contraction headache, headache intensity score > 0.2 on Budzynski scale and > 2 headches per wk *Exclusion criteria:* Secondary headache	
Description of intervention/comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	7	Shavasana Yoga: 4x ? Min sessions followed by 10 wks, 2x 30 min sessions per wk Not further ddescribed.
Comparator #1 (control)	--	--
Comparator #2 (other)	6	EMG bioferedback and Jaconson relaxation: 10 wks, 2x 30 min sessions per wk
Comparator #3 (other)	--	--
Co-interventions	--	--

Characteristics of included studies	Headache (tension-type)				
Study ID	**Sethi 1981**				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	well trained yoga therapist		
Is the comparator clearly inactive?	No	Comparison= other	EMG and biofeedback		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Headache severity	Baseline, mid (1 & 2 mos), end of treatment (3 mos)	5 point rating scale	1 = mild, 2 = moderate, 3 = severe, 4 = incapicating
Outcome 2	Not specified	Social adjustment	Baseline, mid (1 & 2 mos), end of treatment (3 mos)	5 point rating scale	2 = mild, 2 = moderate, 3 = severe, 4 = total inability
Outcome 3	Not specified	Headache frequency	Baseline, mid (1 & 2 mos), end of treatment (3 mos)	NR	
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Not reported				
Population analysed	Intent-to-trea mITT interpretted. Participants who did not complete the study are not presented in the results				

Characteristics of included studies	Headache (tension-type)
Study ID	**Sethi 1981**
Missing data	3/16 participants (19%) did not complete the study. No reasons for drop out are reported and no analysis for missing outcome data is presented
INTERNAL VALIDITY	
Overall risk of bias (select from list)	High risk of bias in one or more key domains
Summary (descriptive)	High risk of bias due to the lack of information regarding randomisation, missing outcome data which was not adjusted for in the analysis and self-reported outcome by non-blinded participants

Characteristics of included studies	Headache disorders (migraine)	
Study ID	**Talakad 2013**	
Study reference	Talakad, S., et al. (2013). "Effect of Yoga therapy on migraine patients: A clinical and cardiac autonomic study." Journal of the Neurological Sciences 1): e495. Kisan R, Sujan M, Adoor M, Rao R, Nalini A, Kutty BM, et al. Effect of Yoga on migraine: A comprehensive study using clinical profile and cardiac autonomic functions. Int. 2014;7(2):126-32.	
Study design	RCT	"Concealed allocation protocol"
Author affiliation	Authors were affiliated with a research centre, National Institute of Mental Health and Neuro Sciences, Institute of Oncology and the Department of Natural Medicine in India.	
Source of funds	Central Council for Research in Yoga and Naturopathy, Department of AYUSH, Ministry of Health and Family Welfare, Government of India, New Delhi	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Not reported	
Country(s) / region	India	
Enrolment period	Not reported	
Length of intervention and follow up (months)	6 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	84	Patients with a migrane diagnosis, with or without aura.
details	*Inclusion criteria:* Patients satisfying international classifiaction of headache disorders (HIS, ICHD - II) criteria for migrane without (1.1) or with (1.2.1) aura, a minimum 2 year history or migrane and headache with a frequency of 5-15/month. *Exclusion criteria:* Other medical or neurological illness, recent head or neck trauma within 2 years, pregnanct and lactating women	
Description of intervention/comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	47	Yoga: 6 wks, 5x 60 min sessions per wk. The yoga intervention consisted of daily practice of loosening exercises, breathing exercises, asanas or postures done with awareness and Shavasana.
Comparator #1 (control)	47	Control (no intervention)
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	Conventional care: headache diary maintained for the 6 wk enrollment period, with telephone check up at wk 1 and end of treatment	

Characteristics of included studies	Headache disorders (migraine)				
Study ID	**Talakad 2013**				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Trained yoga instrutor		
Is the comparator clearly inactive?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Headache specific disability	baseline, end of treatment (6 wks)	Headache impact test (HIT-6)	severe = HIT > 60
Outcome 2	Not specified	Headache intensity	baseline, end of treatment (6 wks)	Visual analog scale	1 = no pain, 10 = severe pain
Outcome 3	Not specified	Headache frequency	baseline, end of treatment (6 wks)	Self-reported diary	
Outcome 4	Not specified	Autonomic function	baseline, end of treatment (6 wks)	EEG	performed when subjects were headache free for 3 days before and after the autonomic function test
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--
Outcome 8	NA	--	--	--	--
Method of analysis					
Statistics	Descriptive statistical analysis has been carried out in the present study. Results on continuous measurements were presented on Mean ± SD unpaired t-test was used to compare the variables at the baseline characteristics of the two groups of patients. Paired t-test was used to compare the clinical, HRV, following 6 wk intervention. HRV parameters were square root transformed for analysis and presented after back transforming. Level of significance was kept at 0.05.				
Population analysed	Per protocol				

Characteristics of included studies	Headache disorders (migraine)
Study ID	**Talakad 2013**
Missing data	10 participants did not come for post-assessment and 14 additional participants were excluded from the analysis. The final analysis include 60/84 participants (71%).
INTERNAL VALIDITY	
Overall risk of bias (select from list)	High risk of bias in one or more key domains
Summary (descriptive)	High risk of bias due to inappropriate exclusion of participants who did not complete the written diary or attend the yoga session. Data is missing for 29% of participants with no analysis or reasons for missingness presented.

Characteristics of included studies	Prehypertension	
Study ID	**Ankolekar 2019**	
Study reference/s	V. H. Ankolekar, G. Govardhan Reddy, S. V. Chidananda Sanju and H. Mamatha. Role of yoga intervention on quality of life and prehypertension. Indian Journal of Traditional Knowledge. 2019;18(2):351-355	
Study design	RCT	Simple random sampling
Author/s affiliation	Department of Anatomy, Kasturba Medical College, Manipal, Manipal Academy of Higher Education, Manipal 576 104, India Division of Yoga, CIMR, Manipal Academy of Higher Education, Manipal 576 104 India	
Source of funds	None reported	
Declared interests of study authors	None reported	
Setting / provider	Manipal Academy of Higher Education	
Country(s) / region	India	
Enrolment period	None reported	
Length of treatment / follow up (wk. or mo.)	6 months (follow up at 3 and 6 months)	
Description of population	*N=*	*Description*
# participants	102	Participants with prehypertension

Characteristics of included studies	Prehypertension	
Study ID	**Ankolekar 2019**	
details	Security personnel of Manipal Academy of Higher Education were screened for hypertension. Participants with prehypertension were selected for the study.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	51	Yoga group: 1hr sessions of Yoga training was given for 15 days. This included asanas and pranayamas. Following this participants were monitored to do yoga 45 minutes daily, 6 days a wk except on their duty off days.
Comparator #1 (control)	51	Control group: Not described
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	--	--
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Prehypertension				
Study ID	**Ankolekar 2019**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Anthropometric parameters	Baseline, followup (3 & 6 months)	Body weight	Measured in kg.
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline, followup (3 & 6 months)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline, followup (3 & 6 months)	Diastolic blood pressue	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 4	Not specified	Quality of life	Baseline, followup (3 & 6 months)	Standard QoL questionnaire, measure not reported	Higher score means better quality of life
Outcome 5	--				
Outcome 6	--				
Outcome 7	--				

Characteristics of included studies	Prehypertension	
Study ID	**Ankolekar 2019**	
Outcome 8	--	
Outcome 9	--	
Outcome 10		
Method of analysis		
Statistics	Data analysed using repeated measures ANOVA	
Population analysed	Intent-to-treat	Uses repeated measures which involves each subject
Missing data	No missing data reported	
INTERNAL VALIDITY		
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias	
Summary (descriptive)	Lack of information regarding randomisation and concealment process, missingness of data, possible influencing of self-reported outcomes and lack of pre-specified analysis plan raise some concerns	

Characteristics of included studies	Prehypertension (or stage 1)	
Study ID	**Cohen 2011a**	
Study reference/s	D. L. Cohen, L. T. Bloedon, R. L. Rothman, J. T. Farrar, M. L. Galantino, S. Volger, C. Mayor, P. O. Szapary and R. R. Townsend. Iyengar yoga versus enhanced usual care on blood pressure in patients with prehypertension to stage 1 hypertension: a randomized controlled trial. Evidence-Based Complementary and Alternative Medicine 2011;(546428):Epub. 2011 NCT00328666	
Study design	RCT	
Author/s affiliation	University of Pennsylvania School of Medicine, Philadelphia, PA 19104, USA; Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania, Philadelphia, PA 19104, USA; Program in Physical Therapy, Richard Stockton College of New Jersey, Pomona, NJ 08240, USA	
Source of funds	National Institutes of Health grants R21AT002353-02 (to P.O.S. and R.R.T.) and M01-RR00040 (General Clinical Research Center) and National Center for Complementary and Alternative Medicine (NCCAM)	
Declared interests of study authors	None reported	
Setting / provider	University of Pennsylvania	
Country(s) / region	USA	
Enrolment period	None reported	
Length of treatment / follow up (wk. or mo.)	12 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	78	Participants with prehypertension or stage 1 hypertension

Characteristics of included studies	Prehypertension (or stage 1)	
Study ID	**Cohen 2011a**	
details	*Inclusion criteria:* between the ages of 18 and 70 and had a systolic blood pressure (SBP) of > 130 but < 160 mm Hg and diastolic blood pressure (DBP) < 100 mmHg. *Exclusion criteria:* pregnant or post partum < 3 months, taking blood pressure lowering medications or dietary supplements (magnesium, potassium, calcium > 1200 mg/day, fish oils > 2000 mg/day, ephedra, hawthorn, forskolin), non-dominant arm circumference > 50 cm, body mass index >= 40.0 or <18.5 kg/m2, have practiced IY in the last 12 months or any form of yoga >2x/month in the previous 6 months., have received an experimental drug, used an experimental medical device within 30 days prior to screening, or who gave a blood donation of greater than or equal to one pint within 8 wks prior to screening, diabetes mellitus, established CVD or known arrhythmias such as atrial flutter or fibrillation or those with cardiac pacemakers, Current users (within the previous 30 days) of any tobacco products, history of renal insufficiency based on estimated GFR < 60 ml/min, Women who consume > 10 alcoholic drinks per wk and men who consume > 15 drinks per wk., known autonomic neuropathy (e.g: Shy-Drager, orthostatic hypotension), known secondary causes of hypertension (renal artery stenosis, pheochromocytoma, coarctation of aorta, hyperaldosteronemia), Regular use of benzodiazepines, anti-psychotic drugs or corticosteroids (> 1x per month). Stable doses (3 months) of antidepressants (selective serotonin reuptake inhibitors or tricyclic antidepressants) will be allowed, subjects with known severe musculoskeletal problems such as spinal stenosis that may limit participation in yoga, Subjects who actively practice (> 2x/month) other mind-body therapy such as Qigong, Tai Chi, or meditation.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	46	Iyengar yoga group: 2x70 min classes each wk for 6 wks then 1x70 min classes for the remaining 6 wks. Participants also participated in home practice in wk 6 to 12and were asked to keep a diary of home practice. In each class 2-10 participants were led through a sequence of timed asanas and breathing techniques using props.
Comparator #1 (control)	--	--
Comparator #2 (other)	32	Education program: Attended four 1-hr groups classes during wks 1,2,3 and 8 with 30 min individual phone contact at wk 5 and 10. Classes were designed to include motivational and behavioural components educating participants about lifestyle modification to reduce elevated BP.
Comparator #3 (other)	--	--
Co-interventions	--	--
Is practitioner/ instructor certified?	Yes	Include in subgroup A

Characteristics of included studies	Prehypertension (or stage 1)				
Study ID	**Cohen 2011a**				
Is there an inactive comparator?	No	Comparison=other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Cardiovascular disease-risk	Baseline, 6 wks, end of treatment (12 wks)	24-hr ambulatory systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 2	Primary	Cardiovascular disease-risk	Baseline, 6 wks, end of treatment (12 wks)	24-hr ambulatory diastolic blood pressue	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Secondary	Cardiovascular disease-risk	Baseline, 6 wks, end of treatment (12 wks)	Heart rate	Beats/min, as measured by stop watch. Higher score means worse health
Outcome 4	Secondary	Physiological parameters	Baseline, 6 wks, end of treatment (12 wks)	Weight & BMI	Higher indicates worse health
Outcome 5	Secondary	Biochemical parameters	Baseline, 6 wks, end of treatment (12 wks)	Aldosterone, renin, metanephrines & cortisol	Higher indicates worse health
Outcome 6	Secondary	Quality of life	Baseline, 6 wks, end of treatment (12 wks)	SF-36	Higher score indicates better general health status. Physica and mental component score given
Outcome 7	Secondary	Mood state	Baseline, 6 wks, end of treatment (12 wks)	Profile of Mood States	65 questions using the 5-point Likert scale.

Characteristics of included studies	Prehypertension (or stage 1)				
Study ID	**Cohen 2011a**				
Outcome 8	Secondary	Stress	Baseline, 6 wks, end of treatment (12 wks)	Percieved Stress Scale	A five point Perceived Stress scale consists of 10 statements rated on a five-point likert scale ranged from 0 to 4 as very low, low, average, high, and very high level of stress
Outcome 9					
Outcome 10					
Method of analysis					
Statistics	Outcomes within groups were tested by comparing means at baseline to means at wk 6 and means at wk 12 using t-tests on the equality of means.				
Population analysed	Per protocol	Per protocol, those who did not complete a requisite number of classes were discontinued			
Missing data	20/43 lost to yoga group and 1/32 lost to control group.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	Lack of information regarding randomisation and concealment process, participant drop out due to trial context, missingness of data , possible influencing of self-reported outcomes and lack of pre-specified analysis plan infer high risk of bias.				

Characteristics of included studies	Prehypertension (or stage 1)	
Study ID	**Cohen 2013**	
Study reference/s	D. L. Cohen, et al. Lifestyle Modification in Blood Pressure Study II (LIMBS): study protocol of a randomized controlled trial assessing the efficacy of a 24 wk structured yoga program versus lifestyle modification on blood pressure reduction. Contemporary Clinical Trials. 2013;36(1):32-40 NCT00964847 D. L. Cohen, et al. Preliminary results of the limbs study: Assessing effects of yoga on blood pressure reduction. Journal of Clinical Hypertension. Conference: 28th Annual Scientific Meeting and Exposition of the American Society of Hypertension, Inc., ASH. 2013;15(SUPPL. 1) D. L. Cohen, et al. Results of the limbs study: Yoga, alone or in combination with other lifestyle measures reduces BP in untreated prehypertension and stage 1 hypertension. Circulation. Conference: American Heart Association's. 2014;130(SUPPL. 2) D. L. Cohen, et al. Blood Pressure Effects of Yoga, Alone or in Combination With Lifestyle Measures: Results of the Lifestyle Modification and Blood Pressure Study (LIMBS). Journal of Clinical Hypertension. 2016;18(8):809-816	
Study design	RCT	
Author/s affiliation	University of Pennsylvania, Philadelphia, PA, 190104; Children's Hospital of Philadelphia, Department of Adolescent Medicine; Thomas Jefferson University Hospital and Medical College, Philadelphia, PA,	
Source of funds	Study funded by NCCAM: 1RO1AT004921-01A1	
Declared interests of study authors	Authors declared no conflict of interest	
Setting / provider	Clinical and Translational ResearchCenter (CTRC) of the University of Pennsylvania(Penn)	
Country(s) / region	USA	
Enrolment period	None reported	
Length of treatment / follow up (wk. or mo.)	24 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	137	Participants with prehypertension or stage 1 hypertension

Characteristics of included studies	Prehypertension (or stage 1)	
Study ID	**Cohen 2013**	
details	*Inclusion criteria:* between the ages of 18 and 70 and had a systolic blood pressure (SBP) of > 130 but < 160 mm Hg and diastolic blood pressure (DBP) < 100 mmHg. *Exclusion criteria:* pregnant or post partum < 3 months, taking blood pressure lowering medications or dietary supplements (magnesium, potassium, calcium > 1200 mg/day, fish oils > 2000 mg/day, ephedra, hawthorn, forskolin), non-dominant arm circumference > 50 cm, body mass index >= 40.0 or <18.5 kg/m2, have practiced IY in the last 12 months or any form of yoga >2x/month in the previous 6 months., have received an experimental drug, used an experimental medical device within 30 days prior to screening, or who gave a blood donation of greater than or equal to one pint within 8 wks prior to screening, diabetes mellitus, established CVD or known arrhythmias such as atrial flutter or fibrillation or those with cardiac pacemakers, Current users (within the previous 30 days) of any tobacco products, history of renal insufficiency based on estimated GFR < 60 ml/min, Women who consume > 10 alcoholic drinks per wk and men who consume > 15 drinks per wk., known autonomic neuropathy (e.g: Shy-Drager, orthostatic hypotension), known secondary causes of hypertension (renal artery stenosis, pheochromocytoma, coarctation of aorta, hyperaldosteronemia), Regular use of benzodiazepines, anti-psychotic drugs or corticosteroids (> 1x per month). Stable doses (3 months) of antidepressants (selective serotonin reuptake inhibitors or tricyclic antidepressants) will be allowed, subjects with known severe musculoskeletal problems such as spinal stenosis that may limit participation in yoga, Subjects who actively practice (> 2x/month) other mind-body therapy such as Qigong, Tai Chi, or meditation.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	46	Yoga + Blood pressure education and walking program (combination of blood pressure education and walking plus yoga, as described in the comparator groups)
Comparator #1 (control)	48	Blood pressure education and walking: Included 12 BPEP classes and 12 motivational experiences. Classes and experiences were on alternate wks. Additionally BPEP subjects were expected to walk 6 days a wk gradually increasing to 180 minutes of walking per wk.
Comparator #2 (other)	43	Yoga group: Started with 2x90 min classes for the first 12 wks, with the option of gradually adding self-practice with provided DVD. In the final 12 wks participants were asked to attend 2x 90 min community yoga session. A typical yoga session included 5-7 minutes of breath work and 25 minutes of warm up poses followed by abdominal positions for 2-3 minutes. The main component of each session was hot poses and lasted for 40 minutes. Yoga sessions concluded with 5-7 minutes of cool down and 5-7 minutes of deep relaxation.
Comparator #3 (other)	--	--
Co-interventions	--	--
Is practitioner/ instructor certified?	Yes	Include in subgroup A

Characteristics of included studies	Prehypertension (or stage 1)				
Study ID	**Cohen 2013**				
Is there an inactive comparator?	Yes	Comparison= control	Yoga delivered as an adjunct to education		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Cardiovascular disease-risk	Baseline, 12 wks, end of treatment (24 wks)	24-hr ambulatory systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 2	Primary	Cardiovascular disease-risk	Baseline, 12 wks, end of treatment (24 wks)	24-hr ambulatory diastolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Secondary	Cardiovascular disease-risk	Baseline, 12 wks, end of treatment (24 wks)	Cerebral blood flow	measured by performing ASL fMRI during resting and stimulated states and observing changes in regional CBF in prefrontal cortex and cingualte gyrus.
Outcome 4	Secondary	Anthropometric parameters	Baseline, 12 wks, end of treatment (24 wks)	Weight & BMI	Higher indicates worse health
Outcome 5	Secondary	Biochemical parameters	Baseline, 12 wks, end of treatment (24 wks)	Urinary isoprostane, ADMA & cortisol	Higher indicates worse health
Outcome 6	Secondary	Quality of life	Baseline, 12 wks, end of treatment (24 wks)	Health survey	Higher score indicates better general health status.
Outcome 7	Secondary	Emotional function	Baseline, 12 wks, end of treatment (24 wks)	Symptoms of Stress Inventory (SOSI), Cook Medley Anger and Hostility Scale, Beck Depression Inventory	

Characteristics of included studies	Prehypertension (or stage 1)				
Study ID	**Cohen 2013**				
Outcome 8	Secondary	Psychological questionnaires	Baseline, 12 wks, end of treatment (24 wks)	Treatment Preference, Expectancy Scale, The Perceived Competence Scale,	
Outcome 9	Secondary	Mood	Baseline, 12 wks, end of treatment (24 wks)	Profile of mood states	POMS is 65 questions using the 5-point Likert scale.
Outcome 10	Secondary	Physical activity	Baseline, 12 wks and post treatment (24 wks)	Paffenbarger Physical Activity	--
Method of analysis					
Statistics	Data analysis conducted using SAS V9. Group differences for continuos characteristics will be compared between groups using one way ANOVA for independent samples. Differences in mean change between intervention will be compared using the time-group interactions under the random effect repeated measures ANOVA model in SAS PROC MIXED. An analogous test of group differences in mean change from baseline to 12 weeks were also provided by the random effects repeated measures ANOVA model. Although 12-week data were provided and prespecified in the data analysis plan, the main outcome measure was the change in BP at 24 weeks.				
Population analysed	Intent-to-treat	Analysis was performed for all patients enrolled (intention-to-treat analysis) and for completers only (per protocol analysis) and both sets of data are presented.			
Missing data	47/137 participants did not complete protocol.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	Participant drop out due to trial context, missingness of data, possible influencing of self-reported outcomes and variance from pre-specified analysis plan infer high risk of bias.				

Characteristics of included studies	Hypertension	
Study ID	**Cramer 2018**	
Study reference/s	H. Cramer, C. Sellin, D. Schumann and G. Dobos. Yoga in Arterial Hypertension. Deutsches Arzteblatt international. 2018;115(50):833-839 NCT02727140 C. Sellin, D. Schumann, H. Cramer and G. Dobos. Effects of different types of yoga on hypertension: A 3-armed randomized controlled trial. Global Advances in Health and Medicine. 2018;7:106	
Study design	RCT	
Author/s affiliation	Department of Naturopathy and Integrative Medicine, Essen Central Hospitals, Faculty of Medicine, Duisburg–Essen University	
Source of funds	Duisburg–Essen University	
Declared interests of study authors	This study was supported by the German Occupational Union for Yoga Teachers (Berufsverband der Yogalehrenden in Deutschland, BDY)	
Setting / provider	Single centre	Participants were recruited by means of appeals in the local press and via the e-mail distribution list
Country(s) / region	Germany	
Enrolment period	Between May 2016 and April 2017	
Length of treatment / follow up (wk. or mo.)	12 wks (16 wk follow up)	
Description of population	*N=*	*Description*
# participants	75	Participants with primary arterial hypertension.

Characteristics of included studies	Hypertension	
Study ID	**Cramer 2018**	
details	*Inclusion criteria* : at least 18 years old with primary arterial hypertension, (>140 mmHg systolic and/or >90 mm Hg diastolic blood pressure) and receiving antihypertensive medication from their primary care physician or specialist at the time of investigation. Exclusion criteria: Secondary hypertension, severe psychiatric comorbidities (major depression, dependency disorders, or psychosis), coronary heart disease, myocardial infarction, pulmonary heart failure of NYHA stage ≥ I, peripheral arterial occlusive disease of stage ≥ 1, renal failure of stage >2 with glomerular filtration rate (GFR) <60 mL/min/1.73 m², participation in any other clinical studies at the time of commencement of our trial or planned participation in such studies in the next 28 wks, pregnancy or breastfeeding.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	25	Yoga (with postures): 1x90 min session per wk for 12 wks. Each session consisted of 45 min yoga postures and 45 min breathing, meditation and relaxation techniques concluding with a short presentation and Q&A time.
Comparator #1 (control)	25	Wait list (no intervention)
Comparator #2 (other)	25	Yoga (without postures): 1x90 min session per wk for 12 wks. Each session consisted of breathing, mediation and relaxation techniques. Concluding with short presentations and Q&A time.
Comparator #3 (other)	--	--
Co-interventions	Anti-hypertensive medication	
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Hypertension				
Study ID	**Cramer 2018**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Cardiovascular disease-risk	Baseline, post-treatment (wk 12), follow-up (28 wks)	Systolic 24-h blood pressure	mmHg, as measured by digital blood pressure monitor. Higher score means worse health
Outcome 2	Primary	Cardiovascular disease-risk	Baseline, post-treatment (wk 12), follow-up (28 wks)	Diastolic 24-h blood pressure	mmHg, as measured by digital blood pressure monitor. Higher score means worse health
Outcome 3	Secondary	Cardiovascular disease-risk	Baseline, post-treatment (wk 12), follow-up (28 wks)	24-hr heart rate	Measured using a monitoring device. Higher score means worse health.
Outcome 4	Secondary	Cardiovascular disease-risk	Baseline, post-treatment (wk 12), follow-up (28 wks)	Diurnal blood pressure	Measured using a monitoring device. Higher score means worse health.
Outcome 5	Secondary	Cardiovascular disease-risk	Baseline, post-treatment (wk 12), follow-up (28 wks)	Nocturnal blood pressure	Measured using a monitoring device. Higher score means worse health.
Outcome 6	Secondary	Percieved stress	Baseline, post-treatment (wk 12), follow-up (28 wks)	Percieved Stress Scale (PSS-10)	Higher scores indicate greater percieved stress.
Outcome 7	Secondary	Anxiety	Baseline, post-treatment (wk 12), follow-up (28 wks)	Hospital Anxiety and Depression Scale (HADS)	14 items,divided into two 7 item subscales. Total score is out of 42. Higher score indicates greater level of anxiety or depression.

Characteristics of included studies	Hypertension				
Study ID	**Cramer 2018**				
Outcome 8	Secondary	Depression	Baseline, post-treatment (wk 12), follow-up (28 wks)	Hospital Anxiety and Depression Scale (HADS)	14 items,divided into two 7 item subscales. Total score is out of 42. Higher score indicates greater level of anxiety or depression.
Outcome 9	Secondary	Quality of life	Baseline, post-treatment (wk 12), follow-up (28 wks)	SF-36	Scale of 0-100. Higher value indicates better status.
Outcome 10	Secondary	Physical activity	Baseline, post-treatment (wk 12), follow-up (28 wks)	Baecke Physical Activity Questionnaire	--
Method of analysis					
Statistics	All linear outcome measures were evaluated by means of univariate analyses of covariance (ANCOVA). All analyses were carried out using Statistical Package for Social Sciences Softwares				
Population analysed	Intent-to-treat				
Missing data	6/75 dropped all. Reasons provided for all. Missing data was imputed				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	No pre-specified analysis plan infers some risk of bias.				

Characteristics of included studies	Hypertension (grade 1 or 2)	
Study ID	**Ghati 2020**	
Study reference/s	N. Ghati, A. K. Killa, G. Sharma, B. Karunakaran, A. Agarwal, S. Mohanty, L. Nivethitha, D. Siddharthan and R. M. Pandey. A randomized trial of the immediate effect of bee-humming breathing exercise on blood pressure and heart rate variability in patients with essential hypertension. Explore: The Journal of Science & Healing. 2020;28:28 CTRI/2018/08/015215	
Study design	RCT	
Author/s affiliation	All India Institute of Medical Sciences, New Delhi, India	
Source of funds	Center of excellence grant from AYUSH ministry, Government of India	
Declared interests of study authors	None reported	
Setting / provider	Center for Integrative Medicine andResearch (CIMR), AIIMS, New Delhi	
Country(s) / region **Enrolment period**	India 25th of August 2018 to 1st of March 2019	
Length of treatment / follow up (wk. or mo.)	Individual session	
Description of population	*N=*	*Description*
# participants	70	Patients with essential hypertension

Characteristics of included studies	Hypertension (grade 1 or 2)	
Study ID	**Ghati 2020**	
details	*Inclusion criteria:* both male andfemale hypertensive patients were eligible for the enrolment in the study if they were 30-70 years of age, having SBP between 140-180 mmHg , DBP between 90-110 mmHg, and not taking more than two anti-hypertensive medications. *Exclusion criteria:* poor drug compliance, presence of secondary hypertension, coronary artery disease, heart failure, arrhythmia, rheumatic heart disease, congenital heart disease, and other significant systemic (renal, hepatic, pulmonary, neurological and, psychiatric) diseases or complications. Those who were practicing yoga regularly for more than one month, and subjects who were unable to perform BHB exercise were also excluded from the trial.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	35	A one-off session. Preceded by 5 minutes of rest, the yoga group participants performed BHB exercise, which involves deep inhalation through both nostrils followed by exhalation along with the production of a hummingbee sound ('MMMM') for as long as possible. Duration was ~10 to 15 seconds, leading to a breath rate of 4-6 per minutes. This was repeated for a duration of 5 minutes.
Comparator #1 (control)	--	--
Comparator #2 (other)	35	placebo (slow breathing exercise): The participants of the control group assumed the same posture and duration as the yoga group. But they were asked to inhale deeply through both the nostrils followed by exhalation along with the production of a hissing sound ('SSSS') for as long as possible. This con trolled slow breathing exercise was designed to evaluate the exact benefit of bee-humming sound over and above the beneficial effect of slow deep breathing.
Comparator #3 (other)	--	--
Co-interventions	--	Anti-hypertensive medication
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Hypertension (grade 1 or 2)				
Study ID	**Ghati 2020**				
Is there an inactive comparator?	No	Comparison=other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Cardiovascular disease-risk	Pre-treatment, Post treatment	Systolic blood pressure	mmHg, as measured by non-invasive ambulatory blood pressure monitoring system. Higher score means worse health
Outcome 2	Primary	Cardiovascular disease-risk	Pre-treatment, Post treatment	Diastolic blood pressure	mmHg, as measured by non-invasive ambulatory blood pressure monitoring system. Higher score means worse health
Outcome 3	Primary	Cardiovascular disease-risk	Pre-treatment, Post treatment	Mean Arterial Pressure	mmHg, as measured by non-invasive ambulatory blood pressure monitoring system. Higher score means worse health
Outcome 4	Primary	Cardiovascular disease-risk	Pre-treatment, Post treatment	Heart rate	Beats/min, as measured by non-invasive ambulatory blood pressure monitoring system. Higher score means worse health
Outcome 5	Primary	Cardiovascular disease-risk	Pre-treatment, Post treatment	Stroke volume	ml/beat, as measured by non-invasive ambulatory blood pressure monitoring system. Higher score meansbetter health.
Outcome 6	Primary	Cardiovascular disease-risk	Pre-treatment, Post treatment	Total vascular resistance	Change in pressure divided by rate of flow through vasculature,as measured by non-invasive ambulatory blood pressure monitoring system. Decreased TVR indicates more blood flow.
Outcome 7	Secondary	Cardiovascular disease-risk	Pre-treatment, Post treatment	High/Low frequency power	Indicative of heart rate variability frequency domain. Measured by Digital Holter recorder machine.

Characteristics of included studies	Hypertension (grade 1 or 2)				
Study ID	**Ghati 2020**				
Outcome 8	Secondary	Cardiovascular disease-risk	Pre-treatment, Post treatment	(rMSSD) Measured by Digital Holter recorder machine.	Indicative of heart rate variability time domain. Square root of the mean of the sum of the squares of differences between adjacent normal-to-normal intervals
Outcome 9	Secondary	Cardiovascular disease-risk	Pre-treatment, Post treatment	proportion derived by dividing NN50 by the total number of NN intervals.	Indicative of heart rate variability time domain. Measured by Digital Holter recorder machine.
Outcome 10		--	--	--	--
Method of analysis					
Statistics	Data analysed using STATA ver 14. Categorical variables reported as frequency (percentages) and subsequently comapred using Chi-Square test. Continuous varaibles were tested for approximate normality and reported as mean § SD. Effect size calculated using ANCOVA.				
Population analysed	Intent-to-treat	Modified intent to treat (incomplete data was removed)			
Missing data	3/70 lost to ambulatory BP measurements and 5/70 lost to heart rate variability measurements. Incomplete data was removed.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	No pre-specified analysis plan infers some risk of bias.				

Characteristics of included studies	Prehypertension (or stage 1)	
Study ID	**Hagins 2014**	
Study reference/s	M. Hagins, A. Rundle, N. S. Consedine and S. B. Khalsa. A randomized controlled trial comparing the effects of yoga with an active control on ambulatory blood pressure in individuals with prehypertension and stage 1 hypertension. Journal of Clinical Hypertension. 2014;16(1):54-62 NCT01542359	
Study design	RCT	
Author/s affiliation	Long Island University, Brooklyn, NY; Columbia University, New York, NY; The University of Auckland, Auckland, New Zealand; Brigham and Women's Hospital, Harvard Medical School, Boston, MA	
Source of funds	Funded by the National Institute of General Medical Sciences: 1SC3GM088049-01A1.	
Declared interests of study authors	Authors declared no conflicts of interest	
Setting / provider	Long Island University	
Country(s) / region	USA	
Enrolment period	January 2010 to March 2012	
Length of treatment / follow up (wk. or mo.)	12 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	84	Participants with prehypertension or stage 1 hypertension

Characteristics of included studies	Prehypertension (or stage 1)	
Study ID	**Hagins 2014**	
details	*Inclusion criteria:* Participants included if they were between the ages of 21 and 70 years old, had prehypertension or stage 1 hypertension (SBP:120-159 mmHg, DBP: 80-99mmHg), were considered medically stable on any current medications, BMI between 18.5-40 kg/m2 and english speaking. *Exclusion criteria:* Participants were excluded if they were currently using insulion or oral hypoglycemic agents, had a history of previous cardiovascular events, cancer diagnosis or symptoms of significant peripheral vascular disease, signifcant comorbidities that preclude successful completion of the study, or if they were a regular/current yoga practitioner (3 sessions in the past year).	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	45	Yoga group: 2x55 min classes per wk for 12 wks. Participants also encouraged to perform 3 sesions of home practice for 20 minutes each wk. A typical session included mediation for 5-7 minutes followed by 35 minutes of physical postures. The last 15 minutes included 10 minutes of regulated breathing and 5 minutes of relaxation.
Comparator #1 (control)	--	--
Comparator #2 (other)	39	Exercise group: 2x55 min classes per wk for 12 wks. Participants also encouraged to perform 3 sesions of home practice for 20 minutes each wk.A typical session included 5-7 minutes of warm up exercises followed by 30-35 minutes of movement exercises. The final 13-20 minutes focused on stretching.
Comparator #3 (other)	--	--
Co-interventions	--	--
Is practitioner/ instructor certified?	Yes	Include in subgroup A

Characteristics of included studies	Prehypertension (or stage 1)				
Study ID	**Hagins 2014**				
Is there an inactive comparator?	No	Comparison=other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	24-hr ambulatory systolic blood pressure	mmHg, measured using Oscar2. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	24-hr ambulatory diastolic blood pressue	mmHg, measured using Oscar2. Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Heart rate	Beats/min, as measured by stop watch. Higher score means worse health
Outcome 4	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	SBP, DBP and HR (day)	Same outcomes above measured during the day
Outcome 5	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	SBP, DBP and HR (night)	Same outcomes above measured during the night
Outcome 6	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Mean Arterial Pressure	mmHg. Higher score means worse health.
Outcome 7	Not specified	Biochemical parameters	Measurements taken during wks 6 to 8 of the intervention.	Metabolic equivalents	Measured using portable indirect calorimeter.

Characteristics of included studies	Prehypertension (or stage 1)				
Study ID	**Hagins 2014**				
Outcome 8	Not specified	Emotional function	Baseline and post treatment (12 wks)	Self-reported psychosocial measures	Not described and reported elsewhere
Outcome 9		--	--	--	--
Outcome 10		--	--	--	--
Method of analysis					
Statistics	Paired t tests were used to assess changes within group preintervention to postintervention. Separate repeated-measures ANOVAs (time x group) were used to determine significant differences relative to the intervention.				
Population analysed	Intent-to-treat	Modified intent to treat			
Missing data	9/45 lost to follow up in yoga group, 7/39 lost to follow up in control group.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Participant drop out due to trial context, missingness of data and no specified analysis plan infer some risk of bias.				

Characteristics of included studies	Hypertension	
Study ID	**McCaffrey-2005**	
Study reference/s	R. McCaffrey, P. Ruknui, U. Hatthakit and P. Kasetsomboon. The effects of yoga on hypertensive persons in Thailand. Holistic nursing practice. 2005;19(4):173-180	
Study design	RCT	
Author/s affiliation	Florida Atlantic University, Boca Raton; Songkhla Hospital, Songkhla, Thailand; Prince of Songkhla University, Songkhla, Thailand	
Source of funds	Not stated	
Declared interests of study authors		
Setting / provider	Community	
Country(s) / region **Enrolment period**	Songkhla Province, Southern Thailand July - November 2003	
Length of treatment / follow up (wk. or mo.)	8 wks	
Description of population	*N=*	*Description*
# participants	54	Patients with hypertension

Characteristics of included studies	Hypertension	
Study ID	**McCaffrey-2005**	
details	*Inclusion criteria:* The target population was identified as having a diagnosis of hypertension (BP > 140/90 mm Hg) and not currently taking antihypertensive medications.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	27	Yoga: 3 sessions a wk for 8 consecutive wks. The experimental group used pranayama(meditative) and asana(elongating and strengthening muscles) yoga training cassettes and received demonstrations by a trained research assistant. Each session was approximately 63 minutes long.
Comparator #1 (control)	27	Control (no intervention).
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	Standard outpatient care (including edducational advice)	
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Hypertension				
Study ID	**McCaffrey-2005**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline, 2 wks, 4 wks, 6 wks and post treatment (8 wks)	Systolic blood pressure	mmHg, as measured by non-invasive ambulatory blood pressure monitoring system. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline, 2 wks, 4 wks, 6 wks and post treatment (8 wks)	Diastolic blood pressure	mmHg, as measured by non-invasive ambulatory blood pressure monitoring system. Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline, 2 wks, 4 wks, 6 wks and post treatment (8 wks)	Body-Mass index	Weight divided by height. Higher score indicates worse health
Outcome 4	Not specified	Cardiovascular disease-risk	Baseline, 2 wks, 4 wks, 6 wks and post treatment (8 wks)	Heart rate	Beats/min, as measured by non-invasive ambulatory blood pressure monitoring system. Higher score means worse health
Outcome 5	Not specified	Stress Symptoms	Baseline, 2 wks, 4 wks, 6 wks and post treatment (8 wks)	Stress Assessment Questionnaire	Modified from the Stress of Symptom Inventory.
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--

Characteristics of included studies	Hypertension				
Study ID	**McCaffrey-2005**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Data analysed using SPSS. Mean, SD and range of total stress score were analysed to compare stress levels between groups. Paired t tests determined the difference in mean stress test scores. A repeated-measures analysis of variance (ANOVA) tested differences in means of BP,HR & BMI.				
Population analysed	Intent-to-treat	Modified (patients lost to follow up were excluded)			
Missing data	5/27 lost to experimental group. 2/27 lost to control group. Missing values were excluded				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Lack of information regarding allocation concealment and lack of pre-specified analysis plan infers some risk of bias.				

Characteristics of included studies	Hypertension	
Study ID	**Misra-2019**	
Study reference/s	S. Misra, J. Smith, N. Wareg, K. Hodges, M. Gandhi and J. A. McElroy. Take a deep breath: A randomized control trial of Pranayama breathing on uncontrolled hypertension. Advances in Integrative Medicine. 2019;6(2):66-72 NCT03320577	
Study design	RCT	
Author/s affiliation	University of Missouri, Columbia, Missouri, United States	
Source of funds	Agency for Healthcare Research and Quality, Clinician's time was supported by internal funds, Family and Commmunity Medicine Department's Leader Explore and Achieve Proficiency program internal funds.	
Declared interests of study authors	None	
Setting / provider	Family and Community Medicine clinic	
Country(s) / region	USA	
Enrolment period	Not indicated	
Length of treatment / follow up (wk. or mo.)	6 wks (1 & 3 month follow up)	
Description of population	*N=*	*Description*
# participants	83	Patients with hypertension

Characteristics of included studies	Hypertension		
Study ID	**Misra-2019**		
details	*Inclusion criteria:* participants were considered eligible for the study if they were: less than 60 years of age with blood pressure measurements of >140/>90 mm Hg; 60 years of age or older with blood pressure measurements of >150/> 90 mm Hg; diagnosed with diabetes with blood pressure measurements of >140/ >90 mm Hg; and had blood pressure measurements of <180/ <110 mm Hg without hypertensive urgency symptoms. *Exclusion critera:* Participants were excluded from the study if they were: less than 18 years of age, had chronic obstructive pulmonary disease, chronic renal disease stage II or above, a history of alcoholism, cognitive problems, mental health diagnosis such as schizophrenia, were non-English speakers, had advanced stage congestive heart failure, or did not have access to internet or a DVD player.		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	
Intervention	23	In-class yoga group: 5x30 min breathing sessions a wk. One session was in-class instruction group then the other four sessions were performed at home. Sessions included 2 mins of bellow breathing, 5 mins of rapid exhalations, 5 mins of Alternate Nostril Breathing and finishing with Bumblebee Breathing.	
Comparator #1 (control)	22	Control group: No intervention. Participants were asked to record dinner time at least 5 times a wk.	
Comparator #2 (other)	38	DVD yoga group: 5x30 min breathing sessions a wk. Followed DVD or Youtube video as session guide. Sessions included 2 mins of bellow breathing, 5 mins of rapid exhalations, 5 mins of Alternate Nostril Breathing and finishing with Bumblebee Breathing.	
Comparator #3 (other)	--	--	
Co-interventions	--	Standard medical care (antihypertensives)	
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	

Characteristics of included studies	Hypertension				
Study ID	**Misra-2019**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Cardiovascular disease-risk	Baseline, 4 wks, post treatment (6 wks) and 3 month follow up	Systolic blood pressure	mmHg, as measured by clinicians. Higher score means worse health
Outcome 2	Primary	Cardiovascular disease-risk	Baseline, 4 wks, post treatment (6 wks) and 3 month follow up	Diastolic blood pressure	mmHg, as measured by clinicians. Higher score means worse health
Outcome 3	Secondary	Medication use	Baseline, post treatment (6 wks)	Questionnaire	Difference on blood pressure (mean mmHg) reduction stratified by use of beta blockers
Outcome 4	Secondary	Stress, specific event	Baseline, 4 wks, post treatment (6 wks) and 3 month follow up	Percieved politcal stress questionnaire	Differences on blood pressure reduction stratified by participants reporting stress using two questions about stress before and after 2016 election rated on 5-point likert scale. Low score indicates low stress
Outcome 5	Secondary	Self-efficacy	Baseline, 4 wks, post treatment (6 wks) and 3 month follow up	Self-efficacy scale	10-40 in response to breathing exercises.
Outcome 6	Secondary	Depression	Baseline, 4 wks, post treatment (6 wks) and 3 month follow up	PHQ-9 Patient Health Questionnaire	% of participants who had depressive symptoms. Score from 0-27. Higher score indicates greater depressive symptoms.
Outcome 7	NA	--	--	--	--

Characteristics of included studies	Hypertension				
Study ID	**Misra-2019**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	All analyses were performed in SAS version 9.4. To examine differences between the study arms, chi-square analyses were utilised. Multivariable logistic regressions were used to model the asociations between select participants.				
Population analysed	Intent-to-treat	Modified (patients lost to follow up were excluded)			
Missing data	101 initially allocated to experimental group's with 21 dropping out of in-class group and 19 dropping out of DVD group. 10 subjects dropped out of control. Missing values were excluded				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	Missingness in data due to context related drop out, bias due to missingness of data and lack of pre-specified analysis plan inferred a high risk of bias for this study.				

Characteristics of included studies	Hypertension (grade 1)	
Study ID	**Mourya-2009**	
Study reference/s	M. Mourya, A. S. Mahajan, P. Singh and A. K. Jain. Effect of slow and fast breathing exercises on autonomic functions in patients with essential hypertension. Journal of Alternative & Complementary Medicine 2009 Jul;15(7):711-717. 2009	
Study design	RCT	
Author/s affiliation	Department of Physiology and Department of Medicine, Maulana Azad Medical College, New Delhi, India.	
Source of funds	Self funded (M.D. thesis)	
Declared interests of study authors	None	
Setting / provider	Department of Physiology, Maulana Azad Medical College	
Country(s) / region **Enrolment period**	Louisiana, USA Not Stated	
Length of treatment / follow up (wk. or mo.)	3 months	
Description of population	*N=*	*Description*
# participants	60	Patients with stage 1 hypertension

Characteristics of included studies	Hypertension (grade 1)	
Study ID	**Mourya-2009**	
details	Inclusion: 20–60 years with essential hypertension stage 1 Exclusion: < 20 or > 60 yrs old, outside of hypertension stage mentioned above, with normal autonomic function tests, with a history of smoking, alcohol or drug intake, receiving drugs that alter the heart rate and subjects already performing breathing or yogic exercises, patients with secondary hypertension, diabetes mellitus, chronic breathing disorders, congestive heart failure, ischemic heart disease, chronic atrial fibrillation, previous stroke, psychiatric disorder, or clinical evidence of malnutrition were not included.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	17	Yoga group (fast breathing): Initially 2 wks, daily classes to learn beathing technique. Following first 2 wks, participants were instructed to pratice exercises for 15 minutes twice daily for 3 months. If required they could record breathing rate. Patients were instructed to breathe quickly and deeply, with an inhalation and exhalation time of 1 second each for 1 minute followed by 3 minutes rest. The procedure was repeated 4 to 5 times for 15 minutes.
Comparator #1 (control)	20	Control group: No intervention
Comparator #2 (other)	18	Yoga group (slow breathing): Initially 2 wks, daily classes to learn beathing technique. Following first 2 wks, participants were instructed to pratice exercises for 15 minutes twice daily for 3 months. If required they could record breathing rate. Inhale and exhale out of alternating nostrils for 6 seconds each. Aimed for 5-6 breaths per minute and repeat for 15 minutes.
Comparator #3 (other)	--	--
Co-interventions	--	Standard medical care (antihypertensives) Some patients were without medication, while others were receiving either diuretics or angiotensin-converting enzyme inhibitors or both as per standard treatment guidelines
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Hypertension (grade 1)				
Study ID	**Mourya-2009**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Cardiovascular disease-risk	Baseline and post-treatment (3 months)	Systolic blood pressure	mmHg, as measured by clinicians. Higher score means worse health
Outcome 2	Primary	Cardiovascular disease-risk	Baseline and post-treatment (3 months)	Diastolic blood pressure	mmHg, as measured by clinicians. Higher score means worse health
Outcome 3	Secondary	Autonomic function	Baseline and post-treatment (3 months)	S/L ratio	Ratio of longest R-R interval during 5 beats before lying down to shortest R-R interval during 10 beats after lying down. S/L ratio<1 is considerd normal and S/L ration < 1 is considered abnormal. Measured using ECG
Outcome 4	Secondary	Autonomic function	Baseline and post-treatment (3 months)	30:15 ratio	Ratio of R-R interval at beat 30 and at beat 15 after standing. Ratio > 1.04 is considered normal and a ratio of < 1 is considered abnormal. Measured using ECG
Outcome 5	Secondary	Autonomic function	Baseline and post-treatment (3 months)	Valsalva ratio	Ratio of longest R-R interval after breathing forcefully into a tube to the shortest R-R interval during the strain. A ratio> 1.45 was normal, between 1.20 and 1.45 borderline and <1.2 was abnormal.
Outcome 6	Secondary	Autonomic function	Baseline and post-treatment (3 months)	E/I ratio	Sum of six longests R-R intervals divided by the sum of the six shortest R-R intervals following deep breathing.
Outcome 7	Secondary	Autonomic function	Baseline and post-treatment (3 months)	Hand grip test	Indicated by changes in diastolic blood pressure. DBP > 15mmHg was considered normal, 11-15 mmHg was borderline and <10mmHg was abnormal.

Characteristics of included studies	Hypertension (grade 1)				
Study ID	**Mourya-2009**				
Outcome 8	Secondary	Autonomic function	Baseline and post-treatment (3 months)	Cold pressor response	Indicated by changes in systolic and diastolic blood pressure when hand of patient was immersed in cold water. A rise of SBP >15mmHg and diastolic BP > 10mmHg was considered normal.
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Changes in all varaibles at baseline and 3 months was evaluated using analysis of variance. Intergroup variance assessed using unpaired t-test.				
Population analysed	Intent-to-treat	Modified (patients lost to follow up were excluded)			
Missing data	2/20 from slow breathing group, 3/20 from fast breathing group. Results were not included in analysis.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Lack of information regarding allocation concealment and lack of pre-specified analysis plan inferred some risk of bias for this study.				

Characteristics of included studies	Hypertension	
Study ID	**Murugesan-2000**	
Study reference/s	R. Murugesan, N. Govindarajulu and T. K. Bera. Effect of selected yogic practices on the management of hypertension. Indian journal of physiology and pharmacology. 2000;44(2):207-210	
Study design	RCT	
Author/s affiliation	Department of Physical Education, Pondicherry University, Pondicherry Scientific Research Department, Kaivalyadhama S.M.Y.M. Samiti, Lonavla, Pune	
Source of funds	None reported	
Declared interests of study authors	None reported	
Setting / provider	Hospital setting	
Country(s) / region	NSW, Australia	
Enrolment period	Not stated	
Length of treatment / follow up (wk. or mo.)	11 wks (Nil follow up)	
Description of population	*N=*	*Description*
# participants	33	Patients with hypertension

Characteristics of included studies	Hypertension	
Study ID	**Murugesan-2000**	
details	Inclusion: Subjects between 35 and 65 years old with hypertension (based on medical officer diagnosis). Exclusion: None reported	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	11	Yoga group: 2x1 hr sessions daily for 6 days a wk. Yogic practices included shavasana, pavanamuktasana, ardhahalasana, viparitakarani, ardhamatsyasana, makarasana, bhujangasana, ardhshalabhasana, vakrasana, vajrasana, yoga mudra, chakrasana, tadasana, nadi-sodhana, Om recitation and medication.
Comparator #1 (control)	11	Control group: No intervention. Controlled with proper suggestions rendered by the said physicians.
Comparator #2 (other)	11	Medication group: Prescribed antihypertensive drugs by physcians in Govt. General Hosptial, Pondicharry.
Comparator #3 (other)	--	--
Co-interventions	--	--
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Hypertension				
Study ID	**Murugesan-2000**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (11 wks)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (11 wks)	Diastolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (11 wks)	Heart rate	Beats/min, as measured by stop watch. Higher score means worse health
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--

Characteristics of included studies	Hypertension				
Study ID	**Murugesan-2000**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Analysis of Covariance was employed to compare the different treatment effects of Yoga and drugs in controlling intensity of hypertension. Scheffe's Post HOC test was also applied to test the significance of difference between pairs of adjusted means.				
Population analysed	Intent-to-treat	patients unable to complete intervention were excluded			
Missing data	Not reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	Lack of information regarding concealment, missingness of data and lack of pre-specified analysis plan inferred a high risk of bias for this study				

Characteristics of included studies	Hypertension (grade 1)	
Study ID	**Patil-2014**	
Study reference/s	S. G. Patil, G. B. Dhanakshirur, M. R. Aithala, G. Naregal and K. K. Das. Effect of yoga on oxidative stress in elderly with grade-I hypertension: a randomized controlled study. Journal of Clinical and Diagnostic Research JCDR. 2014;8(7):BC04-7	
Study design	RCT	
Author/s affiliation	BLDE University's Shri B.M.Patil Medical College, Hospital & Research Centre	
Source of funds	Government of India and BLDE University	
Declared interests of study authors	None reported	
Setting / provider	Hospital	
Country(s) / region	India	
Enrolment period	Not stated	
Length of treatment / follow up (wk. or mo.)	3 months (no follow up)	
Description of population	*N=*	*Description*
# participants	60	Patients with grade-1 hypertension

Characteristics of included studies	Hypertension (grade 1)	
Study ID	**Patil-2014**	
details	Inclusion: Elderly (60-80) male subjects with Grade-1 hypertension. Subjects with Grade-I hypertension. Exclusion: Subjects on any medications and subjects with CV risk factors such as diabetes mellitus, hypercholesterolemia and high triglyceride level were excluded from the study.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	28	Yoga group: 6x1hr sessions per wk. The integrated yoga module for intervention includes: Opening prayer (1min); Sukshma Vyayama or loosening practices; (5 min); Breathing practices like Hands in and out breathing; Ankle stretch breathing, Straight leg raising breathing; Lumbar stretch breathing (5 min); Asanas or maintaining postures such as Padhastasana, Ardhachakrasana, Shashankasana, Ardha Ustrasana, Bhujangasana, Ardha Salabasana and Trikonasana (15 min); Pranayama or breathing exercises such as Anuloma Viloma Pranayama and Brahmari Pranayama (5 min); Cyclic meditation, a yoga based guided relaxation technique
Comparator #1 (control)	--	--
Comparator #2 (other)	29	Control group: flexibility or stretching practices for 15-20 min followed by walking for 35-40 min and rest for 5 min for six days in a wk, for one hour in the morning between 06:00 to 7.00 hours for three months under the supervision of an authorised instructor
Comparator #3 (other)	--	--
Co-interventions	--	--
Is practitioner/ instructor certified?	Yes	Include in subgroup A

Characteristics of included studies	Hypertension (grade 1)				
Study ID	**Patil-2014**				
Is there an inactive comparator?	No	Comparison=other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Biochemical parameters	Baseline and post-treatment (3 months)	Serum MDA level	Lower value tends to indicate increased health
Outcome 2	Not specified	Biochemical parameters	Baseline and post-treatment (3 months)	Serum GSH level	Lower value tends to indicate increased health
Outcome 3	Not specified	Biochemical parameters	Baseline and post-treatment (3 months)	Serum Vitamin C	Lower value tends to indicate increased health
Outcome 4	Not specified	Biochemical parameters	Baseline and post-treatment (3 months)	Superoxider dismutase (SOD)	Lower value tends to indicate increased health
Outcome 5	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (3 months)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 6	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (3 months)	Diastolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 7	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (3 months)	Pulse pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health.

Characteristics of included studies	Hypertension (grade 1)				
Study ID	**Patil-2014**				
Outcome 8	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (3 months)	Mean Arterial Pressure	mmHg. Higher score means worse health.
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Paired t-test for normally distributed data and Wilcoxon signed rank test for non-normally distributed data was applied for determination of statistical significance				
Population analysed	Intent-to-treat	Modified (Patients lost to follow up were excluded)			
Missing data	e.g., imputations, loss to follow up etc.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Lack of information regarding randomisation and concealment of group assignment and lack of pre-specified analysis plan inferred some risk of bias for this study.				

Characteristics of included studies	Hypertension	
Study ID	**Punita-2016**	
Study reference/s	P. Punita, M. Trakroo, S. R. Palamalai, S. K. Subramanian, A. B. Bhavanani and C. Madhavan. Randomized controlled trial of 12-wk yoga therapy as lifestyle intervention in patients of essential hypertension and cardiac autonomic function tests. National Journal of Physiology, Pharmacy and Pharmacology. 2016;6(1):19-26	
Study design	RCT	
Author/s affiliation	Meenakshi Medical College and Research Institute, Kancheepuram, Tamil Nadu, India. Mahatma Gandhi Medical College and Research Institute, Pondicherry, India. ESIC Medical College and Hospital, Coimbatore, Tamil Nadu, India. Center for Yoga Therapy Education and Research (CYTER).	
Source of funds	None	
Declared interests of study authors	None declared	
Setting / provider	Hospital	
Country(s) / region	India	
Enrolment period	Not stated	
Length of treatment / follow up (wk. or mo.)	12 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	80	Patients with hypertensions

Characteristics of included studies	Hypertension	
Study ID	**Punita-2016**	
details	Inclusion: HT in the age group of 35–55 years were recruited from the Medicine Outpatient Department (OPD) of JIPMER. Exclusion: Subjects with secondary HT, diabetes, ischemic heart disease, nephropathy, retinopathy, and any other chronic illness were also excluded by medical history. Subjects with any physical conditions hindering the performance of yoga practices	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	25	Yoga group: 3x45 minute sessions for 12 wks. Yoga sessions started with a brief prayer then preparatory practices such as breath-body coordination and joint loosening exercises for 10 mins. Followed by 10 min asan, 10 min pranayam, and 15 min Shavasan practice. Also recieved antihypertensive drugs
Comparator #1 (control)	30	Control group (no intervention)
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	Routine medical treatment (treatment given in JIPMER OPD)	
Is practitioner/ instructor certified?	Yes	Include in subgroup A

Characteristics of included studies	Hypertension				
Study ID	**Punita-2016**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks)	Heart rate	Beats/min, as measured by stop watch. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks)	Diastolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 4	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks)	Pulse pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health.
Outcome 5	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks)	Mean Arterial Pressure	mmHg. Higher score means worse health.
Outcome 6	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks)	Rate pressure product	Product of brachial systolic blood pressure and the heart rate. Higher score indicates cardiac muscle is under greater stress
Outcome 7	Not specified	Anthropometric parameters	Baseline and post-treatment (12 wks)	Height, body weight, BMI, WHR	

Characteristics of included studies	Hypertension				
Study ID	**Punita-2016**				
Outcome 8	Not specified	Autonomic parameters	Baseline and post-treatment (12 wks)	VLF power, LF power, HF power, total power, LF:HF, LF, HF	Higher is best
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	SPSS software was used for data analysis. Pre-post intervention comparisions were made using Student's paired t-test within the group.				
Population analysed	Intent-to-treat	Modified (Patients lost to follow up were excluded)			
Missing data	10 and 14 lost to follow up in Control and Yoga group respectively. Those lost to follow up and not reaching minimum attendance (70%) were excluded from analysis.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Drop out due to trial context and lack of a pre-specific analysis plan inferred some risk of bias for this study.				

Characteristics of included studies	Hypertension	
Study ID	**Pushpanathan 2015**	
Study reference/s	P. Pushpanathan, M. Trakroo, R. P. Swaminathan and C. Madhavan. Heart rate variability by Poincare plot analysis in patients of essential hypertension and 12-wk yoga therapy. National Journal of Physiology, Pharmacy and Pharmacology. 2015;5(3):174-180	
Study design	RCT	
Author/s affiliation	Meenakshi Medical College Hospital and Research Institute, Kancheepuram, Tamil Nadu, India. Mahatma Gandhi Medical College and Research Institute, Pillaiyarkuppam, Puducherry, India. Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Puducherry, India	
Source of funds	None reported	
Declared interests of study authors	None declared	
Setting / provider	Medicine Outpatient Department of Jawaharlal Insitute of Postgraduate Medical Education and Research	
Country(s) / region	India	
Enrolment period	None reported	
Length of treatment / follow up (wk. or mo.)	12 wks	
Description of population	*N=*	*Description*
# participants	70	Patients with hypertension

Characteristics of included studies	Hypertension	
Study ID	**Pushpanathan 2015**	
details	Inclusion: Patients aged 35-55 yrs of age with hypertension. Exclusion: Patients with secondary hypertension, diabetes mellitus coronary arterial disease and physical conditions hindering performance of yoga were excluded from the study.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	34	Yoga group: 3x45 min session per wk fro 12 wks. Sessions were comprised of preparatory practices for 5 mins followed by 15 mins of static postures. 15 mins of Pranayam was done prior to 10 minutes of relaxation techniques.
Comparator #1 (control)	36	Control group (no intervention)
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	Antihypertensive medication	
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Hypertension				
Study ID	**Pushpanathan 2015**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks)	Systolic Blood Pressure	mmHg, Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks)	Diastolic Blood Pressure	mmHg, Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks)	Mean Arterial Pressure	mmHg. Higher score means worse health.
Outcome 4	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks)	Rate Pressure Product	Product of brachial systolic blood pressure and the heart rate. Higher score indicates cardiac muscle is under greater stress
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--

Characteristics of included studies	Hypertension				
Study ID	**Pushpanathan 2015**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Analysed using SPSS software. Comparison of pre-post intervention was done using Student's paired t-test within the group. Student's unpaired t-test was used to compare the study to control group.				
Population analysed	Intent-to-treat	Modified (Patients lost to follow up were excluded)			
Missing data	6/36 and 4/34 lost to follow up in control and yoga group.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Lack of a pre-specific analysis plan inferred some risk of bias for this study.				

Characteristics of included studies	Prehypertension	
Study ID	**Saptharishi 2009**	
Study reference/s	L. Saptharishi, M. Soudarssanane, D. Thiruselvakumar, D. Navasakthi, S. Mathanraj, M. Karthigeyan and A. Sahai. Community-based Randomized Controlled Trial of Non-pharmacological Interventions in Prevention and Control of Hypertension among Young Adults. Indian Journal of Community Medicine. 2009;34(4):329-34 H. Subramanian, M. B. Soudarssanane, R. Jayalakshmy, D. Thiruselvakumar, D. Navasakthi, A. Sahai and L. Saptharishi. Non-pharmacological Interventions in Hypertension: A Community-based Cross-over Randomized Controlled Trial. Indian Journal of Community Medicine. 2011;36(3):191-6	
Study design	RCT	
Author/s affiliation	Jawaharlal Institute of Post-graduate Medical Education & Research (JIPMER), Puducherry, India	
Source of funds	Stort Term Studentship scheme, Indian Council of Medical Research, New Delhi	
Declared interests of study authors	None reported	
Setting / provider	Kuruchikuppam, JIPMER	
Country(s) / region	India	
Enrolment period	None reported	
Length of treatment / follow up (wk. or mo.)	8 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	113	Young patients with prehypertension and hypertension.

Characteristics of included studies	Prehypertension	
Study ID	**Saptharishi 2009**	
details	Inclusion: Participant included if hypertension reading above SBP 130-139 mmHg and DBS 85-89mmHg and within age range of 20-25. Exclusion: Participants excluded if presenting with severe hypertension.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	27	Yoga group: 5x30-45 minute sessions per wk. Sessions included relaxation techniques like pranayama(breathing exercises), asanas like savasana, ardha matsyendrasana, naadishudhi asana, single leg and double leg raise.
Comparator #1 (control)	30	Control group (no intervention)
Comparator #2 (other)	28	Physical exercise group: 4x50-60 minutes of brisk walking per wk. Often accompanied by investigator
Comparator #3 (other)	28	Salt reduction group: Participants were given practical suggestions on reducing their salt intake. Asked to use separate salt packets and their food was cooked separate from that of other family members. Questionnaire used to assess compliance. Aimed to reduce their daily salt intake to at least half of their previous intake.
Co-interventions	--	--
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Prehypertension				
Study ID	**Saptharishi 2009**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks), after crossover(20 wks)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post-treatment (12 wks), after crossover(20 wks)	Diastolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	NA	--	--	--	--
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--

Characteristics of included studies	Prehypertension				
Study ID	**Saptharishi 2009**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Pre-intervention and post intervention BP values analysed using paired 't' test. Intergroup comparisons made using ANOVA with Games Howell post hoc test.				
Population analysed	Intent-to-treat	Both ITT and moddified results were reported. "ITT analysis was carried out by including the attrition cohort" (assume this means last observation carried forward)			
Missing data	11 dropped out across all groups, 1/30 in the control; 6/27 in the yoga group; 1/28 in the physical exercise group; 3/28 in the salt reduction group.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	Missingness of data, lack of sensitivity analysis and lack of a pre-specific analysis plan inferred high risk of bias for this study.				

Characteristics of included studies	Prehypertension (or stage 1)	
Study ID	**Shetty 2017**	
Study reference/s	P. Shetty, B. Kiran Kumar Reddy, D. R. Lakshmeesha, S. P. Shetty, G. Selva Kumar and R. Bradley. Effects of Sheetali and Sheetkari pranayamas on blood pressure and autonomic function in hypertensive patients. Integrative Medicine (Boulder). 2017;16(5):32-37	
Study design	RCT	
Author/s affiliation	Sri Dharmasthala Manjunatheshwara College of Naturopathy & Yogic Sciences National University of Natural Medicine in Portland, Oregon Division of Preventive Medicine, University of California, San Diego	
Source of funds	None reported	
Declared interests of study authors	None reported	
Setting / provider	Clinical research center at Sri Dharmasthala Manjunatheshwara Yoga and Nature Cure Hospital (Belthangady, India)	
Country(s) / region	India	
Enrolment period	None reported	
Length of treatment / follow up (wk. or mo.)	30 days	
Description of population	*N=*	*Description*
# participants	60	Patients with pre or stage 1 hypertension

Characteristics of included studies	Prehypertension (or stage 1)	
Study ID	**Shetty 2017**	
details	Inclusion: Aged between 25 and 65 years, diagnosed with pre-hypertension or stage 1 hypertension, being treated with medication Exclusion: Participants excluded if they have secondary hypertension, a history, symptom of or laboratory reports suggestive of renal, neurologic or ophthalmologic complications, a history of known cardiac disease or participation in cardiac rehabilitiation following bypass surgery, prior exposure to pranayama practice, a history of smoking or alcoholism and difficulty rolling the tongue for Sheetali practice.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	30	Yoga group: Daily for 30 days. Sessions included sheetali pranayama (breathing through a rolled tongue) for 10 minutes followed by Sheetkari pranayama (breathing through clenched teeth) for 10 minutes.
Comparator #1 (control)	30	Control group: Participants were waitlisted and asked to sit quietly for 20 minutes daily.
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	--	--
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Prehypertension (or stage 1)				
Study ID	**Shetty 2017**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post treatment (30 days)	Systolic Blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post treatment (30 days)	Heart rate variability	Recorded using an ECG, heart rate variability parameters include HR, R-R intervals, SD R-R, NN50, PNN50, High frequency, Low frequency, LF:HF
Outcome 3	Not specified	Respiratory outcome	Baseline and post treatment (30 days)	Respiration rate	Recorded using a volumetric pressure transducrer fixed around participant's trunk at the levelo of the lower costal margin.
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--

Characteristics of included studies	Prehypertension (or stage 1)				
Study ID	**Shetty 2017**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Statistical analysis was done using SPSS software. Data were checked for normal distribution and analyzed using Shaprio-Wilk test for paired sample t-test. Between groups comaprisions consisted of independent, 2-sided t tests of the mean pre- and postintervention .				
Population analysed	Per protocol				
Missing data	No missing data.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Lack of information provided in regards to concealment of intervention allocation, use of per protocol analysis and lack of pre-specified analysis plan infers some risk of bias for this study.				

Characteristics of included studies	Prehypertension (or normortensive)	
Study ID	**Sieverdes 2014**	
Study reference/s	J. C. Sieverdes, M. Mueller, M. J. Gregoski, B. Brunner-Jackson, L. McQuade, C. Matthews and F. A. Treiber. Effects of hatha yoga on blood pressure, salivary alpha-Amylase, and cortisol function among normotensive and prehypertensive youth. Journal of Alternative and Complementary Medicine. 2014;20(4):241-250	
Study design	RCT	Quasirandomised
Author/s affiliation	Medical University of South Carolina, Charleston, SC; Glowing Lotus Yoga & Wellness, LLC, Charleston, SC.	
Source of funds	South Carolina Clinical & Translational Research Institute	
Declared interests of study authors	No competing financial interest exists'	
Setting / provider	Charter school in Charleston, South Carolina	
Country(s) / region	USA	
Enrolment period	Not reported	
Length of treatment / follow up (wk. or mo.)	12 wks	
Description of population	*N=*	*Description*
# participants	31	Seventh graders prehypertension or normotensive

Characteristics of included studies	Prehypertension (or normortensive)	
Study ID	**Sieverdes 2014**	
details	Inclusion: Not described Exclusion: Participants were excluded if they had previous experience to formalised yoga programs and youth identified as hypertensive according to percentiles of age, sex and height.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	14	Yoga group: Received 90 minute sessions on alternating days for 12 wks (cycles of two sessions 1 wk followed by 3 sessions the next wk). A session included 15 mins for roll call and session preparation instructions followed by 5-7 mins of breathing exercises and 5-7 min of warm up. Main component of the session was 50-60 min of asanas sequences (postural exercises). The session finished with relaxation followed by discussion.
Comparator #1 (control)	--	--
Comparator #2 (other)	14	Attention control group: Music and art classes that were part of regular school curriculum.
Comparator #3 (other)	--	--
Co-interventions	None reported	
Is practitioner/ instructor certified?	Yes	Include in subgroup A

Characteristics of included studies	Prehypertension (or normortensive)				
Study ID	**Sieverdes 2014**				
Is there an inactive comparator?	No	Comparison=other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Heart rate	Beats/min, as measured by stop watch. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Diastolic blood pressue	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 4	Not specified	Biochemical parameters	Baseline and post treatment (12 wks)	Salivary cortisol	Determined using time-resolved fluorescence immunoassay. Higher scores means worse health
Outcome 5	Not specified	Biochemical parameters	Baseline and post treatment (12 wks)	alpha-amylase	Determined using kinetic plate reader. Higher score means worse health
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--

Characteristics of included studies	Prehypertension (or normortensive)				
Study ID	**Sieverdes 2014**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Data analysed using SPSS WIN v.17 and SAS software. Group comparison at baseline used independent t-tests and chi-square tests. Differences between groups were assessed using the Wilcoxon rank-sum tests and longitudinal analysis using mixed mdoels adjusted for pre-intervention AUCs.				
Population analysed	Intent-to-treat	Modified (Patients lost to follow up were excluded)			
Missing data	2/16 lost to yoga group and 1/15 lost to attention control group.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Lack of information regarding concealment of intervention allocation, and lack of pre-specified analysis plan infers some risk of bias.				

Characteristics of included studies	Hypertension	
Study ID	**Sriloy 2015**	
Study reference/s	M. Sriloy, P. M. K. Nair, K. Pranav and D. Sathyanath. Immediate effect of manual acupuncture stimulation of four points versus slow breathing in declination of blood pressure in primary hypertension-A parallel randomized control trial. Acupuncture and Related Therapies. 2015;3(2-3):15-18M. Sriloy, P. M. K. Nair, K. Pranav and D. Sathyanath. Immediate effect of manual acupuncture stimulation of four points versus slow breathing in declination of blood pressure in primary hypertension-A parallel randomized control trial. Acupuncture and Related Therapies. 2015;3(2-3):15-18	
Study design	RCT	
Author/s affiliation	S-VYASA University, Bangalore, Karnataka, India; Office of R & D, National Institute of Naturopathy, Ministry of AYUSH, Government of India, Pune, India National Institute of Naturopathy, Ministry of AYUSH, Government of India, Pune, India	
Source of funds	None reported	
Declared interests of study authors	None reported	
Setting / provider	Outpatient department of National Institute of Naturopathy, Pune, India.	
Country(s) / region	India	
Enrolment period	Not reported	
Length of treatment / follow up (wk. or mo.)	One day (no follow up)	
Description of population	*N=*	*Description*
# participants	46	Patients with hypertension

Characteristics of included studies	Hypertension	
Study ID	**Sriloy 2015**	
details	Eligibility criteria: Both sexes, age between 35-60 years, diagnosed with hypertension at least 3 years or less, without systemic complications and no prior experience of acupuncture.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	19	Slow breathing group: provided with slow breathing practices such as abdominal breathing, slow alternate nostril breathing and sectional breathing in a sitting position for 20 min.
Comparator #1 (control)	--	--
Comparator #2 (other)	18	Acupuncture group: Single 20 min session of acupuncture. Using one anti-hypertensive point along with three other supplement points seeking 'de qi'. Manual stimulations like flicking and rotation of the needles were given in each point except one near skull.
Comparator #3 (other)	--	--
Co-interventions	None reported	
Is practitioner/ instructor certified?	Yes	Include in subgroup A

Characteristics of included studies	Hypertension				
Study ID	**Sriloy 2015**				
Is there an inactive comparator?	No	Comparison=other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Heart rate	Beats/min, as measured by stop watch. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Diastolic blood pressue	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--

Characteristics of included studies	Hypertension				
Study ID	**Sriloy 2015**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	SPSS software used to comapre results of both groups. Dependent sample t test was done to evaluate the significant change between pre and post intervention data.				
Population analysed	Intent-to-treat	Modified (Patients lost to follow up were excluded)			
Missing data	4/23 lost to acupuncture group and slow breathing group. Incomplete or missing data was removed.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Lack of pre-specified analysis plan infers some risk of bias.				

Characteristics of included studies	Hypertension (grade 1 or 2)	
Study ID	**Sujatha 2014**	
Study reference/s	T. Sujatha and A. Judie. Effectiveness of a 12-wk yoga program on physiopsychological parameters in patients with hypertension. International Journal of Pharmaceutical and Clinical Research. 2014;6(4):329-335	
Study design	RCT	Quasirandomised
Author/s affiliation	SRM College of Nursing, SRM University, Kattankulathur, India	
Source of funds	None reported	
Declared interests of study authors	None reported	
Setting / provider	Community health centers of SRM University	
Country(s) / region	India	
Enrolment period	None reported	
Length of treatment / follow up (wk. or mo.)	12 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	238	Patients with Stage 1 and Stage 2 Hypertension

Characteristics of included studies	Hypertension (grade 1 or 2)		
Study ID	**Sujatha 2014**		
details	Inclusion: Patients with stage 1 and Stage 2 hypertension, aged 30-60 years and those receiving antihypertensive medications. Exclusion: Patients excluded included those with diabetes mellitus, asthma and hypercholestermia, alcoholics, smokers, antenatal and postnatal mothers and those with regular yoga practice or practing similar techniques.		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	
Intervention	118	Yoga group: Initially participants were asked to participate in a 5 day intensive where yoga training occurred for 2h/day. After this the participants were asked to practice yoga daily for 30-45 mins at home, at least for 5 days per wk. They were requested to attend the yoga group session once every 2 wks till 12 wks. The session included yoga body poses for 18 mins followed by exercises involving awareness and voluntary regulation of breath for 12 min finishing with meditational practices for 10 mins. Instructions were provided to participants by DVD.	
Comparator #1 (control)	120	Control group (no intervention)	
Comparator #2 (other)	--	--	
Comparator #3 (other)	--	--	
Co-interventions	--	Antihypertensive medication	
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	

Characteristics of included studies	Hypertension (grade 1 or 2)				
Study ID	**Sujatha 2014**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Heart rate	Beats/min, as measured by stop watch. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Diastolic blood pressue	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 4	Not specified	Anthropometric parameters	Baseline and post treatment (12 wks)	BMI	Height divided by weight. Higher score means worse health.
Outcome 5	Not specified	Anxiety	Baseline and post treatment (12 wks)	State Trait Anxiety Inventory	20 item test with all items rated on a 4-point scale from almost never to almost always. Higher scores are related to higher levels of anxiety.
Outcome 6	Not specified	Percieved stress	Baseline and post treatment (12 wks)	Percieved Stress Scale (PSS-10)	A five point Perceived Stress scale consists of 10 statements rated on a five-point likert scale ranged from 0 to 4 as very low, low, average, high, and very high level of stress
Outcome 7	NA	--	--	--	--

Characteristics of included studies	Hypertension (grade 1 or 2)				
Study ID	**Sujatha 2014**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Data analysed using SPSS. Baseline equivalence determined using independent t-tests or chi square tests as appropriate. 2-way ANOVA was applied before and after intervention for outcomes.				
Population analysed	Intent-to-treat	Assumed as no details provided in relation to way in which sample population was analysed			
Missing data	Participants in Yoga group reported 100% commitment to the suggested program. Nothing reported in regards to control group.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additionally lack of pre-specified analysis plan and lack of information regarding allocation concealment infers some risk of bias.				

Characteristics of included studies	Hypertension	
Study ID	**Thanalakshmi 2020**	
Study reference/s	J. Thanalakshmi, K. Maheshkumar, R. Kannan, L. Sundareswaran, V. Venugopal and S. Poonguzhali. Effect of Sheetali pranayama on cardiac autonomic function among patients with primary hypertension - A randomized controlled trial. Complementary therapies in clinical practice. 2020;39:101138	
Study design	RCT	
Author/s affiliation	Saveetha Medical College, Thanadalam, India; Government Yoga and Naturopathy Medical College & Hospital, Arumbakkam, Chennai, India; All India Institute of Medical Sciences (AIIMS), Mangalagiri, Vijayawada, Andhra Pradesh, India	
Source of funds	None reported	
Declared interests of study authors	Authors declared no conflict of interest	
Setting / provider	Outpatient department of Saveetha medical college and hospital, Chennai	
Country(s) / region	India	
Enrolment period	None reported	
Length of treatment / follow up (wk. or mo.)	3 months (no follow up)	
Description of population	*N=*	*Description*
# participants	100	Patients with primary hypertension

Characteristics of included studies	Hypertension	
Study ID	**Thanalakshmi 2020**	
details	Inclusion: Patients included if male or female, between the ages of 18-60 years, have no previously practiced yoga in the last 3 months and are non-smokers. Exclusion: Patients with a history of major cardiac/renal/pulmonary disease or history of any surgery in the recent past or history of major medical illness in the past such as tuberculosis,diabetes mellitus, and bronchial asthma.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	50	Sheetali pranayama group: 30 min daily for 4 wks. Participants were asked to inhale through their tongue, which was rolled to form a tube, with their eyes closed. This was then followed by slow exhalation through both nostrils. Participants were instructred to practice for 10 repeats followed by 2 min rest which forms one round and then advised to do a minimum of 20 rounds.
Comparator #1 (control)	50	Control group (no intervention)
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	Anti-hypertensive drugs; beta blockers or calcium channel blocker	
Is practitioner/ instructor certified?	Yes	Include in subgroup A

Characteristics of included studies	Hypertension				
Study ID	**Thanalakshmi 2020**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Cardiovascular disease-risk	Baseline and post treatment (3 months)	Heart rate variability	Recorded using an ECG, heart rate variability parameters include HR, R-R intervals, SDNN, RMSSD, pNN50, High frequency, Low frequency, LF:HF
Outcome 2	Secondary	Cardiovascular disease-risk	Baseline and post treatment (3 months)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Secondary	Cardiovascular disease-risk	Baseline and post treatment (3 months)	Diastolic blood pressue	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 4	Secondary	Cardiovascular disease-risk	Baseline and post treatment (3 months)	Heart rate	Beats/min, as measured by stop watch. Higher score means worse health
Outcome 5	Secondary	Cardiovascular disease-risk	Baseline and post treatment (3 months)	Mean Arterial Pressure	mmHg. Higher score means worse health.
Outcome 6	Secondary	Cardiovascular disease-risk	Baseline and post treatment (3 months)	Rate Pressure Product	Product of brachial systolic blood pressure and the heart rate. Higher score indicates cardiac muscle is under greater stress
Outcome 7	Secondary	Cardiovascular disease-risk	Baseline and post treatment (3 months)	Pulse pressure	Calculated by subtracting systolic with diastolic blood pressure.

Characteristics of included studies	Hypertension				
Study ID	**Thanalakshmi 2020**				
Outcome 8	Secondary	Cardiovascular disease-risk	Baseline and post treatment (3 months)	Double product	Index of oxygen consumption. Heart rate multipled by MAP/100
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Data is expressed in mean with standard deviation. Normality of data was tested using Kolmogrov-Smirnov test. For blood pressure data set variables, paired and unpaired t-0test was done using R statistical software version 3.1.1.				
Population analysed	Intent-to-treat	Modified intent to treat. Using last observation carried forward method for all participants randomised.			
Missing data	LOCF method, 10/50 from yoga group and 8/50 from control group did not complete study.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Lack of pre-specified analysis plan infers some risk of bias.				

Characteristics of included studies	Prehypertension	
Study ID	**Thiyagarajan 2015**	
Study reference/s	R. Thiyagarajan, P. Pal, G. K. Pal, S. K. Subramanian, M. Trakroo, Z. Bobby and A. K. Das. Additional benefit of yoga to standard lifestyle modification on blood pressure in prehypertensive subjects: a randomized controlled study. Hypertension Research - Clinical & Experimental. 2015;38(1):48-55	
Study design	RCT	
Author/s affiliation	Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry, India Mahatma Gandhi Medical College and Research Institute, Puducherry, India;	
Source of funds	INSPIRE fellowship through Department of Science and Technology, New Delhi, India	
Declared interests of study authors	Authors declared no conflict of interest	
Setting / provider	Advanced Center for Yoga Therapy, Education and Research (ACYTER), JIMPER, Pudcherry, India.	
Country(s) / region **Enrolment period**	India August 2010 - Februrary 2013	
Length of treatment / follow up (wk. or mo.)	12 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	192	Participants with prehypertension.

Characteristics of included studies	Prehypertension	
Study ID	**Thiyagarajan 2015**	
details	Inclusion: Participants were included if they had a systolic blood pressure between 120-139 mmHg and/or a diastolic blood pressure between 80-89 mmHg and were between 20-60 years old. Exclusion: Participants were excluded if they had a history of chronic illness, CVD's, diabetes, primary autonomic insufficiency, kidney diseases, sports person, under medication for prehypertension and chronic disease.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	92	Lifestyle modification and Yoga group: 45 minute sessions 3 times a wk for 12 wks. Participants were motivated to do the same at home in the remainings days of the wk. A typical yoga session started with preparatory practices for 10 mins then Asanas for 14 mins followed by breathing techniques for 7 mins finishing with relaxation techniques for 14 minutes. Participants were encouraged to modify lifestyle as per description below.
Comparator #1 (control)	--	--
Comparator #2 (other)	92	Lifestyle modification: Participants were encouraged to; reduce dietary salt intake (< 6g/day) and alcohol consumption, increase fruit and vegetable content in diet, perform aerobic physical activity (>30mins/day, most days/wk) and reduce or maintain body weight (maintain between BMI of 18.5-24.9kg/m) for 12 wks. Participants were also encouraged to diary their daily intake and phsyical activity.
Comparator #3 (other)	--	--
Co-interventions	--	--
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Prehypertension				
Study ID	**Thiyagarajan 2015**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Diastolic blood pressue	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Heart rate	Beats/min, as measured by stop watch. Higher score means worse health
Outcome 4	Not specified	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Mean Arterial Pressure	mmHg. Higher score means worse health.
Outcome 5	Not specified	Biochemical parameters	Baseline and post treatment (12 wks)	Fasting plasma glucose	Measured using glucose oxidase-peroxidase method
Outcome 6	Not specified	Biochemical parameters	Baseline and post treatment (12 wks)	Total cholesterol	Measured by diagnostic kit method using fully automated clinical chemistry analyser
Outcome 7	Not specified	Biochemical parameters	Baseline and post treatment (12 wks)	Triglycerides	Measured by diagnostic kit method using fully automated clinical chemistry analyser

Characteristics of included studies	Prehypertension				
Study ID	**Thiyagarajan 2015**				
Outcome 8	Not specified	Biochemical parameters	Baseline and post treatment (12 wks)	High density lipoprotein cholesterol	Measured by diagnostic kit method using fully automated clinical chemistry analyser
Outcome 9	Not specified	Biochemical parameters	Baseline and post treatment (12 wks)	Low density lipoprotein cholesterol	Calculated using Friedwald's equation.
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Data analysis performed using the SPSS. Continuous data expressed as mean and standard deviation whereas categorical data was expressed as frequencies. Effect of intervention and group was analysed using repeated measured, analysis of varaince with intervention as within-subject factor and group as between-subject factor.				
Population analysed	Per protocol	Only included subjects who had completed 12 wks of the particular intervention for statistical analysis			
Missing data	43/92 lost to LSM group. 41/92 lost to LSM + Yoga group. Missing data was removed				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High drop out between both groups associated with trial context, lack of information regarding effect of missing outcome data and lack of pre-specified analysis plan infer high risk of bias.				

Characteristics of included studies	Hypertension	
Study ID	**Tolbanos Roche 2014**	
Study reference/s	L. Tolbanos Roche and B. Mas Hesse. Application of an integrative yoga therapy programme in cases of essential arterial hypertension in public healthcare. Complementary therapies in clinical practice. 2014;20(4):285-290	
Study design	RCT	
Author/s affiliation	Department of Personality, Evaluation and Psychological Treatment, Faculty of Psychology, National Distance Education University (UNED), Madrid, Spain	
Source of funds	None reported	
Declared interests of study authors	Authors declared no conflict of interest	
Setting / provider	San Jose Health Centre	
Country(s) / region	Spain	
Enrolment period	None reported	
Length of treatment / follow up (wk. or mo.)	3 months (no follow up)	
Description of population	*N=*	*Description*
# participants	50	Participants diagnosed with essential arterial hypertension

Characteristics of included studies	Hypertension	
Study ID	**Tolbanos Roche 2014**	
details	Participants were randomly selected from a list of patients diagnosed with essential arterial hypertension at San Jose Health Centre. 25 patients were assigned to each group. After appointments they were randomly selected from the list until consent was obtained from 20 patients in each group. Exclusions were made due to changes in diagnosis and medication.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	25	Yoga group: 2x90 min sessions per wk for 3 months. Integrative programme of yoga techniques was based on the practice of positions and breathing techniques that are specifically indicated for the treatment of arterial hypertension; yogic relaxation, and visualisation practices, meditation and exercises of mindfulnss applied in everyday life.
Comparator #1 (control)	25	Control group: Not described
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	Antihypertensive medication	
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Hypertension				
Study ID	**Tolbanos Roche 2014**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post treatment (3 months)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post treatment (3 months)	Diastolic blood pressue	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline and post treatment (3 months)	Heart rate	Beats/min, as measured by stop watch. Higher score means worse health
Outcome 4	Not specified	Emotional function (mood)	Baseline and post treatment (3 months)	Positive and Negative Affect Schedule	Self-reported questionnaire with two subscales, positive affect and negative affect, with 10 items each. Higher scores mean worse health.
Outcome 5	Not specified	Emotional function (anxiety)	Baseline and post treatment (3 months)	Hospital Anxiety and Depression Scale - anxiety	This scale contains 14 items, 7 for depressive symptoms and 7 for anxiety symptoms. Higher scores means worse health
Outcome 6	Not specified	Emotional function (depression)	Baseline and post treatment (3 months)	Hospital Anxiety and Depression Scale - depression	This scale contains 14 items, 7 for depressive symptoms and 7 for anxiety symptoms. Higher scores means worse health
Outcome 7	NA	Emotional function	Baseline and post treatment (3 months)	Smith Relaxation State Inventory 3	Contains 38 items evaluating 19 states associated with relaxation in four categories: basic relaxation, mindfulness, positive energy and transcendence.

Characteristics of included studies	Hypertension				
Study ID	**Tolbanos Roche 2014**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	SPSS used for data analysis. A mixed ANOVA was performed to analyse the interaction between measurement and treatment in the physiological variables and a Wilcoxon non-parametric test was performed to analyse the differences between the measn of measurements before and after psychological scales test in both groups.				
Population analysed	Intent-to-treat	Modified (Patients lost to follow up were excluded)			
Missing data	15/25 lost to yoga group. 15/25 lost to control group. Missing data assumed to be removed.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High drop out between both groups associated with trial context, lack of information regarding effect of missing outcome data, randomisation process and pre-specified analysis infer high risk of bias.				

Characteristics of included studies	Hypertension	
Study ID	**Tolbanos Roche 2017**	
Study reference/s	L. Tolbanos Roche, M. T. Miro Barrachina, I. Ibanez Fernandez and M. Betancort. YOGA and self-regulation in management of essential arterial hypertension and associated emotional symptomatology: A randomized controlled trial. Complementary therapies in clinical practice. 2017;29:153-161	
Study design	RCT	
Author/s affiliation	Faculty of Health Sciences, Universidad de La Laguna, Tenerife, Spain	
Source of funds	Authors declared no funding	
Declared interests of study authors	Authors declared no conflict of interest	
Setting / provider	San Jose Health Centre	
Country(s) / region	Spain	
Enrolment period	None reported	
Length of treatment / follow up (wk. or mo.)	2 months	
Description of population	*N=*	*Description*
# participants	100	Participants diagnosed with essential arterial hypertension

Characteristics of included studies	Hypertension	
Study ID	**Tolbanos Roche 2017**	
details	Participants were randomly selected from a list of patients diagnosed with essential arterial hypertension at San Jose Health Centre. None of the patients were familiar with yoga practice.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	22	Yoga group: 2x 1 hr and 15 min sessions per wk for 2 months. Yoga sessions included 45-50 min of warmup exercises, yoga postures followed by 5 minutes of pranayama then 10-15 min of meditation. Session was concluded by a biref talk about yoga and it's practical application.
Comparator #1 (control)	19	Control group: Received a lecture on arterial hypertension and healthy lifestyle habits one month into study.
Comparator #2 (other)	23	Pranayama group: 2x 40 min sessions per wk for 2 months. Pranayama sessions included 30 min of breathing practices such as abdominal breathing and full yogic breathing techniques. Sessions concluded with a brief talk on practical application of pranayama techniques.
Comparator #3 (other)	21	HT Meditation: 2x 1 hr sessions per wk for 2 months. HT meditation sessions included Shavasana relaxation, Shavayatra relaxation, Body Scan meditation and Nadi Suddhi breathing for 40 mins followed by 10 min of talk about yoga and meditation and 10 min of mindfulness exercises focused on everyday life
Co-interventions	--	--
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Hypertension				
Study ID	**Tolbanos Roche 2017**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post treatment (2 months)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post treatment (2 months)	Diastolic blood pressue	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Not specified	Cardiovascular disease-risk	Baseline and post treatment (2 months)	Heart rate	Beats/min, as measured by stop watch. Higher score means worse health
Outcome 4	Not specified	Emotional function	Baseline and post treatment (2 months)	Multidimensional Assessment of Interoceptive Awareness	32 item instrument with 8 scored subscales from 3 to 7 items each.
Outcome 5	Not specified	Emotional function	Baseline and post treatment (2 months)	EQ-D & State Mindfulness Scale	EQ-D contains 11 items. State Mindfulness Scale contains 21 items
Outcome 6	Not specified	Emotional function (anxiety)	Baseline and post treatment (2 months)	Beck Anxiety Inventory	Contains 21 items. Higher score means worse health
Outcome 7	Not specified	Emotional function (depression)	Baseline and post treatment (2 months)	Beck Depression Inventory	Contains 21 items. Higher score means worse health

Characteristics of included studies	Hypertension				
Study ID	**Tolbanos Roche 2017**				
Outcome 8	Not specified	Emotional function (distress)	Baseline and post treatment (2 months)	Hospital Anxiety and Depression Scale	This scale contains 14 items, 7 for depressive symptoms and 7 for anxiety symptoms. Higher scores means worse health
Outcome 9	Not specified	Percieved Stress	Baseline and post treatment (2 months)	Percieved Stress Scale	14 item scale. Higher score means worse health
Outcome 10	Not specified	Emotional function	Baseline and post treatment (2 months)	Subjective Happiness Scale	4 item scale. Higher score means greater happiness
Method of analysis					
Statistics	SPSS used for data analysis. Principal Components Analysis was carried out, in order to find a smaller number of dimensions that facilitates the interpretation of data information. Statistical analysis of the differences between groups in the resulting factor changes was performed using MANOVA. Clinical significance of changes found between pre and post measurements of SBP and DBP were analysed.				
Population analysed	Intent-to-treat	Modified (Patients lost to follow up were excluded)			
Missing data	45 lost after initial assignment. Missing data assumed to be removed.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	Lack of information regarding randomsiation process, high drop out between both groups associated with trial context, unbalanced missingness of outcome data, lack of information regarding effect of missing outcome data and lack of pre-specified analysis plan infer high risk of bias.				

Characteristics of included studies	Prehypertension (or grade 1)	
Study ID	**Wolff 2016**	
Study reference/s	M. Wolff, K. Rogers, B. Erdal, J. P. Chalmers, K. Sundquist and P. Midlov. Impact of a short home-based yoga programme on blood pressure in patients with hypertension: A randomized controlled trial in primary care. Journal of Human Hypertension. 2016;30(10):599-605 NCT01984593	
Study design	RCT	
Author/s affiliation	Skåne University Hospital, Lund University, Malmö, Sweden; The George Institute for Global Health, Sydney, NSW, Australia; University of Sydney, Sydney, NSW, Australia Prevention Research Center, Stanford University School of Medicine, Stanford, CA, USA.	
Source of funds	Funded by the Faculty of Medicine at Lund University, the Ekhaga Foundation, the Swedish Heart-Lung Foundation and the Swedish Southern Health Care Region, Agreement for Medical Education and Research (ALF) funding from Region Skåne and a Swedish Research Council grant awarded to Kristina Sundquist	
Declared interests of study authors	Authors declared no conflict of interest	
Setting / provider	three health-care centers	
Country(s) / region **Enrolment period**	Sweden September - November 2013	
Length of treatment / follow up (wk. or mo.)	12 wk intervention	
Description of population	*N=*	*Description*
# participants	191	Patients with high normal or grade 1 hypertension

Characteristics of included studies	Prehypertension (or grade 1)	
Study ID	**Wolff 2016**	
details	*Inclusion criteria:* Participants with 130-160 mm Hg systolic or 80-110mm Hg diastolic Exclusion: Participants excluded if BP fell outside 120-180 systolic or 80-110 mm Hg diastolic. Participants requiring onging adjustment of BP medications were also excluded. Participants with expected inability to understand instructions about the yoga exercises, physical or mental incapacity to carry out yoga exercises, or language problems/interpreter needs were also excluded.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	96	Yoga group: Kundalini yoga which takes 15 mins and incorporates left nostril breathing and spinal flex. Participants received information and instructions concerning the above mentioned yoga exercises. They were asked to perform the exercises for 15 min twice daily (just after getting out of bed and before getting into bed). Participants were given CD and nose plug to facilitate home exercises.
Comparator #1 (control)	95	Control group (no intervention)
Comparator #2 (other)	--	--
Comparator #3 (other)	--	--
Co-interventions	--	Standard medical care
Is practitioner/ instructor certified?	No	Include in subgroup B

Characteristics of included studies	Prehypertension (or grade 1)				
Study ID	**Wolff 2016**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 2	Primary	Cardiovascular disease-risk	Baseline and post treatment (12 wks)	Diastolic blood pressue	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Secondary	Quality of life	Baseline and post treatment (12 wks)	WHOQOL-BREF	Higher score denotes higher QoL. Seven items of brief. Scores range from 4-20
Outcome 4	Secondary	Percieved Stress	Baseline and post treatment (12 wks)	Percieved Stress Scale	14 item scale. Higher score means worse health
Outcome 5	Secondary	Emotional function (anxiety)	Baseline and post treatment (12 wks)	Hospital Anxiety and Depression Scale - anxiety	This scale contains 14 items, 7 for depressive symptoms and 7 for anxiety symptoms. Higher scores means worse health
Outcome 6	Secondary	Emotional function (depression)	Baseline and post treatment (12 wks)	Hospital Anxiety and Depression Scale - depression	This scale contains 14 items, 7 for depressive symptoms and 7 for anxiety symptoms. Higher scores means worse health
Outcome 7	NA	--	--	--	--

Characteristics of included studies	Prehypertension (or grade 1)				
Study ID	**Wolff 2016**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Data analysed using IBM SPSS software. Differences in outcomes between baseline and follow up were calculated by paired-samples Student's t-test in each group. Differences in mean change between the yoga and control groups were calculated by ANCOVA.				
Population analysed	Intent-to-treat	All participants randomised were analysed			
Missing data	11/96 lost to yoga group and 9/95 lost to control group.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additionally lack of pre-specified analysis plan infers some risk of bias.				

Characteristics of included studies	Hypertension
Study ID	**Yadav 2012**
Study reference/s	A. Yadav, S. Telles, N. Kumar, S. Sharma, N. K. Visweswaraiah and A. Balkrishna. Blood pressure and purdue pegboard scores in individuals with hypertension after alternate nostril breathing, breath awareness, and no intervention. Indian Journal of Physiology and Pharmacology. 2012;1):105-106 S. Telles, A. Yadav, N. Kumar, S. Sharma, N. K. Visweshwaraiah and A. Balkrishna. Blood pressure and Purdue pegboard scores in individuals with hypertension after alternate nostril breathing, breath awareness, and no intervention. Medical Science Monitor. 2013;19:61-6
Study design	RCT
Author/s affiliation	Patanjali Research Foundation, Haridwar, Indiaq
Source of funds	Funding from Departmental sources
Declared interests of study authors	None reported
Setting / provider	out-patient department of a yoga and ayurveda hospital
Country(s) / region	India
Enrolment period	None reported
Length of treatment / follow up (wk. or mo.)	10 minutes

Description of population	*N=*	*Description*
# participants	90	Participants with essential hypertension

Characteristics of included studies	Hypertension	
Study ID	**Yadav 2012**	
details	*Inclusion criteria:* Participants included if diagnosed with esssential hypertension (SBP >140mmHg and/or DBP >90mmHg), hypertension without complications, familiarity with yoga practice for minimum 6 months and regularity of practice, blood pressure stabilised on medication which was not altered during the trial and the ability to perform Purdue pegboard task.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	30	Yoga group: 10 min session breathing through the left and right nostrils alternately. Thumb and ring finger of right hand were used to manipulate or occlude the nostrils.
Comparator #1 (control)	--	--
Comparator #2 (other)	30	Breath awareness group: Participants were asked to maintain awareness of the breath without manipulation of the nostrils. Participants attention was directed to the movement of air into and out of their nostrils.
Comparator #3 (other)	30	Attention Control group: Asked to read a magazine which had articles of neutral content for 10 minutes.
Co-interventions	--	--
Is practitioner/ instructor certified?	Not specified	Include in subgroup C

Characteristics of included studies	Hypertension				
Study ID	**Yadav 2012**				
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Cardiovascular disease-risk	Baseline and post treatment (10 mins)	Systolic blood pressure	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 2	Not specified	Cardiovascular disease-risk	Baseline and post treatment (10 mins)	Diastolic blood pressue	mmHg, as measured by clinicians using sphygmomanometer. Higher score means worse health
Outcome 3	Not specified	Physical function	Baseline and post treatment (10 mins)	Purdue pegboard scores	90 second test, pegboard has 25 holes. Participant must place pegs in holes with right hand, left hand and both ahnds.
Outcome 4	NA	--	--	--	--
Outcome 5	NA	--	--	--	--
Outcome 6	NA	--	--	--	--
Outcome 7	NA	--	--	--	--

Characteristics of included studies	Hypertension				
Study ID	**Yadav 2012**				
Outcome 8	NA	--	--	--	--
Outcome 9	NA	--	--	--	--
Outcome 10	NA	--	--	--	--
Method of analysis					
Statistics	Scores compared using a repeated measures analysis of variance with one Between subjects factor and one Within subjects factor. SPSS was used for analysis				
Population analysed	Intent-to-treat	All participants randomised were analysed			
Missing data	No missing data reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Lack of information regarding randomisation and concealment process and lack of pre-specified analysis plan infer some concerns for risk of bias.				

Characteristics of included studies	Asthma	
Study ID	**Agnihotri 2013**	
Study reference	Agnihotri S, Kant S. Significance of yoga in asthma management to improve the status of quality of life. Allergy: European Journal of Allergy and Clinical Immunology. 2013;97):378. Agnihotri S, Kant S, Kumar S, Mishra RK, Mishra SK. Impact of yoga on biochemical profile of asthmatics: A randomized controlled study. Int. 2014;7(1):17-21. Agnihotri S, Kant S, Kumar S, Mishra RK, Mishra SK. The assessment of effects of yoga on pulmonary functions in asthmatic patients: A randomized controlled study. JMS - Journal of Medical Society. 2016;30(2):98-102. Kant S, Agnihotri S. Asthma diagnosis and treatment-1029. Yoga as an adjuvant therapy in asthma management. World allergy organization journal. 2013;6(Suppl 1):P28.	
Study design	RCT	Computer generated random number table
Author affiliation	Authors were affiliated with tertiary instituitions in India.	
Source of funds	Indian Council of Medical Research, New Delhi, India	
Declared interests of study authors	None declared	
Setting / provider	Tertiary care teaching hospital	
Country(s) / region	India	
Enrolment period	Not reported	
Length of intervention / follow up (months)	6 months	
Description of population	*N=*	*Description*
# participants	276	People with mild-to-moderate asthma
details	*Inclusion criteria:* Patients aged between 12-60 years diagnosed with mild to moderate bronchial asthma (FEV1>60) according to GINA-2009, reversible airflow limitation measured by ≥12% increase and ≥200ml absolute increase in FEV1 after post bronchodilator, nonsmokers or exsmokers with <10 pack/year who have not smoked for at least 6 months. *Exclusion criteria:* those who had clinical diagnosis of asthma but did not satisfy the diagnostic criteria, patients with severe airflow limitation or more (FEV1<60%), pregnant/lactating women, patients assosiated with chronic respiratory diseases such as pulmonary turberculosis and autoimmune lung diseases and major psychiatric illnesses.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	138	Yoga: 6 months, 5x 30 min sessions per wk. The intevention included asanas, pranayama and meditation.
Comparator #1 (control)	138	Control (no intervention)

Characteristics of included studies	Asthma				
Study ID	**Agnihotri 2013**				
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Standard medical care (inhaled corticosteroids +/- oral drug)				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Qualified yoga trainer selected by expert panel		
Is the comparator clearly inactive?	Yes	Comparison= control	Only received standard care		
Outcomes (meaure, description, tool, timing)	***Description***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Health related QoL	Baseline, 3 month, Post intervention (6 months)	Asthma QoL Questionnaire (32-item)	Disease-specific questionnaire, scored on a 7-point scale, higher is better.
Outcome 2	Not specified	Biochemical parameters	Baseline, 3 month, Post intervention (6 months)	Blood test	Haemoglobin, white blood cell count, superoxide dismutase
Outcome 3	Not specified	Pulmonary function	Baseline, 3 month, Post intervention (6 months)	FEV1	Higher score is better
Outcome 4	Not specified	Pulmonary function	Baseline, 3 month, Post intervention (6 months)	FVC	Higher score is better
Outcome 5	Not specified	Pulmonary function	Baseline, 3 month, Post intervention (6 months)	FEV1/FVC	Higher score is better
Outcome 6	Not specified	Pulmonary function	Baseline, 3 month, Post intervention (6 months)	PEFR	Higher score is better

Characteristics of included studies	Asthma				
Study ID	**Agnihotri 2013**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Paired t-test and student's independent sample t-test				
Population analysed	Intent-to-treat	Analysis conducted on participants who completed the study			
Missing data	35 participants (13%) dropped from the study, reasons for dropout were not reported. Drop outs were balanced between groups.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Concerns with self-reported outcomes, randomisation of participants to intervention arms and lack of blinding.				

Characteristics of included studies	Asthma		
Study ID	**Agnihotri 2017**		
Study reference	Agnihotri S, Kant S, Mishra SK, Verma A. Assessment of significance of Yoga on quality of life in asthma patients: A randomized controlled study. Ayu. 2017;38(1-2):28-32.		
Study design	RCT	Computer generated random number, no mention of allocation concealment	
Author affiliation	The authors were affiliated with a univeristy in India		
Source of funds	The study was supported by ICMR, New Delhi		
Declared interests of study authors	The authors declared no conflicts of interest		
Setting / provider	Department of Pulmonary Medicine		
Country(s) / region	India		
Enrolment period	Not reported		
Length of intervention / follow up (months)	6 month intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	300	People with mild-to-moderate asthma	
details	*Inclusion criteria:* mild-moderate bronchial asthma GINA-2011 criteria, 12-60 years, non-smokers or ex-smokers for at least 6 months, reversible airflow limitation (post bronchodilator FEV1>12% and >200mL) *Exclusion criteria:* severe airflow limitation (Fev1<60%), pregnant or lactating women, any associated chronic repiratory conditions, major psychitric illnesses, current smokers		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	
Intervention	150	Yoga: 6 months, 5x 30 min sessions per wk. The yoga intervention consisted of asanas, pranayama and meditation.	
Comparator #1 (control)	150	Control (no intervention)	

Characteristics of included studies	Asthma				
Study ID	**Agnihotri 2017**				
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Standard medical care (inhaled corticosteroids +/- oral drug)				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is the comparator clearly inactive?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Health related QoL	Baseline, 3 months, 6 months	mini-Asthma QoL Questionnaire (15-items)	Disease-specific questionnaire, scored on a 7-point scale, higher is better.
Outcome 2	Not specified	Asthma symptoms	Baseline, 3 months, 6 months	Asthma QoL Questionnaire - Symptom subdomain	15-item disease-specific questionnaire, scored on a 7-point scale, higher is better.
Outcome 3	Not specified	Activity limitation	Baseline, 3 months, 6 months	Asthma QoL Questionnaire - Activity limitation subdomain	15-item disease-specific questionnaire, scored on a 7-point scale, higher is better.
Outcome 4	Not specified	Emotional function	Baseline, 3 months, 6 months	Asthma QoL Questionnaire - Emotional function subdomain	15-item disease-specific questionnaire, scored on a 7-point scale, higher is better.
Outcome 5	Not specified	Response to environmental stimuli	Baseline, 3 months, 6 months	Asthma QoL Questionnaire - Response to environmental stimuli subdomain	15-item disease-specific questionnaire, scored on a 7-point scale, higher is better.
Outcome 6	--	--	--	--	--

Characteristics of included studies	Asthma				
Study ID	**Agnihotri 2017**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Paired t-test to test within group differences at each time point. Independent t-test to test between group differences. P<0.05 is considered significant. Minimum important difference is a >0.05 change in the AQLQ score.				
Population analysed	Intent-to-treat	Not specified but modified intention to treat is interpretted			
Missing data	25 participants from the Yoga group (16.7%) and 20 participants from the control group (13.3%) dropped out during the study. No mention of reasons for drop out or how the missing data was handled.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns regarding the lack of information provided for the reasons for drop out, how missing outcome data was handled and the self-reporting of outcomes by non-blinded participants.				

Characteristics of included studies	Asthma	
Study ID	**Bidwell 2012**	
Study reference	Bidwell AJ, Yazel B, Davin D, Fairchild TJ, Kanaley JA. Yoga training improves quality of life in women with asthma. J Altern Complement Med. 2012;18(8):749-55.	
Study design	quasiRCT	No mention of randomisation method or allocation concealment.
Author affiliation	Three authors are affiliated with tertiary institutions in USA and Australila. One author is affiliated with a hospital in USA.	
Source of funds	Not reported	
Declared interests of study authors	Authors declare no competing financial interests.	
Setting / provider	Community	
Country(s) / region	USA	
Enrolment period	Not reported	
Length of intervention / follow up (months)	10 wk intervention period	
Description of population	*N=*	*Description*
# participants	19	Female volunteers between 20-65 years with mild-to-moderate asthma Note: 19 participants as reported by study authors does not correspond to the sum of each intervention group
details	*Inclusion criteria:* Females between 20-65 years, mild-moderate asthma, a forced expiratory volume in 1 second/ forced vital capacity (FEV1/FVC) ratio of <80% of predicted, use of bronchodilator at least once daily, and symptoms of wheezing and/ or coughing for a minimum of 2 years that improves either spontaneously or with drug therapy. *Exclusion criteria:* smokers (>2 cigarettes/ day), participated in yoga therapy in the last 12 months, diagnosed with hypertension, major orthopedic injuries prohibiting the performance of various yoga postures and or currently taking medications that would alter autonomic function.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	12	Yoga: 10 wks, 2x 1 hour sessions per wk. Yoga intervention consisted of 10 min relaxation/ deep breathing techniques, 40 mins asanas and 10min meditation. Additionally, participants performed 30min at home session, 5min deep breathing, 20min asanas and 5min meditation/relaxation
Comparator #1 (control)	8	Control (no intervention)

Characteristics of included studies	Asthma				
Study ID	**Bidwell 2012**				
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Standard medical care (inhaled corticosteroids +/- oral drug)				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Classes were conducted by certified yoga instructor		
Is the comparator clearly inactive?	Yes	Comparison= control	participants instructed to not participate in any yoga or breathing practices throughout 10wk period.		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Health related QoL	Baseline, Post intervention (wk 10)	St. George Respiratory QoL Questionnaire - Total	Expressed as percentage, where higher is worse
Outcome 2	Not specified	Asthma symptoms	Baseline, Post intervention (wk 10)	St. George Respiratory QoL Questionnaire - Symptom domain	Expressed as percentage, where higher is worse
Outcome 3	Not specified	Asthma Impact	Baseline, Post intervention (wk 10)	St. George Respiratory QoL Questionnaire - Impact domain	Expressed as percentage, where higher is worse
Outcome 4	Not specified	Asthma Activity	Baseline, Post intervention (wk 10)	St. George Respiratory QoL Questionnaire - Activity domain	Expressed as percentage, where higher is worse
Outcome 5	Not specified	Cardiac autonomic function associated with heart rate modulation	Baseline, Post intervention (wk 10)	Heart rate variability response (HRV)	Before and after intervention, differences between resting parasympathetic modulation (HFnu) and sympathetic modulation (LFnu) and logLF/HF between groups
Outcome 6	Not specified	Hemodynamic repsonse	Baseline, Post intervention (wk 10)	Systolic blood pressure (SBP), diastolic blood pressure (DBP) and mean arterial pressure (MAP)	Differences between SBP nd DBP and MAP

Characteristics of included studies	Asthma				
Study ID	**Bidwell 2012**				
Outcome 7	Not specified	Pulmonary function	Baseline, Post intervention (wk 10)	forced expiratory volume (FEV1)/ forced vital capacity (FVC)	
Outcome 8	Not specified	Pulmonary function test	Baseline, Post intervention (wk 10)	Tidal volume, FVC, FEV1 and peak expiratory flow rate (PEFR).	Differences between FEV1, FVC and PEFR prior to the intervention and post intervention
Outcome 9	Not specified	Physical activity	Baseline, Post intervention (wk 10)	Physical activity questionnaire	
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Mixed model ANOVA was conducted for cardiac function variables. Two-way ANOVA pre and post intevention for each group. Post hoc analysis using Tukey test used to detect significant interactions. Significance level set to p<0.05				
Population analysed	Intent-to-treat	Not specified but intention-to-treat is interpreted due to baseline and outcome data presented for participants			
Missing data	12 participants in yoga and 8 participants in control, however 19 participants were reported with no mention of drop-out or missing data.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns due to the lack of blinding of participants, the self-reporting of outcomes and handling of missing data.				

Characteristics of included studies	Asthma	
Study ID	**Jiandani Mariya 2013**	
Study reference	Jiandani Mariya P, Mahulkar Rashmi D, Athavale Amita U, Mehta Amita A. Yoga versus physiotherapy: effect on pulmonary function, breath holding time & quality of life in asthmatics. Indian journal of physiotherapy & occupational therapy. 2013;7(4):160-6.	
Study design	RCT	
Author affiliation	Three authors affiliated with tertiary institutions in India. One author is a physiotherapist in India.	
Source of funds	None declared	
Declared interests of study authors	None declared	
Setting / provider	Tertiary hospital, Mumbai	
Country(s) / region	India	
Enrolment period	Not reported	
Length of intervention / follow up (months)	7 wk intervention period	
Description of population	*N=*	*Description*
# participants	30	Adult asthmatics between 14-60 years with mild-to-moderate asthma for minimum 6months
details	*Inclusion criteria:* Adults between 14-60 years, mild-moderate asthma for minimum 6months, taking at least one of the following: inhaled â-agonists, anticholinergics, inhaled corticosteroids, stable medication dosage for the the past month. *Exclusion criteria:* acute exacerbation of asthma or associated with any other lung or cardiac disease, were pregnant or treated with steroids in the past 3 months and those who practised yoga or any form of excercise.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	15	Yoga: 7 wks, ? X ? Min sessions per wk (14 sessions per wk?). First 4 wks were supervised in department and once at home. Last 3 wks, patients followed twice at home daily. Daily telephone calls to ensure compliance.
Comparator #1 (control)	--	--

Characteristics of included studies	Asthma				
Study ID	**Jiandani Mariya 2013**				
Comparator #2 (other)	15	Physiotherapy: 7 wks, ? X ? Min sessions per wk (14 sessions per wk?). First 4 wks were supervised in department and once at home. Last 3 wks, patients followed twice at home daily. Daily telephone calls to ensure compliance			
Comparator #3 (other)	--	--			
Co-interventions	Standard medical care (inhaled corticosteroids +/- oral drug), patient education program				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	Each group had same amount of contact time with the therapist, unsure if therapist was qualified.		
Is the comparator clearly inactive?	No	Comparison= other	Participants underwent physiotherapy througout the 7wk period.		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pulmonary function	Baseline, Post intervention (wk 7)	FEV1	Higher score is better
Outcome 2	Not specified	Pulmonary function	Baseline, Post intervention (wk 7)	FVC	Higher score is better
Outcome 3	Not specified	Pulmonary function	Baseline, Post intervention (wk 7)	FEV1/FVC	Higher score is better
Outcome 4	Not specified	Pulmonary function	Baseline, Post intervention (wk 7)	Maximal mid-expiratory flow (MMEF)	Higher score is better
Outcome 5	Not specified	Pulmonary function	Baseline, Post intervention (wk 7)	Maximal voluntary ventilation	Higher score is better
Outcome 6	Not specified	Health related QoL	Baseline, Post intervention (wk 7)	St. George Respiratory QoL Questionnaire - Total	Scores range 0-100, higher score is worse

Characteristics of included studies	Asthma				
Study ID	**Jiandani Mariya 2013**				
Outcome 7	Not specified	Asthma symptoms	Baseline, Post intervention (wk 7)	St. George Respiratory QoL Questionnaire - Symptom domain	Scores range 0-100, higher score is worse
Outcome 8	Not specified	Asthma Impact	Baseline, Post intervention (wk 7)	St. George Respiratory QoL Questionnaire - Impact domain	Scores range 0-100, higher score is worse
Outcome 9	Not specified	Asthma Activity	Baseline, Post intervention (wk 7)	St. George Respiratory QoL Questionnaire - Activity domain	Scores range 0-100, higher score is worse
Outcome 10	Not specified	Breath holding time	Baseline, Post intervention (wk 7)	Breath holding time	Higher is better
Method of analysis					
Statistics	Student's paired t-test was used to examine data between groups and ANOVA (RMANOVA) with Bonfferoni adjustment was used to compare data between yoga and physiotherapy groups.				
Population analysed	Intent-to-treat	Not specified but modified intention-to-treat is interpreted			
Missing data	Not reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	b				

Characteristics of included studies	Asthma	
Study ID	**Malarvizhi 2019**	
Study reference	M M, K M, M B, B H. Effect of 6 months of yoga practice on quality of life among patients with asthma: A randomized control trial. Advances in Integrative Medicine. 2019;6(4):163-6.	
Study design	RCT	Computer generated random numbers
Author affiliation	All authors affiliated with tertiary institutions in India.	
Source of funds	Not reported	
Declared interests of study authors	None declared	
Setting / provider	Hospital in India	
Country(s) / region	India	
Enrolment period	Not reported	
Length of intervention / follow up (months)	6 month intervention period	
Description of population	*N=*	*Description*
# participants	250	Adult asthmatics aged between 21-60 years who had minimum 2 year since diagnosis
details	*Inclusion criteria:* Asthmatics of any sex, aged between 21-60 years who met Global Inititaives for Asthma (GINA) criteria, who had minimum 2 years diagnosis and under medical treatment, do not practce yoga and was a non-smoker. Participants must speak either English or Tamil *Exclusion criteria:* Participants with severe airflow limitations (FEV1<60%), smokers, had a history of comorbidities (medical, neurological and psychiatrics,orthopedics), had associated chronic respiratory diseases such as tuberculosis, autoimmune lung diseases or practiced yoga or any other similar discipline.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	125	Yoga: 1 wk, ?x 30 min sessions. Participants were then instructed to practice at home for 6 months. The yoga intervention included both poses and breathing.
Comparator #1 (control)	125	Control (no intervention)

Characteristics of included studies	Asthma				
Study ID	**Malarvizhi 2019**				
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Standard medical care (inhaled corticosteroids +/- oral drug)				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Participants in yoga arm were instructed by trained yoga instructor for one wk and were advised to practice at home daily.		
Is the comparator clearly inactive?	Yes	Comparison= control	All patients remained on their usual care, while the yoga group received yoga in addition to their usual care.		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Health related QoL	Baseline, 3 months, post intervention (6 months)	Asthma QoL Questionnaire (AQOL) - total score	Higher score is better
Outcome 2	Not specified	Asthma symptoms	Baseline, 3 months, post intervention (6 months)	Asthma QoL Questionnaire (AQOL) - Sypmtom domain	Higher score is better
Outcome 3	Not specified	Activity limitation	Baseline, 3 months, post intervention (6 months)	Asthma QoL Questionnaire (AQOL) - Activity limitation domain	Higher score is better
Outcome 4	Not specified	Emotional function	Baseline, 3 months, post intervention (6 months)	Asthma QoL Questionnaire (AQOL) - Emotional function domain	Higher score is better
Outcome 5	Not specified	Response to environmental stimuli	Baseline, 3 months, post intervention (6 months)	Asthma QoL Questionnaire (AQOL) - Environmental stimuli domain	Higher score is better
Outcome 6	--	--	--	--	--

Characteristics of included studies	Asthma				
Study ID	**Malarvizhi 2019**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Data expressed as mean +/-SD,with paired, unpaired t-test and one-way ANOVA using R-Studio				
Population analysed	Intent-to-treat	Modified ITT, not including participants who dropped out			
Missing data	Missing data not reported, only those who completed the study were included in the analysis (yoga= 123, control=120).				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns with self-reported outcomes and lack of pre-specified analysis plan				

Characteristics of included studies	Asthma	
Study ID	**Manocha 2002**	
Study reference	Manocha R, Marks GB, Kenchington P, Peters D, Salome CM. Sahaja yoga in the management of moderate to severe asthma: a randomised controlled trial. Thorax. 2002;57(2):110-5.	
Study design	RCT	
Author affiliation	Two authors affiliated with tertiary instituitions in Australia and two authors affiliated with a hospital and clinic in Australia.	
Source of funds	Royal Australasian College of General Practitioners (Scholarship and Research fund)	
Declared interests of study authors	Not specified	
Setting / provider	Community	
Country(s) / region	Louisiana, USA	
Enrolment period	Not reported	
Length of intervention / follow up (months)	4 month intervention period and 2 month follow-up	
Description of population	*N=*	*Description*
# participants	59	59 eligible subjects were finally randomised: 30 to Sahaja yoga and 29 to the control arm.
details	*Inclusion criteria* : Asthmatics >16 with at least 1 year of asthmatic symptoms. Moderate to severe asthma evidenced from a combined asthma score score of 7 on a 12 point scale, airway hyperresponsiveness or >15% FEV bronchodialator response; daily inhaled treatment with 1500ug beclomethasone, 1200ug budesonide or 750ug fluticasone for at least 6wks, and stable asthma treatment or the precceding 6 wks. *Exclusion criteria* : participants with a history of exacerbation or respiratory tract infection in the preceeding 6wks, smokers, pregnant or lactating women and those who could not communicate English	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	30	Yoga: 4 months, 1x 2 hour session per wk + 10-20 min per day practice at home. Sahaja yoga described as "thoughless awareness" or "mental silence". Silent psychological affirmations through meditation, instructional videos, personalised instruction and discussion via wkly sessions guided by an experienced instructor.
Comparator #1 (control)	--	--

Characteristics of included studies	Asthma				
Study ID	**Manocha 2002**				
Comparator #2 (other)	29	Intervention included relaxation methods, group discussion and cognitive behaviour therapy-like exercises. Relaxation methods included positive affirmations, progressive muscle relaxation and visualisation. Sessions were conducted by experienced instructor 10-20mins, twice daily.			
Comparator #3 (other)	--	--			
Co-interventions	Treatment with inhaled steroid, long acting β2 agonists and/or theophylline was continued unchanged thoughout the study period.				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Participants were guided by an experienced instructor.		
Is the comparator clearly inactive?	No	Comparison= other	Control arm included relaxation methods, group discussion and cognitive behaviour therapy-like excerises.		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Pulmonary function	Baseline, end of treatment (4 mos), followup (2 mos)	Morning peak flow (PEF) & Lowest peak flow as a percentage of the highest peak flow (low%high)	Reported in diary cards
Outcome 2	Primary	Health related QoL	Baseline, end of treatment (4 mos), followup (2 mos)	Asthma QoL Questionnaire (AQOL) - total score	Questionnaire used to measure issues asthmatics experience
Outcome 3	Secondary	Emotional function	Baseline, end of treatment (4 mos), followup (2 mos)	Profile of mood States (POMS)	Psychological rating scale used to assess transient distinct mood states. POMS scores for tension, depression, anger, vigour, fatigue, confusion and summary mood score.
Outcome 4	Primary	Pulmonary function	Baseline, end of treatment (4 mos), followup (2 mos)	FEV1	Measured at least 4hrs after the last dose of short acting bronchodilator and 12hrs after last dose of long acting bronchodialator.
Outcome 5	Primary	Pulmonary function	Baseline, end of treatment (4 mos), followup (2 mos)	FEV1/FVC	Measured at least 4hrs after the last dose of short acting bronchodilator and 12hrs after last dose of long acting bronchodialator.
Outcome 6	Secondary	Methacholine challenge test	Baseline, end of treatment (4 mos), followup (2 mos)	Was performed by using hand DeVilbiss No45 nebuliser	Was performed to assess airway responsiveness in subject who did not have severe airflow obstruction at baseline (FEV1 >60% predicted).

Characteristics of included studies	Asthma				
Study ID	**Manocha 2002**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Changes from baseline were compared by the unpaired (two sample) *t* test. For non-normally distributed data Wilcoxon's non-parametric test				
Population analysed	Intent-to-treat	Authors specified as intention-to-treat			
Missing data	Nine participants withdrew from yoga arm and 3 withdrew from control arm. Of the 26 in the control arm one was lost to follow-up before the 2month followup assessment.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns with self-reported outcomes and missing participant data				

Characteristics of included studies	Asthma	
Study ID	**Mekonnen 2010**	
Study reference	Mekonnen D, Mossie A. Clinical effects of yoga on asthmatic patients: a preliminary clinical trial. Ethiop J Health Sci. 2010;20(2):107-12.	
Study design	RCT	
Author affiliation	Two authors affiliated with tertiary institutions in Ethiopia.	
Source of funds	Not reported	
Declared interests of study authors	Not specified	
Setting / provider	Missionary of cahrity in jimma Town, Ethiopia	
Country(s) / region	NSW, Australia	
Enrolment period	28 March to 27 March 2009	
Length of intervention / follow up (months)	4 weeks	
Description of population	*N=*	*Description*
# participants	24	24 participants eligible for inclusion, randomised to either yoga or control
details	*Inclusion criteria:* patients with bronchial asthma, have regular follow-up at a chest clinic, patients with mild to moderate asthma, and those who could actively attend yoga practices. *Exclusion criteria:* patients with chronic obstructive pulmonary lung disease (diagnosed to have active tuberculosis), patients with severe asthmatic attack, and those with cardiac disease.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	12	Yoga: 4 wks, 7x 50 min sessions per wk. 10min of simple general physical postures, 10 min of deep relaxation (slow deep breathing), 10 min of breath slowing technique, and 10min discussion.
Comparator #1 (control)	12	Control (no intervention)

Characteristics of included studies	Asthma				
Study ID	**Mekonnen 2010**				
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Standard medical care (inhaled corticosteroids +/- oral drug)				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Indian yoga expert		
Is the comparator clearly inactive?	No	Comparison= other	Inactivity of control group not reported		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Asthma experience	Baseline, end of treatment (4 weeks)	Questionnaire	Self-reported diary cards
Outcome 2	Not specified	Peak expiratory flow rate	Baseline, end of treatment (4 weeks)	Mini Wright peak flow	Before and 30min after yoga sessions
Outcome 3	Not specified	Physical examination	Baseline, end of treatment (4 weeks)	Not specified	Before and 30min after yoga sessions
Outcome 4	Not specified	Medication use	Baseline, end of treatment (4 weeks)	salbutamol use	
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--

Characteristics of included studies	Asthma				
Study ID	**Mekonnen 2010**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Descriptive, chi squared, p-value and paired students t-test				
Population analysed	Intent-to-treat	Data was collected from participants who had completed the study.			
Missing data	Outcome data available for all participants from baseline to end of intervention.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns with self-reported outcomes and lack of blinding				

Characteristics of included studies	Asthma	
Study ID	**Prem 2013**	
Study reference	Prem V, Sahoo RC, Adhikari P. Comparison of the effects of Buteyko and pranayama breathing techniques on quality of life in patients with asthma – a randomized controlled trial. Clinical Rehabilitation. 2012;27(2):133-41.	
Study design	RCT	
Author affiliation	All authors affiliated with tertiary institutions in India.	
Source of funds	None declared	
Declared interests of study authors	Not specified	
Setting / provider	Outpatient department of chest medicine	
Country(s) / region	India	
Enrolment period	Not reported	
Length of intervention / follow up (months)	3 months	
Description of population	*N=*	*Description*
# participants	120	Patients were assigned to 3 groups through block randomisation to either yoga, butekyo or control.
details	*Inclusion criteria* : Aged between 18-60 years, Asthma Quality of Life score <5.5, forced expiratory volume (FEV1) increased by 12% following bronchodilator adminstration and usage for 6months without exacerbation in the preceeding 8wks. *Exclusion criteria* : had medical conditions impairing performance of breathing techniques, had previous history of breathing retraining, pregnant and non-compliance with exercise for more that 15% of the study period.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	40	Pranayama: 3-5 days, 60 min sessions per day + 3 months home practice. Diaphragmatic, thoracic, upper lobe and full yogic breathing.
Comparator #1 (control)	40	Control (usual care)

Characteristics of included studies	Asthma				
Study ID	**Prem 2013**				
Comparator #2 (other)	40	Buteyko: 3-5 days, 60 min sessions per day + 3 months home practice. The aim of the Buteyko method was to correct that patient's breathing pattern by reducing hyperventilation.			
Comparator #3 (other)	--	--			
Co-interventions	Standard medical care (inhaled corticosteroids +/- oral drug)				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	provide details		
Is the comparator clearly inactive?	No	Comparison= other	Pharmacological management with no report of complete inactivity (non-compliance with exercise for more than 15% of study period).		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Health related QoL	Baseline, end of treatment (3 mos)	Asthma QoL Questionnaire	Self-reported
Outcome 2	Secondary	Pulmonary function test	Baseline, end of treatment (3 mos)	ATS/ERS Task Force measured with flow metre	
Outcome 3	Secondary	Asthma symptoms	Baseline, end of treatment (3 mos)	Asthma control questionnaire	Self-reported
Outcome 4	--	--	--	--	--
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--

Characteristics of included studies	Asthma				
Study ID	**Prem 2013**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Descriptive analysis, Kruskal-Wallis test, post-hoc with Bonferroni test, chi-square- test, Fisher's exact test and Wilcoxon signed ranked test				
Population analysed	Per protocol	Per protocol, participants who missed >15% of sessions were excluded.			
Missing data	Outcome data unavailable for 5 partcipants in Buteyko and pranayama groups with reasons for dropout provided.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High risk of bias associated with inappropriate methods of analysis (per protocol) excluding participants who did not complete a minimum number of sessions.				

Characteristics of included studies	Asthma	
Study ID	**Pushpa 2018**	
Study reference	Pushpa K DS. Yoga as a complementary therapy improves pulmonary functions in patients of bronchial asthma: A randomized controlled trial. National Journal of Physiology, Pharmacy and Pharmacology. 2018;8(12):1704-8.	
Study design	RCT	
Author affiliation	One author affiliated with a tertiary hospital in India and one author affilated with department of Pharmacovigilance in India	
Source of funds	Not reported	
Declared interests of study authors	None declared	
Setting / provider	Department of physiology, BMCRI, Bengaluru	
Country(s) / region	India	
Enrolment period	Not reported	
Length of intervention / follow up (months)	8 weeks	
Description of population	*N=*	*Description*
# participants	60	60 patients with mild-moderate bronchial asthma from outpatient hospital, divided into yoga or control.
details	*Inclusion criteria:* individuals with diagnosed bronchial asthma, aged 18-50years with an established diagnosis for at least 6months, mild-moderateasthma meeting the National Asthma Education and Prevention Program Classification. Subjects on inhaled B-antagonist(short-acting and long-acting) with stable medication dose for past a month. *Exclusion criteria:* smokers, patients with concomitant lung disease, practiced yoga or any similar discipline during 6 months preceeding the study, pregnant, any chronic medical condition requiring oral/systemic steroid treatment, any medical condition that contraindicated excercise, history of turberculosis, diabetes mellitus, renal failure, coronary artery disease, musculoskeletal deformaties and status asthmaticus.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	30	Pranayamas, kapalabhati, bhastrika, ujjayi and sukhapurvaka Yogic excercises. Sessions guided by trained yoga teacher for 45 mins a day for 2 wks. Then the followiing 6wks participants were instructed keep diary of each day of yoga.
Comparator #1 (control)	30	Control (no intervention)

Characteristics of included studies	Asthma				
Study ID	**Pushpa 2018**				
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Standard medical care (inhaled corticosteroids +/- oral drug)				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Yoga intrusted by trained instructor		
Is the comparator clearly inactive?	Yes	Comparison= control	Control instrcuted to take pharmacological therapy. Exclusion of individuals who currently practice yoga or similar discipline.		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pulmonary function	Baseline, 4wks, 8wks	FEV1/FVC	M.E.C PFT body plethysmograph station
Outcome 2	Not specified	Pulmonary function	Baseline, 4wks, 8wks	FEV1	M.E.C PFT body plethysmograph station
Outcome 3	Not specified	Pulmonary function	Baseline, 4wks, 8wks	FVC	M.E.C PFT body plethysmograph station
Outcome 4	Not specified	Pulmonary function	Baseline, 4wks, 8wks	peak expiratory flow rate (PEFR),	M.E.C PFT body plethysmograph station
Outcome 5	Not specified	Pulmonary function	Baseline, 4wks, 8wks	airway resistance (RAW),	M.E.C PFT body plethysmograph station
Outcome 6	Not specified	Pulmonary function	Baseline, 4wks, 8wks	forced expiratory flow rate (FEFR),	M.E.C PFT body plethysmograph station

Characteristics of included studies	Asthma				
Study ID	**Pushpa 2018**				
Outcome 7	Not specified	Pulmonary function	Baseline, 4wks, 8wks	specific airway conductance (sGAW)	M.E.C PFT body plethysmograph station
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Descriptive, student t-test (two-tailed, independent), Levene's test				
Population analysed	Intent-to-treat	Outcome data available for all patients			
Missing data	No reported missing data. All outcome data available for participants.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Be Outcome specific				

Characteristics of included studies	Asthma	
Study ID	**Raghavendra 2016**	
Study reference	Raghavendra P, Shetty P, Shetty S, Manjunath NK, Saoji AA. Effect of high-frequency yoga breathing on pulmonary functions in patients with asthma: A randomized clinical trial. Annals of Allergy, Asthma & Immunology. 2016;117(5):550-1.	
Study design	RCT	
Author affiliation	All authors affilated with tertiary institutions in India	
Source of funds	Not reported	
Declared interests of study authors	None declared	
Setting / provider	Inpatient yoga and naturopathy facility from South India	
Country(s) / region	India	
Enrolment period	Not reported	
Length of intervention / follow up (months)	Not reported	
Description of population	*N=*	*Description*
# participants	60	Clinician diagnosed asthma were randomised to yoga or control.
details	All patients were taught kapalabhati before being assigned to intervention. *Inclusion criteria:* patients aged between 20-50 with clinician diagnosed asthma. *Exclusion criteria:* patients with severe asthma, respiratory disorders that influence pulmonary function or a prior history of abdominal or thoracic surgery and have a history of smoking.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	30	18 men and 12 women assigned to kapalabhati for two 10min sessions.
Comparator #1 (control)	--	--

Characteristics of included studies	Asthma				
Study ID	**Raghavendra 2016**				
Comparator #2 (other)	30	17 men and 13 women assigned to control with deep breathing at 6 breaths per minute			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	All participants wihtin study were trained kapalabahti prior to being assigned intervention.		
Is the comparator clearly inactive?	No	Comparison= other	Control group practiced deep breathing		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pulmonary function	Baseline, end treatment (not reported)	FEV	Spirometry measured with BIOPAC MP36 system
Outcome 2	Not specified	Pulmonary function	Baseline, end treatment (not reported)	FVC	Spirometry measured with BIOPAC MP36 system
Outcome 3	Not specified	Pulmonary function	Baseline, end treatment (not reported)	FEV1/FVC	Spirometry measured with BIOPAC MP36 system
Outcome 4	--	--	--	--	--
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--

Characteristics of included studies	Asthma				
Study ID	**Raghavendra 2016**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Paired sample t-test and independent samples t-test, Shapiro-Wilk test				
Population analysed	Intent-to-treat	Outcome data available for all patients			
Missing data	Data available for all participants with no missing data reported.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Intervention length not reported. Some concerns with self-reported outcomes and lack of blinding. Data was available for almost all participants.				

Characteristics of included studies	Asthma	
Study ID	**Sabina 2005**	
Study reference	Sabina AB, Williams AL, Wall HK, Bansal S, Chupp G, Katz DL. Yoga intervention for adults with mild-to-moderate asthma: a pilot study. Ann Allergy Asthma Immunol. 2005;94(5):543-8.	
Study design	RCT	
Author affiliation	All authors affiliated with tertiary institutions in the USA	
Source of funds	Centers for Disease Control and Prevention Special Interest Project 14 (CDC SIP 14–00)	
Declared interests of study authors	Not reported	
Setting / provider	Yale-Griffith PreventionResearch Centre	
Country(s) / region	USA	
Enrolment period	1st October 2001- 31 March 2003	
Length of intervention / follow up (months)	4 weeks	
Description of population	*N=*	*Description*
# participants	62	Adults with mild-to-moderate asthma
details	*Inclusion criteria:* >18 years, established diagnosis of mild-to-moderate asthma for at least 6months (based on the American Thoracic Society spirometry criteria [FEV1/FVC] below the normal limit with significant repsonse to bronchodialator [a≥12% increase and a ≥200mL absolute increase in FEV1 15mins after the administration of 2 puffs of a short β-agonists] or PEFR variability of >20%), taking at least inhaled b-agonists, methylxanthines, anticholinergics, inhaled corticosteroids, leukotriene inhibitors or receptor antagonists, or mast cell–stabilizing agents for at least 6 months, with stable medication dosing for the past month. *Exclusion criteria:* Smoked currently or in the past year or had a smoking history of greater than 5 pack-years, had a concomitant lung disease, had excercise induced asthma, practiced yoga in the past 3 years, pregnant, had a chronic condition that requires treatment with oral corticosteroids in the past month, had a medical condition that contraindicted excercise or had an unstable medical condition	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	29	Participants attended twice-wkly 90min Iyengar yoga sessions for 4 wks. Yoga consisted of asanas, pranayama and dhyana. Participants were encouraged to practice at home after each session and after the intervention period for an additional 3months
Comparator #1 (control)	--	--

Characteristics of included studies	Asthma				
Study ID	**Sabina 2005**				
Comparator #2 (other)	33	One hour classes of sham intervention of basic muscle stretching excercises. Classes were led by a certified exercise physiologist or by graduate students in exercise physiology. No breathing techniques were taught. Participants were encouraged to continue for 20mins a day, 3times a wk for 3months			
Comparator #3 (other)	--	--			
Co-interventions	Standard medical care (inhaled corticosteroids +/- oral drug)				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Taught by experienced Iyengar yoga instructor		
Is the comparator clearly inactive?	No	Comparison= other	Muscle stretching exercises were taught		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Frequency of inhaler use	Baseline, 4, 8, 12 and 16 wks	Average number of puffs per day	
Outcome 2	Primary	Health related QoL	Baseline, 4, 8, 12 and 16 wks	Mini AQLQ	QoL scale that measures 4 domains of QoL: symptoms, activity limitation, emotional function, and environmental stimuli
Outcome 3	Secondary	Pulmonary function	Baseline, 4, 8, 12 and 16 wks	Pre- and post-bronchodilator FEV1	
Outcome 4	Secondary	Pulmonary function	Baseline, 4, 8, 12 and 16 wks	PEFR variability	
Outcome 5	Secondary	Baseline medication	Baseline, 4, 8, 12 and 16 wks	Not specified	
Outcome 6	Secondary	Asthma symptom score	Baseline, 4, 8, 12 and 16 wks	Not specified	

Characteristics of included studies	Asthma				
Study ID	**Sabina 2005**				
Outcome 7	Secondary	Health care utilisation	Baseline, 4, 8, 12 and 16 wks	Not specified	
Outcome 8	Secondary	Compliance with intervention	Baseline, 4, 8, 12 and 16 wks	Not specified	
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Mann-Whitney U test, 2-sample t-test, *X*- 2 analysis, Fisher exact test, paired t-test				
Population analysed	Intent-to-treat	Authors specify ITT			
Missing data	Six participants lost to followup in yoga arm, 11 lost to followup in control arm. Sixty-two patients recruited with 45 retained for followup. Reason for loss to followup were not provided.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High risk of bias due to the high proportion of deviations from the intended intervention beyond what would be expected in usual practice. Deviations were unbalanced between groups.				

Characteristics of included studies	Asthma	
Study ID	**Saravanan 2019**	
Study reference	Saravanan PSL, Anu S, Priya KAS, Vijaybabu K, Paul R. Lung-specific yoga mudras on respiratory function in asthma patients. National Journal of Physiology, Pharmacy and Pharmacology. 2019;9(9):878-83.	
Study design	RCT	
Author affiliation	All authors affiliated with tertiary instutions in the USA	
Source of funds	None declared	
Declared interests of study authors	None declared	
Setting / provider	Department of physiology at a private hospital, Madurai	
Country(s) / region	India	
Enrolment period	2018 July,	
Length of intervention / follow up (months)	6 wks, July 2018-September 2018	
Description of population	*N=*	*Description*
# participants	50	Stable asthma patients aged between 20-50 years with weight and height matched.
details	*Inclusion criteria:* Patients attending outpatient department and hospital workers with asthma for a duration greater than a year but not on a routine drug treatment. *Exclusion criteria* : patients with acute asthmatic exacerbations, not willing to participate, lung diseases, trained in mudra, smokers, skeletomuscular disorders, sucjects with cardio diseases and on medication were excluded.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	25	Subjects were instructed to relax for 10 minutes initially in seated position and performed hand mudras along with smooth and deep breathing (8 breaths/minute) for 30min a day, 5 days a wk for 6 wks. Mudras performed included: Atmanjali, bronchial, asthma, bhramara, linga.
Comparator #1 (control)	--	--

Characteristics of included studies	Asthma				
Study ID	**Saravanan 2019**				
Comparator #2 (other)	25	Subjects were assembled everyday in the department and took rest in the sitting position and were instructed to practice deep breathing for 8 breaths/per min, for 6 wks.			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Yes	Include in subgroup A	All yoga mudras were practiced everyday in the evening under the supervision of the yoga instructor		
Is the comparator clearly inactive?	No	Comparison= other	Concentrated on breathing		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Breath-holding time	Baseline, 6wks	Duration subject held their breath.	Three observations 5min apart
Outcome 2	Not specified	Expiratory blast test	Baseline, 6wks	sphygmomanometer	Subject asked to take deep inspiration and blow into the to raise mercury column
Outcome 3	Not specified	Snider's test	Baseline, 6wks	Blow out a burning match/candle	Flame 30cm away from face and single forceful expiration
Outcome 4	Not specified	Respiratory endurance test	Baseline, 6wks	sphygmomanometer	Subject asked to take deep inspiration and blow into the to raise mercury column to 40mmHg in the manometre and maintain the mecury level at 40mmHg for 40-70 seconds.
Outcome 5	Not specified	Pulmonary function	Baseline, 6wks	PEFR	mini-Wrights peak flow meter
Outcome 6	--	--	--	--	--

Characteristics of included studies	Asthma				
Study ID	**Saravanan 2019**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	One-way Wilcoxon signed-rank test and Snider's test using McNemar test before and after 6wks.				
Population analysed	Intent-to-treat	Outcome data available for all patients			
Missing data	Not reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns with self-reported outcomes and lack of blinding.				

Characteristics of included studies	Asthma	
Study ID	**Saxena 2009**	
Study reference	Saxena T, Saxena M. The effect of various breathing exercises (pranayama) in patients with bronchial asthma of mild to moderate severity. Int J Yoga. 2009;2(1):22-5.	
Study design	RCT	
Author affiliation	One author affilated with a hospital and one author is affiliated with a university in India.	
Source of funds	Not reported	
Declared interests of study authors	Not reported	
Setting / provider	Mittal Hospital, Amjer, India	
Country(s) / region	India	
Enrolment period	Not reported	
Length of intervention / follow up (months)	12 wks	
Description of population	*N=*	*Description*
# participants	50	Patients had bronchial asthma
details	*Inclusion criteria:* Diagnostic confirmation of bronchial asthma, forced Expiratory Volume in one second (FEV1) < 85%, and reversibility (increase in FEV1) > 12% after 20 minutes of two salbutamol puffs. Minimum 6 months yoga practice and 70% interest in yoga. *Exclusion criteria:* patients with diseases other than bronchial asthma e.g. ischaemic heart disease, bronchitis and anaemia, and patients with a history of smoking. Participants on regular medications wereadvised to discontinue.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	25	practiced breathing exercises/ pranyama for 20mins twice daily for 12 wks. Includes Sasankasana breathing, Anuloma viloma, Bhramari and Omkara.
Comparator #1 (control)	--	--

Characteristics of included studies	Asthma				
Study ID	**Saxena 2009**				
Comparator #2 (other)	25	Parcticed meditation for 20mins twice daily for 12 wks			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	Participants were experienced in yoga		
Is the comparator clearly inactive?	Yes	Comparison= control	Meditation and breathing excercises		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pulmonary function	Baseline, 12 wks	FEV1	Medical International Research Spirometer
Outcome 2	Not specified	Pulmonary function	Baseline, 12 wks	PEFR	Wright peak flowmeter
Outcome 3	Not specified	Asthma Symptoms	Baseline, 12 wks	Symptom score	Categorised into cough, wheezing and dsypnea.
Outcome 4	--	--	--	--	--
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--

Characteristics of included studies	Asthma				
Study ID	**Saxena 2009**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Mantel Haensal X2				
Population analysed	Intent-to-treat	Outcome data available for participants who completed the trial			
Missing data	Not reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns with self-reported outcomes and lack of blinding.				

Characteristics of included studies	Asthma	
Study ID	**Satpathy 2012**	
Study reference	Satpathy S, Kar A, Mishra A. A Comparative Study Of Effect Of Yoga And Drugs On Pulmonary Functions And Inflammation In Bronchial Asthma. International Journal of Basic and Applied Physiology. 2012;2(1):12-15	
Study design	RCT	
Author affiliation	Authors were affiliated with tertiary instituitions in India.	
Source of funds	None declared	
Declared interests of study authors	None declared	
Setting / provider	Department of Physiology and Department of Pulmonary Medicine in VSS Medical College, Burla.	
Country(s) / region	India	
Enrolment period	Not reported	
Length of intervention / follow up (months)	6 wks	
Description of population	*N=*	*Description*
# participants	71	Men with chronic bronchial asthma
details	*Inclusion criteria* : Physician confirmed bronchial asthma, with asthma symptoms persisting at least 6 months despite therapy. *Exclusion criteria* : Hisotry of smoking within the last year, acute infection or infections within the last 6 wks, and patients with serious systemic illness- hepatic, renal, cardiac of central nervous diseases, and patients with cardiovascular diseases including hypertension.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	37	Yoga intervention (Pranayama), one simple Bhastrka, 15 mins daily for 6 wks
Comparator #1 (control)	34	Pharmacotherpy group (standard of care only)

Characteristics of included studies	Asthma				
Study ID	**Satpathy 2012**				
Comparator #2 (other)					
Comparator #3 (other)					
Co-interventions	Standard of care (normal medication)				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	Not specified		
Is the comparator clearly inactive?	Yes	Comparison= control	Only received standard care		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pulmonary function	Baseline, 6 wks	FEV1	Spirometer
Outcome 2	Not specified	Pulmonary function	Baseline, 6 wks	FVC	Spirometer
Outcome 3	Not specified	Pulmonary function	Baseline, 6 wks	FEV1/FVC	Spirometer
Outcome 4	--	--	--	--	--
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--

Characteristics of included studies	Asthma				
Study ID	**Satpathy 2012**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Descriptive, paired t-test (<0.05 is significant)				
Population analysed	Intent-to-treat	ITT is interpretted			
Missing data	Randomisation process not explained.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Concerns with randomisation process, allocation concealment and blinding.				

Characteristics of included studies	Asthma	
Study ID	**Sodhi 2009**	
Study reference	Sodhi C, Singh S, Dandona PK. A study of the effect of yoga training on pulmonary functions in patients with bronchial asthma. Indian J Physiol Pharmacol. 2009;53(2):169-74.	
Study design	RCT	
Author affiliation	All authors were affiliated with tertiary institution in India.	
Source of funds	Not reported	
Declared interests of study authors	Not reported	
Setting / provider	Department of medicine and physiology, Christian Medical College and Hospital, Ludhiana	
Country(s) / region	India	
Enrolment period	Not reported	
Length of intervention / follow up (months)	8 weeks	
Description of population	*N=*	*Description*
# participants	120	Partcipants of any sex with diagnosed bronchial asthma
details	*Inclusion criteria* : Non-smokers between 17-50 yrs with mild to moderate asthma as per National Asthma Education and Prevention Programme. *Exclusion criteria* : Patients with turberculosis, COPD, diabetes, renal failure, coronary arterty disease and musculoskeletal chest deformaties, respiratiry tract infection within the previous 6 wks, and engagement in regular excercise/ training.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	60	Yoga group included pranayams (deep breathing), kapalabhati (clean breathing), bhastrika (rapid, deep bellows), ujjayi (loud, sound producing) and sukhapurvaka (easy comfortable). Each session was 45 mins per wk with a trained instructor for 8 wks duration. Patients were instructed to practice at home for 45 min twice daily everyday. Diaries were used to record yoga practice.
Comparator #1 (control)	60	Control (no intervention)

Characteristics of included studies	Asthma				
Study ID	**Sodhi 2009**				
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Participants were taught by an experienced instructor		
Is the comparator clearly inactive?	Yes	Comparison= control	Participants in control group were inactive		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pulmonary function	Baseline, 4 wks, 8 wks	PEFR	
Outcome 2	Not specified	Pulmonary function	Baseline, 4 wks, 8 wks	FEV1	
Outcome 3	Not specified	Pulmonary function	Baseline, 4 wks, 8 wks	FVC	
Outcome 4	Not specified	Pulmonary function	Baseline, 4 wks, 8 wks	Forced mid expiratory flow	Forced mid expiratory flow in 0.25-0.75 seconds
Outcome 5	Not specified	Pulmonary function	Baseline, 4 wks, 8 wks	FEV1/FVC	
Outcome 6	--	--	--	--	--

Characteristics of included studies	Asthma				
Study ID	**Sodhi 2009**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Paired t-test, chi-square test				
Population analysed	Intent-to-treat	Outcome data available for participants who completed the trial			
Missing data	Not reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns with self-reported outcomes and lack of blinding.				

Characteristics of included studies	Asthma	
Study ID	**Turan 2020**	
Study reference	Bahçecioğlu Turan G, Tan M. The effect of yoga on respiratory functions, symptom control and life quality of asthma patients: A randomized controlled study. Complement Ther Clin Pract. 2020;38:101070.	
Study design	RCT	
Author affiliation	All authors affiliated with tertiary institutions in Turkey	
Source of funds	Grants received from the Ataturk University Scientific Resrach Project in Tirkey (ID number 2018/6563)	
Declared interests of study authors	None declared	
Setting / provider	Chest Diseases Outpaitent clinic of a university and public hospital	
Country(s) / region	Turkey	
Enrolment period	Not reported	
Length of intervention / follow up (months)	6 weeks	
Description of population	*N=*	*Description*
# participants	120	Participants aged between 18-55 with at least 6month asthma
details	*Inclusion criteria* : aged 18-55 old diagnosed with asthma for at least 6months and were living in the city centre, had not participated in regular excericse program in the last 6 months, no other respiratory system disease, were not in the exacerbation period, no physical or cognitive deficiency and psyciatric disease that could prevent the understanding of the training,were literate and volunteered	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	56	Two yoga sesisons per wk for 6wks. Each session ran for 60-90min. Participants were given instructional handbooks and CDs about yoga including formation of the poses and breathing techniques. Yoga techniques included asanas and relaxation. At the end of each session feedback was given about each yoga application
Comparator #1 (control)	56	Control (no intervention)

Characteristics of included studies	Asthma				
Study ID	**Turan 2020**				
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Researcher providing yoga training to intervention arm was given 100hours of theoretical and practical training.		
Is the comparator clearly inactive?	Yes	Comparison= control	provide details		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pulmonary function	Baseline, 6wks	FEV1/FVC	Spirometer
Outcome 2	Not specified	Pulmonary function	Baseline, 6wks	FVC, FEV1, PEFR	Spirometer
Outcome 3	Not specified	Asthma symptoms control	Baseline, 6wks	5 questions (5-Likert type scale), max points = 25.	Scoring 25 is accepted as 'full control' of the disease, 20-24 is accepted as 'good control' and less than 19 indicates disease is not under control
Outcome 4	Not specified	Health related QoL	Baseline, 6wks	Asthma QoL Questionnaire (AQLQ)	Higher total score and sub-dimension score averages mean higher QoL.
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--

Characteristics of included studies	Asthma				
Study ID	**Turan 2020**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Arithmetic mean, standard deviation, percentage Chi-square, t-test for independent groups, t-test for dependent groups, Mann-Whitney u test and Wilcoxon test				
Population analysed	Intent-to-treat	Modified ITT is interpretted			
Missing data	Eight people left the study. Reasons were not provided.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns with self-reported outcomes and handling of misisng outcome data. Reason for participant dropout unexplained.				

Characteristics of included studies	Asthma	
Study ID	**Yuce 2020**	
Study reference	Erdoğan Yüce G, Taşcı S. Effect of pranayama breathing technique on asthma control, pulmonary function, and quality of life: A single-blind, randomized, controlled trial. Complement Ther Clin Pract. 2020;38:101081.	
Study design	RCT	
Author affiliation	Both authors are affiliated with tertiary institutions in Turkey	
Source of funds	Unit of Scientific Research Projects of Erciyes University (Project no. TDK-2017- 7652)	
Declared interests of study authors	None declared	
Setting / provider	Public and private hospital located at a province centre in Turkey	
Country(s) / region	Turkey	
Enrolment period	Feb-2018 to Dec 2018	
Length of intervention / follow up (months)	4 weeks	
Description of population	*N=*	*Description*
# participants	55	patients with asthma directed by polyclinic doctors
details	*Inclusion criteria* : patients ≥18 years, able to communicate, diagnosed with chronic asthma for 6months and are undergoing treatment, those with uncontrolled or partly controlled asthma in relation to the Global Initiative for Asthma values, those taking a beta2 agonist and/or inhaling corticosteroids twice a wk or more, those without changes to inhaler bronchodialtor drug portions in the preceeding 4wks and those who had a smartphone. *Exclusion criteria* : patients with sevre asthma (FEV1≤60%), those with lung diseases such as COPD, turberculosis, respiratory infection, diabetes and coronary artery disease, smokers, pregnant/nursing mothers, regularly excercised, and those who benefited from other alternative practices.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	27	Pranayama group received a training program/ guide consisting of kapalbhati, ujjayiand anuloma viloma techniques. Participants attended 3day yoga training. Then were instructed to practice yoga 20mindaily for a month.
Comparator #1 (control)	--	--

Characteristics of included studies	Asthma				
Study ID	**Yuce 2020**				
Comparator #2 (other)	28	Relaxation group included 3day training of progressive relaxation. 20min daily for 1month.			
Comparator #3 (other)	--	--			
Co-interventions	Standard medical care (inhaled corticosteroids +/- oral drug)				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Researcher had certificate in yoga		
Is the comparator clearly inactive?	No	Comparison= other	Group taught relaxation techniques		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Asthma symptoms	Baseline, 1month	Asthma control test (ACT)	Self-reported questionnaire regarding general asthma symptoms and shortness of breath frequency
Outcome 2	Not specified	Health related QoL	Baseline, 1month	Asthma QoL Questionnaire (AQLQ)	Self-reported questionnaire
Outcome 3	Not specified	Pulmonary function	Baseline, 1month	FEV1/FVC	Spirometer
Outcome 4	Not specified	Pulmonary function	Baseline, 1month	FEV1, FVC, PEFR	Spirometer
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--

Characteristics of included studies	Asthma				
Study ID	**Yuce 2020**				
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Method of analysis					
Statistics	Chi-square test, Fisher's exact test, Shapiro-Wilk normaliy test, Levene's test, independent-sample t-test, Mann-Whitney U-test, paired-samples t-test and Wilcoxon's paired sample test.				
Population analysed	Intent-to-treat	Analysis conducted on participants who completed the study			
Missing data	5 people dropped out and were not included in the final analysis.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns with self-reported outcomes and lack of blinding.				

Characteristics of included studies	Chronic pain (fibromyalgia)	
Study ID	**Carson 2010**	
Study reference	Carson JW, Carson KM, Jones KD, Bennett RM, Wright CL, Mist SD. A pilot randomized controlled trial of the Yoga of Awareness program in the management of fibromyalgia. Pain. 2010;151(2):530-9. Carson JW, Carson KM, Jones KD, Mist SD, Bennett RM. Follow-up of yoga of awareness for fibromyalgia: Results at 3 months and replication in the wait-list group. Clinical Journal of Pain. 2012;28(9):804-13. Wright C, Carson J, Carson K, Bennett R, Mist S, Jones K. Yoga of awareness: A randomized trial in fibromyalgia: Post intervention and 3 month follow up results. BMC Complementary and Alternative Medicine Conference: International Research Congress on Integrative Medicine and Health. 2012;12(SUPPL. 1).	
Study design	RCT	Random number table, generated by someone not involved in the study. Assignments were concealed in envelopes and not opened until after the baseline assessment.
Author affiliation	The authors were affiliated with a university in the USA	
Source of funds	This work was supported by a grant from the Oregon Health & Science University Medical Research Foundation and resources supplied by the Fibromyalgia Information Foundation.	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community	
Country(s) / region	USA	
Enrolment period	OCT 2009 - JAN 2010	
Length of treatment / followup	8 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	53	Women with fibromyalgia
details	*Inclusion criteria:* diagnosed with fibromyalgia by American College of Rheumatology criteria for at least 1 year, stable regimen of pharmacologic and/or non-pharmacologic treatment for at least 3 months *Exclusion criteria:* residing >70 miles from the research site, unable to attend at one of the scheduled times, currently engaged in yoga practice, actively contemplating suicide, currently undergoing disability application, determination or litigation, scheduled for elective surgery during the study period, physically disabled in a manner that precluded meaningful participation, unwilling to forgo changing their treatment for the length of the study period, not able to speak English	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Chronic pain (fibromyalgia)				
Study ID	**Carson 2010**				
Intervention	25	Yoga: 8 wks, 1x 120 min sessions per wk. Each Yoga of Awareness class included 40 mins of gentle stretching, 25 mins of mindfulness meditation, 10 mins of breathing techniques, 20 mins of didactic presentations, and 25 mins of group discussions			
Comparator #1 (control)	28	Control: waitlist			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Usual care				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified yoga instructor who had received training in traditional schools of yoga, holds a Masters degree in health education and extensive experience treaching yoga.		
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist control with standard care		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Symptoms and functional deficits (global)	Baseline, end of treatment (8 wks)	Fibromylagia Impact Questionnaire (FIQ) - total score (0-100)	21-item self-assessment. Range 0–100. Higher scores indicating more symptom burden and functional limitations in FM.
Outcome 2	Secondary	Fibromyalgia symptoms	Baseline, end of treatment (8 wks)	FIQ - symptoms	Higher score indicates worse symptom severity.
Outcome 3	Secondary	Function	Baseline, end of treatment (8 wks)	FIQ - function	Higher score indicates worse functional limitation.
Outcome 4	Secondary	Fibromyalgia impact	Baseline, end of treatment (8 wks)	FIQ - overall impact	High score indicates worse symptom impact.

Characteristics of included studies	Chronic pain (fibromyalgia)				
Study ID	**Carson 2010**				
Outcome 5	Secondary	Pain	Baseline, end of treatment (8 wks)	FIQ - pain	Higher score indicates worse pain.
Outcome 6	Secondary	Fatigue	Baseline, end of treatment (8 wks)	FIQ - fatigue	Higher score indicates worse fatigue.
Outcome 7	Secondary	Stiffness	Baseline, end of treatment (8 wks)	FIQ - stiffness	Higher score indictaes worse symptoms.
Outcome 8	Secondary	Sleep quality	Baseline, end of treatment (8 wks)	FIQ - poor sleep	Higher score indictaes worse sleep quality.
Outcome 9	Secondary	Depression	Baseline, end of treatment (8 wks)	FIQ - depression	Higher score indictaqes worse depression.
Outcome 10	Secondary	Memory	Baseline, end of treatment (8 wks)	FIQ - poor memory	Higher score indicates worse memory.
Outcome 11	Secondary	Anxiety	Baseline, end of treatment (8 wks)	FIQ - anxiety	Higher score indictaes worse anxiety.
Outcome 12	Secondary	Tenderness	Baseline, end of treatment (8 wks)	FIQ - tenderness	Higher score indictaes worse tenderness.
Outcome 13	Secondary	Balance	Baseline, end of treatment (8 wks)	FIQ - poor balance	Higher score indicates poorer balance.
Outcome 14	Secondary	Environment sensitivity	Baseline, end of treatment (8 wks)	FIQ - environment sensitivity	Higher score indicates worse sensitivity.
Outcome 15	Secondary	Perceived change	Baseline, end of treatment (8 wks)	Patient Global Impression of Change	Lower score indicates greater improvement.

Characteristics of included studies	Chronic pain (fibromyalgia)				
Study ID	**Carson 2010**				
Outcome 16	Secondary	Fibromyalgia symptoms	Baseline, end of treatment (8 wks)	Total Myalgic Score	Number of tender points and extent of tenderness. Scores range from 11-53 with higher score indicating greater pain.
Outcome 17	Secondary	Fibromyalgia symptoms	Baseline, end of treatment (8 wks)	Number of tender points	Higher score indicates more tender points.
Outcome 18	Secondary	Extremity strength	Baseline, end of treatment (8 wks)	Chair to stand test	Seated subjects are asked to rise to full height with arms crossed over their chest as many times as possible within 30 s.
Outcome 19	Secondary	Balance	Baseline, end of treatment (8 wks)	Sensory Integration for Balance Test - eyes open/ eyes closed	Subjects stand on block of foam with eyes open/closed. Score represents number of seconds position is held to max of 30s.
Outcome 20	Secondary	Chronic Pain Acceptance	Baseline, end of treatment (8 wks)	Chronic Pain Acceptance Questionnaire (CPAQ) (total)	20-item instrument for self-assessment of participation in daily activities and willingness to tolerate pain. Scores range from 0-120 with higher score indicating greater pain acceptance.
Outcome 21	Secondary	Chronic Pain Acceptance	Baseline, end of treatment (8 wks)	CPAQ - activity engagement	Activity engagement subscale of CPAQ. Higher score indicates greater engagement.
Outcome 22	Secondary	Chronic Pain Acceptance	Baseline, end of treatment (8 wks)	CPAQ - pain willingness	Pain willingness subscale of CPAQ. Higher score indicates greater willingness.
Outcome 23	Secondary	Pain coping	Baseline, end of treatment (8 wks)	Coping Strategies Questionnaire - pain catastrophising	6-item subscale. Scores range from 0-36 with higher scores indicating greater pain catastrophising.
Outcome 24	Secondary	Pain coping	Baseline, end of treatment (8 wks)	Vanderbilt Multidimensional Pain Coping Inventory (PCI)	Adaptive coping strategy. Higher score indicates greater use of: problem solving,positive reappraisal, distraction, religion, social support, distancing, self-blame, self-isolation, confrontation, disengagement
Outcome 25	Secondary	Pain	Baseline, end of treatment (8 wks)	Daily diary	Scale 0-10. Higher score reflects greater amounts.
Outcome 26	Secondary	Fatigue	Baseline, end of treatment (8 wks)	Daily diary	Scale 0-10. Higher score reflects greater amounts.
Outcome 27	Secondary	Emotional Distress	Baseline, end of treatment (8 wks)	Daily diary	Scale 0-10. Higher score reflects greater amounts.
Outcome 28	Secondary	Vigour	Baseline, end of treatment (8 wks)	Daily diary	Scale 0-10. Higher score reflects greater amounts.

Characteristics of included studies	Chronic pain (fibromyalgia)				
Study ID	**Carson 2010**				
Outcome 29	Secondary	Acceptance	Baseline, end of treatment (8 wks)	Daily diary	Scale 0-10. Higher score reflects greater amounts.
Outcome 30	Secondary	Relaxation	Baseline, end of treatment (8 wks)	Daily diary	Scale 0-10. Higher score reflects greater amounts.
Method of analysis					
Statistics	For goodness-of-fit normal data, standard ANCOVA was used. For non-normal data, bootstrap regression models were used with 5000 re-samples for each analysis. Daily diary data were analysed by multilevel random effects modelling. Repeat analysis for completers only.				
Population analysed	Intent-to-treat	ITT using last oberservation carried forward for missing outcome data.			
Missing data	5 participants were lost to follow up during the treatment period (9.4%). This included 3 in the yoga arm and 2 in the waitlist control arm. Last observation carried forward to account for missing data in the ITT population.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns relating to the self-reported outcomes by non-blinded participants. Blinding of outcome assessors for the objective outcomes means the study is at low risk of bias for these domains.				

Characteristics of included studies	Chronic pain (trauma related)	
Study ID	**Flehr 2019**	
Study reference	Flehr A, Barton C, Coles J, Gibson SJ, Lambert GW, Lambert EA, et al. MindinBody -- feasibility of vigorous exercise (Bikram yoga versus high intensity interval training) to improve persistent pain in women with a history of trauma: a pilot randomized control trial. BMC Complementary and Alternative Medicine 2019 Aug 29;19(234):Epub. 2019. ACTRN12617001507370	
Study design	RCT	Random number table in Excel, performed by someone blind to which activity each number represented.
Author affiliation	The authors were associated with a number of hospitals, universities and research institutes in Australia	
Source of funds	The project was made possible with the resources provided by the Department of General Practice, Monash University and the Baker IDI Heart and Diabetes Institute Melbourne Victoria.	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community	
Country(s) / region	Victoria, Australia	
Enrolment period	OCT 2016 - AUG 2017	
Length of treatment / followup	8 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	34	Women with chronic pain and a self-reported history of trauma
details	*Inclusion criteria:* female, 20-50 years old, persistent pain (present for >12 months, assessed as average pain level over past wk), self-assessed history of trauma, willingness to be randomised to either arm of the study *Exclusion criteria:* malignant pain (associated with disease), bone fracture, dislocated joint, current diagnosis of diabetes, heart disease, hypertention, endocrine disorder, organic brain syndrome, or other cognitive dysfunction, BMI <18 or >40, peri or post menopausal, breast feeding, insufficient understanding of English, imable to provide medical clearance to participate, lack of consent, unwillingness to be randomised, 'moderate' or 'high' for suicidality on the MINI International Neuropsychiatric Interview, other severe comorbidities	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Chronic pain (trauma related)				
Study ID	**Flehr 2019**				
Intervention	18	Bikram yoga: 8 wks, 3x 90 min sessions per wk. Each yoga class consisted of the same series of 26 postures, beginning with standing pranayama, followed by the standing sequence, savasana and a sequence of floor asanas. Class finshes with a seated breathing exercise. Yoga classes are ocnducted in a room maintained at a constant heat of 40 degrees celsius and a humidity of 40%.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	16	HIIT: 8 wks, 3x 45 min sessions per wk. Classes were a trademarked "Adrenaline HIIT" program. Each class consists of 3x 15 min sections: warm up, complete the exercise with perfect technique, complete the exercise at high intensity.			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified Bikram yoga instructor		
Is the comparator clearly inactive?	No	Comparison= other	HIIT exercise		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Pain	Baseline, end of treatment (8 wks)	Brief Pain Inventory	Two domains, severity and intensity, scored from 0-10 where higher score indicates worse pain. MCID reported as an ~ 2 point difference in average severity scores.
Outcome 2	Secondary	Pain severity	Baseline, end of treatment (8 wks)	Brief Pain Inventory - severity	Severity domain of BPI. Higher score indicates worse severity.
Outcome 3	Secondary	Pain interference	Baseline, end of treatment (8 wks)	Brief Pain Inventory - interference	Severity domain of BPI. Higher score indicates worse severity.
Outcome 4	Secondary	HRQoL	Baseline, end of treatment (8 wks)	SF-36	The SF-36 is a measure of health status which also includes summary scores for mental and physical health. Lower score indicates worse quality of life.

Characteristics of included studies	Chronic pain (trauma related)				
Study ID	**Flehr 2019**				
Outcome 5	Secondary	Physical functioning	Baseline, end of treatment (8 wks)	SF-36 - physical functioning	Physical functioning subscale of SF-36. Lower score indicates worse functioning.
Outcome 6	Secondary	Role physical	Baseline, end of treatment (8 wks)	SF-36 - role physical	Role physical subscale of Sf-36. Lower score indicates worse quality.
Outcome 7	Secondary	Body pain	Baseline, end of treatment (8 wks)	SF-36 - body pain	Body pain subscale of Sf-36. Lower score indicates worse pain.
Outcome 8	Secondary	General health	Baseline, end of treatment (8 wks)	SF-36 - general health	General health subscale of Sf-36. Lower score indicates worse health.
Outcome 9	Secondary	Vitality	Baseline, end of treatment (8 wks)	SF-36 - vitality	Vitality subscale of Sf-36. Lower score indicates worse vitality.
Outcome 10	Secondary	Social functioning	Baseline, end of treatment (8 wks)	SF-36 - social functioning	Social functioning subscale of Sf-36. Lower score indicates worse functioning.
Outcome 11	Secondary	Role emotional	Baseline, end of treatment (8 wks)	SF-36 - role emotional	Role emotional subscale of Sf-36. Lower score indicates worse quality.
Outcome 12	Secondary	Mental health	Baseline, end of treatment (8 wks)	SF-36 - mental health	Mental health subscale of Sf-36. Lower score indicates worse health.
Outcome 13	Secondary	Stress	Baseline, end of treatment (8 wks)	DASS - stress subscale	7 questions, 4-point severity/frequency scale with higher scores indicating worse stress.
Outcome 14	Secondary	Anxiety	Baseline, end of treatment (8 wks)	DASS - anxiety subscale	7 questions, 4-point severity/frequency scale with higher scores indicating worse anxiety.
Outcome 15	Secondary	Depression	Baseline, end of treatment (8 wks)	DASS - depression subscale	7 questions, 4-point severity/frequency scale with higher scores indicating worse depression.

Characteristics of included studies	Chronic pain (trauma related)				
Study ID	**Flehr 2019**				
Outcome 16	Secondary	Stress	Baseline, end of treatment (8 wks)	Self-report Inventory for Disorders of Extreme Stress	6 dimensions, 45 items. Higher score indicates greater severity.
Outcome 17	Secondary	Self-efficacy	Baseline, end of treatment (8 wks)	Coping Self-Efficacy Scale	26 items, higher score indicates greater self-efficacy.
Outcome 18	Secondary	Life Stressors	Baseline, end of treatment (8 wks)	Life Stressor Checklist	Stress associated with life events. Each event rated on scale 1-5. Higher score indicates greater stress.
Outcome 19	Secondary	Mindfulness	Baseline, end of treatment (8 wks)	Five Facet Midfulness Questionnaire	39 items rated on a 5-point scale. Higher scores indicate greater mindfulness.
Outcome 20	Secondary	Cardiovascular	Baseline, end of treatment (8 wks)	Heart rate	
Outcome 21	Secondary	Cardiovascular	Baseline, end of treatment (8 wks)	Heart rate variability	
Outcome 22	Secondary	Cardiovascular	Baseline, end of treatment (8 wks)	Systolic blood pressure	
Outcome 23	Secondary	Cardiovascular	Baseline, end of treatment (8 wks)	Diastolic blood pressure	
Outcome 24	Secondary	Anthropometric	Baseline, end of treatment (8 wks)	Weight	
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Chronic pain (trauma related)				
Study ID	**Flehr 2019**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Repeated measures ANCOVA used to assess the outcomes. Effect size for each measure was calculated to estimate the variability between groups and to estimate the sample size required for future studies. Repeated measures ANOVA to assess whether total BPI score reduced from pre to post intervention.				
Population analysed	Intent-to-treat	ITT is specified, however 2 participants dropped out after randomisation and before baseline characteristics were collected. These participants were excluded from the analysis.			
Missing data	Descriptive statistics reported without replacing missing data, in multivariate analysis single imputation was used for missing data.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Low risk of bias for all key domains				
Summary (descriptive)	Low risk of bias. Well decsribed randomisation procedure. Effective blinding of participants given the nature of the intervention. Outcome data available for most participants. Appropriate measure of outcome. No evidence of inappropriatye statistical analysis.				

Characteristics of included studies	Chronic pain (myofascial dysfunction syndrome)	
Study ID	**Khan 2018**	
Study reference	Khan AA, Srivastava A, Passi D, Devi M, Chandra L, Atri M. Management of myofascial pain dysfunction syndrome with meditation and yoga: healing through natural therapy. National journal of maxillofacial surgery. 2018;9(2):155-9.	
Study design	RCT	quasirandomised
Author affiliation	The authors were associated with 4 different colleges and hospitals in India and Saudi Arabia	
Source of funds	None	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Not specified	
Country(s) / region	Not specified	
Enrolment period	Not reported	
Length of treatment / followup	3 months follow up	
Description of population	*N=*	*Description*
# participants	30	Myofascial pain dysfunction syndrome
details	*Inclusion criteria:* diffuse pain in the preauricular region, unilateral, dull, ache, usually constant, tenderness in the involed muscle of mastication, limitation of mandibular movements, absence of clinical and radiographic evidence of any abnormality in the TMJ proper, presence of joint sounds accompanied by myofascial pain and tenderness in the masticatory musculature that begen before the onset of joint noise *Exclusion criteria:*	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Chronic pain (myofascial dysfunction syndrome)				
Study ID	**Khan 2018**				
Intervention	10	Raj-yoga meditation therapy and pranayama			
Comparator #1 (control)	10	Control (no intervention)			
Comparator #2 (other)	10	Raj-yoga meditation therapy and pranayama NO standard of care			
Comparator #3 (other)	--	--			
Co-interventions	Usual care				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Expert teacher supervised the yoga module		
Is the comparator clearly inactive?	Yes	Comparison= control	Standard care		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pain	Baseline, 3 months	Not reported	
Outcome 2	Not specified	Mouth opening	Baseline, 3 months	Not reported	
Outcome 3	Not specified	Mandibular deviation	Baseline, 3 months	Not reported	
Outcome 4	Not specified	Inflammation	Baseline, 3 months	Not reported	

Characteristics of included studies	Chronic pain (myofascial dysfunction syndrome)				
Study ID	**Khan 2018**				
Outcome 5	Not specified	Swelling	Baseline, 3 months	Not reported	
Outcome 6	Not specified	Clicking	Baseline, 3 months	Not reported	
Outcome 7	Not specified	Occlusion	Baseline, 3 months	Not reported	
Outcome 8	Not specified	Psychologic evaluation	Baseline, 3 months	Not reported	
Outcome 9	Not specified	Depression	Baseline, 3 months	Depression, Anxiety and Stress Scale (42-item)	14 items, 4-point severity/frequency scale. Higher scores indicate worse depression.
Outcome 10	Not specified	Anxiety	Baseline, 3 months	Depression, Anxiety and Stress Scale (42-item)	14 items, 4-point severity/frequency scale. Higher scores indicate worse anxiety.
Outcome 11	Not specified	Distress	Baseline, 3 months	Depression, Anxiety and Stress Scale (42-item)	14 items, 4-point severity/frequency scale. Higher scores indicate worse stress.
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Outcome 15	--	--	--	--	--

Characteristics of included studies	Chronic pain (myofascial dysfunction syndrome)				
Study ID	**Khan 2018**				
Outcome 16	--	--	--	--	--
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Chronic pain (myofascial dysfunction syndrome)				
Study ID	**Khan 2018**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Results are reported as pre-post mean difference, SD. A t-test was used to test for significance.				
Population analysed	Other (provide details)	Not reported			
Missing data	Not reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High risk of bias due to lack of information in key domains such as the method of randomisation, baseline characteristics between the two groups, any protocol deviations, missing outcome data and method of analysis.				

Characteristics of included studies	Chronic pain	
Study ID	**Schmid 2018**	
Study reference	Schmid AA, Atler KE, Malcolm MP, Grimm LA, Klinedinst TC, Marchant DR, et al. Yoga improves quality of life and fall risk-factors in a sample of people with chronic pain and Type 2 Diabetes. Complementary therapies in clinical practice. 2018;31:369-73. Schmid AA, Grimm LA, Chop CA. Yoga Improves Occupational Performance, Pain-Related Disability, and Activities of Daily Living for People With Chronic Pain...AOTA Annual Conference & Expo, April 19-22, 2018, Salt Lake City, Utah. American journal of occupational therapy. 2018;72:1-. Schmid A, Malcolm MP, Atler KE, Grimm LA, Klinedinst T, Chop C. Yoga Improves Fall Risk Factors and Quality of Life in People With Type 2 Diabetes Mellitus...AOTA Annual Conference & Expo, April 19 to April 22, 2018, Salt Lake City, Utah. American journal of occupational therapy. 2018;72:1-. Schmid AA, Fruhauf CA, Sharp JL, Van Puymbroeck M, Bair MJ, Portz JD. Yoga for People With Chronic Pain in a Community-Based Setting: A Feasibility and Pilot RCT. Journal of evidence-based integrative medicine. 2019;24:2515690X19863763. Schmid AA, Van Puymbroeck M, Fruhauf CA, Bair MJ, Portz JD. Yoga improves occupational performance, depression, and daily activities for people with chronic pain. Work (Reading, Mass). 2019;63(2):181-9. NCT03010878	
Study design	RCT	Random number generator. Assessor blinded to allocation assisted with baseline assessments.
Author affiliation	The authors were associated with universities in the USA	
Source of funds	Colorado State University Prevention Research Center	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community, self-reported	
Country(s) / region	USA	
Enrolment period	Not reported	
Length of treatment / followup	8 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	83	Self-reported chronic pain, presenting at a community pain clinic
details	*Inclusion criteria:* self-report of chronic pain for at least 6 months, > 18 years old, willing to consent to the study *Exclusion criteria:* self-report of exercise restrictions, consitent yoga practice for the past year, travel restrictions, serious and recent medical procedures or conditions without a doctor's note, high risk pregnancy	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Chronic pain				
Study ID	**Schmid 2018**				
Intervention	44	Yoga: 8 wks, 2x 60 min sessions per wk. The yoga program was a standardised, progressive yoga, moving from sitting postures to then include standing and floor postures. Yoga postures were modified as needed.			
Comparator #1 (control)	39	Control (no intervention)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Monthly self-management: usual care includes monthly visits with the medical care provider, recording of vitals, pain medication management, goal setting, nutritional counselling, a set number of visits to a massase therapist or accupuncturist, and monthly self-management programming.				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Occupational or physical therapist		
Is the comparator clearly inactive?	Yes	Comparison= control	No intervention		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Pain	Baseline, 8 wks	Brief pain inventory	Two domains, severity and intensity, scored from 0-10 where higher score indicates worse pain. MCID reported as an ~ 2 point difference in average severity scores.
Outcome 2	Not specified	Balance	Baseline, 8 wks	Fullerton Advanced Balance Scale	10 items, scores range from 0-40. Higher score indicates better balance.
Outcome 3	Not specified	HRQoL	Baseline, 8 wks	SF-36	The SF-36 is a measure of health status which also includes summary scores for mental and physical health. Lower score indicates worse quality of life.
Outcome 4	Not specified	Self-efficacy for managing pain	Baseline, 8 wks	Chronic Pain Self-Efficacy Scale	3 domains. Higher score indicates increased self-efficacy.

Characteristics of included studies	Chronic pain				
Study ID	**Schmid 2018**				
Outcome 5	Not specified	Self-efficacy for managing pain	Baseline, 8 wks	Stanford Self-Efficacy Managing Chronic Disease (SSMCD-6)	6 items, scores 0-100%. Higher score indicates increased confidence.
Outcome 6	Not specified	Mindfullness	Baseline, 8 wks	Body Responsiveness Scale	7 items. Higher score indicates increased responsiveness or mind-body connection.
Outcome 7	Not specified	Functional mobility	Baseline, 8 wks	6 Minute Walk Test	Distance walked in 6 minutes.
Outcome 8	Not specified	Gait speed	Baseline, 8 wks	10 meter walk	Participants walk along a 14 meter corridor at a comfortable speed. Gait speed is recorded in m/s
Outcome 9	Not specified	Upper body strength	Baseline, 8 wks	Arm curl test	Perform as many arm curls as possible in 30 seconds
Outcome 10	Not specified	Extremity strength	Baseline, 8 wks	Chair to stand test	Seated subjects are asked to rise to full height with arms crossed over their chest as many times as possible within 30 s.
Outcome 11	Not specified	Occupational performance	Baseline, 8 wks	Canadian Occupational Performance Measure	The 5 most important problems were rated on a 1-10 scale for the ability to perform the activity. Higher scores indicate greater occupational performance.
Outcome 12	Not specified	Activities of Daily living	Baseline, 8 wks	Frenchay Activities Index	Higher scores indicate increased activity or occupation
Outcome 13	Not specified	Psychosocial wellbeing	Baseline, 8 wks	Patient Health Questionnaire 9	Higher scores indicate increased risk of depression
Outcome 14	Not specified	Reintegration with community	Baseline, 8 wks	Reintegration to Normal Living Index	Higher scores indicate enhanced reintegration
Outcome 15	Not specified	Pain impact	Baseline, 8 wks	Occupational Impact of Pain Screening	Higher score is worse

Characteristics of included studies	Chronic pain				
Study ID	**Schmid 2018**				
Outcome 16	--	--	--	--	--
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Chronic pain				
Study ID	**Schmid 2018**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Double data entry was conducted for 10% of the sample to ensure quality of data, Shapiro-Wilk test to check data were normally distributed, T-tests or Chi-squared to compare demographic variables between yoga and control groups, Paired t-test to compare outcome data between baseline and post-intervention, D_cohen effect size for each variable: 0.20 small, 0.				
Population analysed	Per protocol	Only participants who completed the study (8 or more yoga sessions) were included in the analysis.			
Missing data	One outlying value for BPI severity was excluded. Of 44 participants randomised to yoga, only 28 completed enough sessions to be included in the analysis (63%). Not explicit how many participants were lost in the control group but it is interpretted that there were no				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High risk of bias due to the inapproapriate method of analysis used to estimate the measure of effect (per protocol) effectively excluding all pariticpants who are less likely to experience an effect. High proportion of patients not included in the final analysis (36% of the yoga group). Patients self-report outcomes and are not blinded to intervention status.				

Characteristics of included studies	Joint pain (osteoarthritis)		
Study ID	**Bedekar 2012**		
Study reference	Bedekar, N., Prabhu, A., Shyam, A., et al. 2012. Comparative study of conventional therapy and additional yogasanas for knee rehabilitation after total knee arthroplasty. International Journal of Yoga, 5, 118-22.		
Study design	RCT	quasirandomised	Alternate allocation
Author affiliation	The authors were associated with universities in India		
Source of funds	None		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	Community, self-reported		
Country(s) / region	Louisiana, USA		
Enrolment period	Not reported		
Length of treatment / followup	8 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	51	Undergoing total knee replacement due to osteoarthritis	
details	*Inclusion criteria:* undergoing total knee replacement due to osetoarthritis *Exclusion criteria:* revision arthroplasty, post-operative infections requiring extended immobilisation, neuro-vascular defecit		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Bedekar 2012**				
Intervention	25	Yoga: daily during hospital stay + 3 months, 3x ? min sessions per wk. Subjects received yoga daily at the hospital and were instructured to practice 3x per wk after discharge.			
Comparator #1 (control)	26	Control (no intervention)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Conventional exercise training: circulatory exercises, breathing exercises, strengthening exercises, walking, stair climbing, progress to lunges, step ups and stationary bike				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	Yoga delivered by the 'evaluation therapist'		
Is the comparator clearly inactive?	Yes	Comparison= control	No intervention		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Pain and stiffness	3rd post-operative day (baseline), 6 wks, 3 months	WOMAC - Pain and stiffness subscales	Higher score is worse, scores range 0-28.
Outcome 2	Primary	Physical function	3rd post-operative day (baseline), 6 wks, 3 months	WOMAC- Function subscale	Higher score is worse, scores range 0-68
Outcome 3	--	--	--	--	--
Outcome 4	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Bedekar 2012**				
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Outcome 15	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Bedekar 2012**				
Outcome 16	--	--	--	--	--
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Bedekar 2012**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Non-parametric tests. Relative differences between the time duration of each group, Mann-Whitney U test was used to compare between groups. Wilcoxon sign rank test was used to evaluate differences within paired scores. P<0.05 was considered significant.				
Population analysed	Intent-to-treat	Modified ITT, participants lost to follow up were excluded. It is unclear whether these participants were included in the baseline characteristics.			
Missing data	Forms for three subjects in the control group and 1 in the intervention group were not returned.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High risk of bias specifically relating to the quasirandomisation and lack of baseline characteristics available to assess the appropriateness of the randomisation process. Some concerns arise due to the self-reported outcome measure, and the plausible multiple analyses of data.				

Characteristics of included studies	Joint pain (osteoarthritis)	
Study ID	**Cheung 2014**	
Study reference	Corjena, C., Wyman, J. F., Resnick, B., et al. 2014. Yoga for managing knee osteoarthritis in older women: a pilot randomized controlled trial. BMC Complementary & Alternative Medicine, 14, 2-18.	
Study design	RCT	Computer-generated random numbers
Author affiliation	The authors were associated with universities in the USA	
Source of funds	This study was funded by grants from the John A Hartford Foundation, Atlantic Philanthropies, Midwest Nursing Research Society Joanne Stevenson Seed Grant, and St. Catherine University.	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community dwelling	
Country(s) / region	NSW, Australia	
Enrolment period	FEB 2011 - SEPT 2011	
Length of treatment / followup	8 wk intervention, 20 wk follow up	
Description of population	*N=*	*Description*
# participants	36	Symptomatic knee osteoarthritis
details	*Inclusion criteria:* community-dwelling women aged 65-90, stmptomatic knee OA *Exclusion criteria:* previous yoga training, participating in a supervised exercise program, score <8 on the Short Portable Mental Status Questionnaire, symptoms of joint locking, instability indicated by chronic use of knee brace, cane, walker or wheellchair, corticosteroid injection in the symptomatic joint within 3 months of study entry, hyaluronic acid injection in the symptomatic joint within 6 months of study entry, history of knee surgery within the last 2 years, joint replacement at any time, significant medical co-morbidities or co-morbidities with overlapping symptoms	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Cheung 2014**				
Intervention	18	Hatha yoga: 8 wks, 1x 60 min session per wk + 4x 30 mins home practice per wk. Sessions included poses, breathing and meditation.			
Comparator #1 (control)	18	Control (waitlist)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Registered yoga teacher with over 10 years experience		
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Symptoms	Baseline, 4 wks, 8 wks, 20 wks	WOMAC Osteoarthritis Index - Total	Higher score is worse, scores range 0-96
Outcome 2	Primary	Pain	Baseline, 4 wks, 8 wks, 20 wks	WOMAC Osteoarthritis Index - Pain subscale	Higher score is worse, scores range 0-20
Outcome 3	Primary	Stiffness	Baseline, 4 wks, 8 wks, 20 wks	WOMAC Osteoarthritis Index - Stiffness subscale	Higher score is worse, scores range 0-8
Outcome 4	Primary	Physical function	Baseline, 4 wks, 8 wks, 20 wks	WOMAC Osteoarthritis Index - Function subscale	Higher score is worse, scores range 0-68

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Cheung 2014**				
Outcome 5	Primary	Analgesic use	Baseline, 4 wks, 8 wks, 20 wks	Single question	
Outcome 6	Secondary	Physical function	Baseline, 4 wks, 8 wks, 20 wks	Short Physical Performance Battery - Total	Higher score is better, scores range 0-12
Outcome 7	Secondary	Physical function	Baseline, 4 wks, 8 wks, 20 wks	Short Physical Performance Battery - Chair stand	Higher score is better, scores range 0-4
Outcome 8	Secondary	Balance	Baseline, 4 wks, 8 wks, 20 wks	Short Physical Performance Battery - Balance	Higher score is better, scores range 0-4
Outcome 9	Secondary	Physical function	Baseline, 4 wks, 8 wks, 20 wks	Short Physical Performance Battery - 8 ft walk	Higher score is better, scores range 0-4
Outcome 10	Secondary	Sleep quality	Baseline, 4 wks, 8 wks, 20 wks	Pittsburgh Sleep Quality Index - Total	Higher score is worse, scores range 0-21
Outcome 11	Secondary	Sleep quality	Baseline, 4 wks, 8 wks, 20 wks	Pittsburgh Sleep Quality Index - Sleep efficiency	Higher score is worse, scores range 0-3
Outcome 12	Secondary	Sleep quality	Baseline, 4 wks, 8 wks, 20 wks	Pittsburgh Sleep Quality Index - Sleep disturbance	Higher score is worse, scores range 0-3
Outcome 13	Secondary	Sleep quality	Baseline, 4 wks, 8 wks, 20 wks	Pittsburgh Sleep Quality Index - Sleep duration	Higher score is worse, scores range 0-3
Outcome 14	Secondary	Sleep quality	Baseline, 4 wks, 8 wks, 20 wks	Pittsburgh Sleep Quality Index - Sleep latency	Higher score is worse, scores range 0-3
Outcome 15	Secondary	Sleep quality	Baseline, 4 wks, 8 wks, 20 wks	Pittsburgh Sleep Quality Index - Sleep quality	Higher score is worse, scores range 0-3

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Cheung 2014**				
Outcome 16	Secondary	Sleep quality	Baseline, 4 wks, 8 wks, 20 wks	Pittsburgh Sleep Quality Index - Sleep quality	Higher score is worse, scores range 0-3
Outcome 17	Secondary	Sleep quality	Baseline, 4 wks, 8 wks, 20 wks	Pittsburgh Sleep Quality Index - Use of sleep medication	Higher score is worse, scores range 0-3
Outcome 18	Secondary	Physical wellbeing	Baseline, 4 wks, 8 wks, 20 wks	SF-12 - Physical	Higher score is better, scores range 0-100
Outcome 19	Secondary	Mental wellbeing	Baseline, 4 wks, 8 wks, 20 wks	SF-12 - Mental	Higher score is better, scores range 0-100
Outcome 20	Secondary	Self-anchoring, striving	Baseline, 4 wks, 8 wks, 20 wks	Cantril Self-Anchoring Striving Scale - Current	Higher score is better, scores range 0-10
Outcome 21	Secondary	Self-anchoring, striving	Baseline, 4 wks, 8 wks, 20 wks	Cantril Self-Anchoring Striving Scale - 5 years	Higher score is better, scores range 0-10
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Cheung 2014**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Independent t-test to test between-group differences at baseline. Main aim was analysed with ANCOVA at 8 wks, using baseline scores as covariates. P<0.05 was considered significant.				
Population analysed	Intent-to-treat	ITT analysis was specified.			
Missing data	One participant in the waitlist control group withdrew from the study due to family obligations				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns arising from the self-reported outcome measure, lack of blinding and no pre-specified analysis plan.				

Characteristics of included studies	Joint pain (osteoarthritis)	
Study ID	**Cheung 2016**	
Study reference	Cheung, C. K., Wyman, J., Bronas, U., et al. 2016. Is yoga better than aerobic/strengthening exercises for managing knee osteoarthritis in older adults? Osteoarthritis and Cartilage, 1), S484. Cheung, C., Wyman, J. F., Bronas, U., et al. 2017. Managing knee osteoarthritis with yoga or aerobic/strengthening exercise programs in older adults: a pilot randomized controlled trial. Rheumatology International, 37, 389-398. NCT02525341	
Study design	RCT	Online random number generator
Author affiliation	The authors were associated with universities in the USA	
Source of funds	This study was funded by the University of Iowa Hartford Center Geriatric Nursing Excellent Pilot Grant, and Deborah E. Powell Center of Mature Women's Health and Research Grants. It is also supported in part by the National Center for Advancing Translational Sciences Award UL1TR000114.	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community dwelling	
Country(s) / region	USA	
Enrolment period	MAR 2013 - SEPT 2013 (wave 1); APR 2014 - NOV 2015 (wave 2)	
Length of treatment / followup	8 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	83	Symptomatic knee osteoarthritis
details	*Inclusion criteria:* community-dwelling adults aged 60 and over, self-reported medical diagnosis of symptomatic knee OA for at least 6 months *Exclusion criteria:* yoga training within 2 months, currently participating in a supervised exercise program more than 2x per wk, symptoms of joint locking that would affect balance and make exercise unsafe, chronic use of assistive devices, corticosteroid injection within 3 months, hyaluronic acid injection within 6 months, history of knee surgery within 2 years, knee joint replacement, self-reported co-morbidities including uncontrolled hypertension, unstable heart conditions, or comorbidities with overlapping symptoms, score <8 on the Short Portable Mental Status Questionnaire	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Cheung 2016**				
Intervention	32	Hatha yoga: 8 wks, 1x 45 min session per wk + 4x 30 mins home practice per wk. Sessions included poses, breathing and mindfullness training.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	28	Aerobic and strengthening exercises: 8 wks, 1x 45 min session per wk + 6x 15-30 min home practice per wk. Sessions included 15 mins of mild aerobic exercises and 30 mins of strengthening exercises. Participants were asked to practice the aerobic portion of the program at home 4x wkly, and the strengthening exercises 2x wkly.			
Comparator #3 (other)	23	Education: pre-printed education brochures from the Arthritis Foundation on how to manage OA pain, and physical activity and exercise for OA., wkly telephone calls from the research assistant during the 8-week intervention period. They were asked about their OA symptoms and general health status.			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	A registered yoga teacher taught all HY classes		
Is the comparator clearly inactive?	No	Comparison= other	Education and wkly phone calls		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Symptoms	Baseline, 4 wks, 8 wks	WOMAC Osteoarthritis Index - Total	Higher score is worse, scores range 0-96
Outcome 2	Primary	Pain	Baseline, 4 wks, 8 wks	WOMAC Osteoarthritis Index - Pain subscale	Higher score is worse, scores range 0-20
Outcome 3	Primary	Stiffness	Baseline, 4 wks, 8 wks	WOMAC Osteoarthritis Index - Stiffness subscale	Higher score is worse, scores range 0-8
Outcome 4	Primary	Physical function	Baseline, 4 wks, 8 wks	WOMAC Osteoarthritis Index - Function subscale	Higher score is worse, scores range 0-68

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Cheung 2016**				
Outcome 5	Primary	Pain	Baseline, 4 wks, 8 wks	Visual analogue scale	Higher is worse, scores range 0-10
Outcome 6	Primary	Analgesic use	Baseline, 4 wks, 8 wks	Average number used for knee OA per day	Higher is worse
Outcome 7	Secondary	Physical function	Baseline, 4 wks, 8 wks	Short Physical Performance Battery - Total	Higher score is better, scores range 0-12
Outcome 8	Secondary	Physical function	Baseline, 4 wks, 8 wks	Short Physical Performance Battery - Chair stand	Higher score is better, scores range 0-4
Outcome 9	Secondary	Balance	Baseline, 4 wks, 8 wks	Short Physical Performance Battery - Balance	Higher score is better, scores range 0-4
Outcome 10	Secondary	Physical function	Baseline, 4 wks, 8 wks	Short Physical Performance Battery - 8 ft walk	Higher score is better, scores range 0-4
Outcome 11	Secondary	Anxiety	Baseline, 4 wks, 8 wks	Hospital Anxiety and Depression Scale - Anxiety	Higher score is worse, scores range 0-21
Outcome 12	Secondary	Depression	Baseline, 4 wks, 8 wks	Hospital Anxiety and Depression Scale - Depression	Higher score is worse, scores range 0-21
Outcome 13	Secondary	Fear of falling	Baseline, 4 wks, 8 wks	Falling self-efficacy scale	Higher score is worse, scores range 15-60
Outcome 14	Secondary	Spiritual health	Baseline, 4 wks, 8 wks	Self-transcendance scale	Higher score is worse, scores range 16-64
Outcome 15	Secondary	Physical wellbeing	Baseline, 4 wks, 8 wks	SF-12 - Physical	Higher score is better, scores range 0-100

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Cheung 2016**				
Outcome 16	Secondary	Mental wellbeing	Baseline, 4 wks, 8 wks	SF-12 - Mental	Higher score is better, scores range 0-100
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Cheung 2016**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	To evaluate treatment differences, means were adjusted by baseline values and contrasts with 95% CI was calculated. P<0.05 was significant, with no adjustment for multiple comparison.				
Population analysed	Intent-to-treat	ITT analysis was specified.			
Missing data	Last observation carried forward for missing data.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns arising from the missing outcome data, self-reported outcome measure, lack of blinding and no pre-specified analysis plan.				

Characteristics of included studies	Joint pain (osteoarthritis)		
Study ID	**Deepeshwar 2018**		
Study reference	Deepeshwar, S., Tanwar, M., Kavuri, V., et al. 2018. Effect of yoga based lifestyle intervention on patients with knee osteoarthritis: A randomized controlled trial. Frontiers in Psychiatry, 9 (MAY) (no pagination). CTRI/2017/10/010141		
Study design	RCT	quasirandomised	"Systematic sampling method". No mention of allocation concealment.
Author affiliation	The authors were affiliated with a yoga centre in India		
Source of funds	No information		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	Home-based health centre		
Country(s) / region	Bengalore, India		
Enrolment period	APRIL 2015 - JULY 2015		
Length of treatment / followup	1 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	66	Knee osteoarthritis	
details	*Inclusion criteria:* knee OA for more than 3 months, fully ambulant, literate, willing to participate *Exclusion criteria:* rheumatoid arthritis, autoimmune diseases, malignancies, knee surgery or knee arthroscopy, knee pain caused by congenital dysplasia		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Deepeshwar 2018**				
Intervention	31	Integrated approach of yoga therapy: 7 days, 2x ? Min sessions per day (morning and evening). Yoga sessions included postures, breathing, relaxation techniques, devotional sessions and stress management through yogic lifestyle. All participants practiced intense candlelight gazing, nasal cleansing, vomiting with lukewarm saline water, partial colon cleansing.			
Comparator #1 (control)	35	Control (usual care)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	No information		
Is the comparator clearly inactive?	Yes	Comparison= control	No intervention		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Functional mobility	Baseline, day 7	Timed up and go	Higher time is worse
Outcome 2	Primary	Functional mobility	Baseline, day 7	Sit to stand	Higher time is worse
Outcome 3	Primary	Flexibility and range of motion	Baseline, day 7	Goniometer - right extension	Higher range of motion is better
Outcome 4	Primary	Flexibility and range of motion	Baseline, day 7	Goniometer - right flexion	Higher range of motion is better

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Deepeshwar 2018**				
Outcome 5	Primary	Flexibility and range of motion	Baseline, day 7	Goniometer - left extension	Higher range of motion is better
Outcome 6	Primary	Flexibility and range of motion	Baseline, day 7	Goniometer - left flexion	Higher range of motion is better
Outcome 7	Secondary	Handgrip strength	Baseline, day 7	Handgrip dynamometer - left hand	Higher is better
Outcome 8	Secondary	Handgrip strength	Baseline, day 7	Handgrip dynamometer - right hand	Higher is better
Outcome 9	Secondary	Falls self-efficacy	Baseline, day 7	Falls self-efficacy scale	Higher score is worse, scores range 15-60
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Outcome 15	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Deepeshwar 2018**				
Outcome 16	--	--	--	--	--
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Deepeshwar 2018**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Repeated measures ANOVA were performed for each outcome measures with two factors: group; timepoint. All comparisons were made between pre- and post- mean values of each outcome. P<0.05 was considered significant				
Population analysed	Intent-to-treat	As no drop outs were reported, ITT analysis is assumed.			
Missing data	All participants provided outcome data, no missing data identified.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns arising from the lack of pre-specified analysis plan to confirm the selection of the reported result.				

Characteristics of included studies	Joint pain (osteoarthritis)	
Study ID	**Ebnezar 2011**	
Study reference	Ebnezar, J., Nagarathna, R., Bali, Y., et al. 2011. Effect of an integrated approach of yoga therapy on quality of life in osteoarthritis of the knee joint: A randomized control study. International Journal of Yoga, 4, 55-63. Ebnezar, J. & Yogitha, B. 2012. Effectiveness of yoga therapy with the therapeutic exercises on walking pain, tenderness, early morning stiffness and disability in osteoarthritis of the knee joint -- a comparative study. Journal of Yoga & Physical Therapy 2012 Jun;2(3):114. Ebnezar, J., Nagarathna, R., Yogitha, B., et al. 2012. Effects of an integrated approach of hatha yoga therapy on functional disability, pain, and flexibility in osteoarthritis of the knee joint: A randomized controlled study. Journal of Alternative and Complementary Medicine, 18, 463-472. Ebnezar, J., Nagarathna, R., Yogitha, B., et al. 2012. Effect of integrated yoga therapy on pain, morning stiffness and anxiety in osteoarthritis of the knee joint: A randomized control study. International Journal of Yoga, 5, 28-36.	
Study design	RCT	Computer-generated random number table. Numbered envelopes to conceal the sequence.
Author affiliation	The authors were affiliated with a hospital and yoga centre in India	
Source of funds	SVYASA and Ebnezar Orthopedic Centre	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Outpatient department of orthopedic centre	
Country(s) / region	Bengalore, India	
Enrolment period	Not reported	
Length of treatment / followup	2 wks + 10-12 wks home practice, no follow up reported	
Description of population	*N=*	*Description*
# participants	250	Knee osteoarthritis
details	*Inclusion criteria:* persistent pain for 3 months, moderate to severe pain on walking, Kellergren and Lawrence radiologic grading of II-IV within 6 months, fully ambulant, literate, willing to participate *Exclusion criteria:* grade I changes in x-ray films, acute knee pain, secondary OA due to rheumatoid arthritis, gout, septic arthritis, tuberculosis, tumor, trauma, haemophilia, major medical or psychiatric disorders	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Ebnezar 2011**				
Intervention	125	Integrated approach of yoga therapy: 2 wks, 1x 40 min session per day + 10 wks home practice. The yogic exercises included loosening, strengthening, postures, breating, relaxation techniques with devotional songs.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	125	Non-yogic therapeutic exercises: 2 wks, 1x 40 min session per day + 12 wks home practice. Exercises included loosening and strenghening practices for all the joints of the upper and lower limbs.			
Comparator #3 (other)	--	--			
Co-interventions	Conventional physiotherapy including electrical stimulation and ultrasound: 2 wks, 1x 20 min session daily. Compliance for home exercise of both groups was monitored by wkly review.				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified therapists		
Is the comparator clearly inactive?	No	Comparison= other	Loosening and strengthening exercises		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Physical functioning	Baseline, 2 wks, 3 months	SF-36 - Physical functioning	Higher score is better
Outcome 2	Not specified	Role limitation	Baseline, 2 wks, 3 months	SF-36 - Role physical	Higher score is better
Outcome 3	Not specified	Emotional problems	Baseline, 2 wks, 3 months	SF-36 - Role emotional	Higher score is better
Outcome 4	Not specified	Energy/Fatigue	Baseline, 2 wks, 3 months	SF-36 - Vitality	Higher score is worse

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Ebnezar 2011**				
Outcome 5	Not specified	Emotional wellbeing	Baseline, 2 wks, 3 months	SF-36 - mental health	Higher score is worse
Outcome 6	Not specified	Social functioning	Baseline, 2 wks, 3 months	SF-36 - Social functioning	Higher score is better
Outcome 7	Not specified	Pain	Baseline, 2 wks, 3 months	SF-36 - Pain	Higher score is better
Outcome 8	Not specified	General health	Baseline, 2 wks, 3 months	SF-36 - General health	Higher score is better
Outcome 9	Not specified	Pain	Baseline, 2 wks, 3 months	VAS (0-10)	Pain while walking, higher score is worse
Outcome 10	Not specified	Tenderness	Baseline, 2 wks, 3 months	Clinician graded, NRS (1-4)	Higher score is worse
Outcome 11	Not specified	Stiffness	Baseline, 2 wks, 3 months	Mins experienced	Higher score is worse
Outcome 12	Not specified	Symptoms	Baseline, 2 wks, 3 months	WOMAC Osteoarthritis Index - Total	Higher score is worse
Outcome 13	Not specified	Flexibility and range of motion	Baseline, 2 wks, 3 months	Goniometer - right flexion	Higher range of motion is better
Outcome 14	Not specified	Flexibility and range of motion	Baseline, 2 wks, 3 months	Goniometer - left flexion	Higher range of motion is better
Outcome 15	Not specified	Swelling	Baseline, 2 wks, 3 months	Clinician graded, NRS (0-3)	Higher score is worse

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Ebnezar 2011**				
Outcome 16	Not specified	Crepitus	Baseline, 2 wks, 3 months	Clinician graded, NRS (1-4)	Higher score is worse
Outcome 17	Not specified	Functional mobility	Baseline, 2 wks, 3 months	Time to walk 50m	Higher time is worse
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Ebnezar 2011**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Wilcoxon signed rank test to assess within group differences, Mann-Whitney U tests to assess between group differences.				
Population analysed	Other (provide details)	Modified ITT is interpretted. Drop outs not included in final analysis			
Missing data	7 drop outs in the yoga group and 8 in the control group. No method of adjusting for missing data is specified.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns arising from the self-reported outcomes by non-blinded participants and the lack of a pre-specified analysis plan.				

Characteristics of included studies	Joint pain (osteoarthritis)	
Study ID	**Kuntz 2016**	
Study reference	Kuntz, A. B., Karampatos, S., Brenneman, E., et al. 2016. Can a biomechanically-designed yoga exercise program yield superior clinical improvements than traditional exercise in women with knee osteoarthritis? Osteoarthritis and Cartilage, 1), S445-S446. Kuntz, A. B., Chopp-Hurley, J. N., Brenneman, E. C., et al. 2018. Efficacy of a biomechanically-based yoga exercise program in knee osteoarthritis: A randomized controlled trial. PLoS ONE, 13 (4) (no pagination).	
Study design	RCT	Computer generated randomisation, allocation provided in an opaque envelope
Author affiliation	The authors were affiliated with several universities in Canada	
Source of funds	Project funding was received through a Canadian Institutes for Health Research (CIHR) Bridge Grant #137147 (MRM). Funding for certain equipment used in this research was received through the Canada Foundation for Innovation and the Ontario Research Fund. Alexander Kuntz was supported by the Joint Motion Program	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community	
Country(s) / region	Canada	
Enrolment period	APRIL 2015 - JUNE 2015	
Length of treatment / followup	12 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	31	Knee osteoarthritis
details	*Inclusion criteria:* abultatory, community-dwelling women, aged 50 or over, clinical knee OA *Exclusion criteria:* other forms of arthritis, history of osteoporotic fracture, neurological conditions, physician-advised physical activity restrictions, skin allergy to medical tape, lower limb trauma in past 3 months, ipsilateral hip or ankle conditions, undergoing cancer treatment, pregnancy	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Joint pain (osteoarthritis)					
Study ID	**Kuntz 2016**					
Intervention	10	Yoga: 12 wks, 3x 60 min sessions per wk. Alignment-based postures to activate lower limb musculature, selected weight-bearing static poses, body-awareness exercises, relaxation exercises.				
Comparator #1 (control)	--	--				
Comparator #2 (other)	10	Relaxation: 12 wks, 3x 60 min sessions per wk. Somatic awareness exercises, meditation, passive postures.				
Comparator #3 (other)	11	Traditional exercise: 12 wks, 3x 60 min sessions per wk. Gold standard exercises, knee strengthening, aerobic warm-up, balance exercises, stretching.				
Co-interventions	--					
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Trained yoga instructor			
Is the comparator clearly inactive?	No	Comparison= other	Loosening and strengthening exercises, meditation and passive postures			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***	
Outcome 1	Primary	Pain	Baseline, 12 wks	Knee Injury and Osteoarthritis Outcome Score (KOOS) - pain subscale	Higher score is better, scores normalised out of 100	
Outcome 2	Primary	Pain	Baseline, 12 wks	Measure of Intermittent and Constant Osteoarthritis Pain	Higher score is worse	
Outcome 3	Primary	Physical functioning	Baseline, 12 wks	Lower Extremity Functional Scale	Higher score is better, scores range 0-80	
Outcome 4	Primary	Physical functioning	Baseline, 12 wks	KOOS - acitivities of daily living subscale	Higher score is better, scores normalised out of 100	

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Kuntz 2016**				
Outcome 5	Primary	Physical functioning	Baseline, 12 wks	KOOS - sport and recreation subscale	Higher score is better, scores normalised out of 100
Outcome 6	Primary	Functional mobility	Baseline, 12 wks	6 minute walk test	Longer distance is better
Outcome 7	Primary	Functional mobility	Baseline, 12 wks	40-meter walk	Shorter time is better
Outcome 8	Primary	Functional mobility	Baseline, 12 wks	30 second chair stand	Higher score is better
Outcome 9	Primary	Functional mobility	Baseline, 12 wks	Timed up and go	Shorter time is better
Outcome 10	Primary	Functional mobility	Baseline, 12 wks	Stair ascent	Shorter time is better
Outcome 11	Secondary	Strength	Baseline, 12 wks	Peak torque in knee extensor - symptomatic knee	Higher is better
Outcome 12	Secondary	Strength	Baseline, 12 wks	Peak torque in knee flexor - symptomatic knee	Higher is better
Outcome 13	Secondary	Depression	Baseline, 12 wks	Centre for Epidemiologic Studies Depression Scale	Higher score is worse, scores range 0-60
Outcome 14	Secondary	Quality of life	Baseline, 12 wks	KOOS - quality of life subscale	Higher score is better, scores normalised out of 100
Outcome 15	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Kuntz 2016**				
Outcome 16	--	--	--	--	--
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Kuntz 2016**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	One-way ANOVA to detect differences at baseline. ANCOVA comparing mean change scores across the intervention (follow-up minus baseline) with baseline data used as co-variates, used to detect between group differences. P<0.05 was significant. Paired t-tests used to assess within group differences. Outcomes were interpretted relatuve to the MCID and Patient Acceptable Symptoms States (PASS).				
Population analysed	Per protocol	One participant in the yoga group was excluded due to a flare-up of a pre-existing condition.			
Missing data	One participant in the traditional exercise group was lost-to follow up. Outcome data was collected for all other participants, regardless of their participation in the intervention.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns arising from the self-reported outcomes by non-blinded participants and the lack of a pre-specified analysis plan.				

Characteristics of included studies	Joint pain (osteoarthritis)	
Study ID	**McCaffrey 2019**	
Study reference	McCaffrey, R., Taylor, D., Marker, C., et al. 2019. A Pilot Study of the Effects of Chair Yoga and Chair-Based Exercise on Biopsychosocial Outcomes in Older Adults With Lower Extremity Osteoarthritis. Holistic nursing practice, 33, 321-326.	
Study design	RCT	Computer generated randomisation
Author affiliation	The authors were affiliated with several tertiary education centres in the USA	
Source of funds	This study was funded by Mercer University	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community	
Country(s) / region	Georgia,USA	
Enrolment period	Not reported	
Length of treatment / followup	8 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	18	Osteoarthritis of the lower extremities
details	*Inclusion criteria:* aged 62 or older, living independently, reported pain associated with lower extremity OA verified by a nurse practitioner, ability to ambulate independently with minimal assistance, chronic pain at least 15 days of the month for at least 3 months, self-reported inability to participate in regular standing yoga or standing exercise due to pain, not currently participating in any exercise program, ability to read and understand English *Exclusion criteria:* none reported	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**McCaffrey 2019**				
Intervention	9	Chair yoga: 8 wks, 2x 50 min sessions per wk. The chair yoga program was based on traditional Hatha yoga postures, practiced in a chair or using a chair as support. The yoga intervention included breathing, physical postures and relaxation.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	9	Chair exercise for older adults: 8 wks, 2x 50 min sessions per wk. The CEOA is an exercise program adapted for older adults to increase muscle strength, range of motion, and acivities of daily living. The program uses progressive resistive exercises incorporating body weight, resistance bands and balls.			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified yoga instructor		
Is the comparator clearly inactive?	No	Comparison= other	Exercise program		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pain	Baseline, mid (4 wks), end of treatment (8 wks)	WOMAC Osteoarthritis Index - Pain subscale	Higher score is worse, scores range 0-20
Outcome 2	Not specified	Functional mobility	Baseline, mid (4 wks), end of treatment (8 wks)	Timed up and go	Shorter time is better, average of 2 tests used for analysis
Outcome 3	Not specified	Physical function	Baseline, mid (4 wks), end of treatment (8 wks)	WOMAC Osteoarthritis Index - function subscale	Higher score is worse, scores range 0-68
Outcome 4	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**McCaffrey 2019**				
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Outcome 15	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**McCaffrey 2019**				
Outcome 16	--	--	--	--	--
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**McCaffrey 2019**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	One-way ANOVA used to measure between group differences at 3 data collection points. Time points were treated as the within-group factor. P<0.05 was statistically significant.				
Population analysed	Intent-to-treat	Not specified, ITT is interpretted			
Missing data	No drop outs reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns arising from the self-reported outcomes by non-blinded participants and the lack of a pre-specified analysis plan.				

Characteristics of included studies	Joint pain (osteoarthritis)		
Study ID	**Park 2011**		
Study reference	Park, J., McCaffrey, R., Dunn, D., et al. 2011. Managing osteoarthritis: comparisons of chair yoga, Reiki, and education (pilot study). Holistic nursing practice, 25, 316-326.		
Study design	RCT	quasirandomised	No mention of the randomisation sequence. The education group were non-randomised.
Author affiliation	The authors were affiliated with several tertiary education centres in the USA		
Source of funds	This study was supported by a Florida Atlantic University mentoring grant.		
Declared interests of study authors	The authors declared no conflict of interest		
Setting / provider	Community		
Country(s) / region	Florida,USA		
Enrolment period	Not reported		
Length of treatment / followup	8 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	29	Osteoarthritis	
details	*Inclusion criteria:* older than 55 years, living independently in the community, having OA, having pain for at least 15 days of the month of at least a 4/10 *Exclusion criteria:* narcotic analgesic medications, severe cognitive impairment, inability to come to the research site wkly, inability to speak or understand English		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Park 2011**				
Intervention	10	Yoga: 8 wks, 2x 45 min sessions per wk. Sessions centred on using the chair for meditation and supporting the body with the chair to create space while releasing chronically contracted muscles.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	9	Reiki: 8 wks, 1x 30 min session per wk. Sessions were conducted individually. Reiki is a complementary biofield or energy therapy that creates subtle changes in the life energy or chi.			
Comparator #3 (other)	10	NON RANDOMISED 'Education: 8 wks, 1x 1.5 hour session every other wk (i.e. 4 sessions total). Sessions were divided into discussions of OA and its impact, benefits and drawbacks of medications, alternative and complementary treatments for OA, and exercise for OA.			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified yoga instructor		
Is the comparator clearly inactive?	No	Comparison= other	Reiki		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pain	Baseline, end of treatment (8 wks)	WOMAC Osteoarthritis Index - Pain subscale	Higher score is worse, scores range 0-20
Outcome 2	Not specified	Stiffness	Baseline, end of treatment (8 wks)	WOMAC Osteoarthritis Index - Stiffness subscale	Higher score is worse, scores range 0-8
Outcome 3	Not specified	Physical function	Baseline, end of treatment (8 wks)	WOMAC Osteoarthritis Index - Function subscale	Higher score is worse, scores range 0-68
Outcome 4	Not specified	Depression	Baseline, end of treatment (8 wks)	Centre for Epidemiologic Studies Depression Scale	Higher score is worse, scores range 0-60

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Park 2011**				
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Outcome 15	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Park 2011**				
Outcome 16	--	--	--	--	--
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Park 2011**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Paired t-tests comparing pre-test and post-test data for each intervention, and repeated measures of analysis (ANOVAs) were conducted. The ANOVA tested the 3 interventions as the between-subjects factor.				
Population analysed	Other (provide details)	Modified ITT is interpretted, with participants who dropped out of the study being excluded from the analysis.			
Missing data	8 drop outs were reported (28%). This included 3 in the yoga group, 2 in the Reiki group and 3 in the education group.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High risk of bias due to the proportion of missing outcome data and lack of analysis presented to assess the impact of missingness.				

Characteristics of included studies	Joint pain (osteoarthritis)	
Study ID	**Park 2016**	
Study reference	Park, J., Newman, D., McCaffrey, R., et al. 2016. The Effect of Chair Yoga on Biopsychosocial Changes in English- and Spanish-Speaking Community-Dwelling Older Adults with Lower-Extremity Osteoarthritis. Journal of gerontological social work, 59, 604-626. Park, J., McCaffrey, R., Newman, D., et al. 2017. A Pilot Randomized Controlled Trial of the Effects of Chair Yoga on Pain and Physical Function Among Community-Dwelling Older Adults With Lower Extremity Osteoarthritis. Journal of the American Geriatrics Society, 65, 592-597. Park, J., Sherman, D. G., Agogo, G., et al. 2020. Frailty modifies the intervention effect of chair yoga on pain among older adults with lower extremity osteoarthritis: Secondary analysis of a nonpharmacological intervention trial. Experimental Gerontology, 134 (no pagination).	
Study design	RCT	Computer generated random numbers by an independent statistician with allocation concealment
Author affiliation	The authors were affiliated with several tertiary education centres in the USA	
Source of funds	The study was funded by National Institutes of Health (NIH), National Center for Complementary and Integrative Health (NCCIH), 1R15AT007352-01A1.	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community	
Country(s) / region	USA	
Enrolment period	Not reported	
Length of treatment / followup	8 wk intervention, 3 month follow up	
Description of population	*N=*	*Description*
# participants	131	Osteoarthritis
details	*Inclusion criteria:* older than 65 years, living in the community, self-reported joint pain caused by OA and persistent in one or more lower extremity joints, pain level of at least 4/10 at least 15 days of the month for at least 3 months, ability to ambulate independently with or without assistive devices, self-reported inability to participate in standing exercise *Exclusion criteria: k* nee or hip surgery within 12 wks prior to enrollment, systemic or intra-articular corticosteroid in the past 60 days, serious comorbidity that could interfere with ability to complete the program	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Park 2016**				
Intervention	66	Chair yoga: 8 wks, 2x 45 min sessions per wk. Based on Iyengar Yoga, the yoga intervention consisted of postures, breathing, deep relaxation and meditation. Participants were given a manual with instructions to practice at home.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	65	Education program: 8 wks, 2x 45 min sessions per wk. Participants discussed general health education information and specific facts regarding OA.			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified yoga instructor		
Is the comparator clearly inactive?	No	Comparison= other	Education control		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Pain interference	Baseline, mid (4 wks), end of treatment (8 wks), followup (1 & 3 mos)	PROMIS - Pain interference	Higher score is worse, scores range 8-40
Outcome 2	Primary	Symptom	Baseline, mid (4 wks), end of treatment (8 wks), followup (1 & 3 mos)	WOMAC Osteoarthritis Index - Total	Higher score is worse, scores range 0-96
Outcome 3	Secondary	Physical function	Baseline, mid (4 wks), end of treatment (8 wks), followup (1 & 3 mos)	WOMAC Osteoarthritis Index - Function subscale	Higher score is worse, scores range 0-68
Outcome 4	Secondary	Functional mobility	Baseline, mid (4 wks), end of treatment (8 wks), followup (1 & 3 mos)	Gait speed test	Score in seconds

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Park 2016**				
Outcome 5	Secondary	Balance	Baseline, mid (4 wks), end of treatment (8 wks), followup (1 & 3 mos)	Berg Balance Scale	Higher score is worse, scores range 0-56
Outcome 6	Secondary	Functional mobility	Baseline, mid (4 wks), end of treatment (8 wks), followup (1 & 3 mos)	6 minute walk test	Higher distance is better
Outcome 7	Secondary	Depression	Baseline, mid (4 wks), end of treatment (8 wks), followup (1 & 3 mos)	PROMIS - Emotional Distress Depression scale	Higher score is worse, scores range 8-40
Outcome 8	Secondary	Fatigue	Baseline, mid (4 wks), end of treatment (8 wks), followup (1 & 3 mos)	PROMIS - Fatigue	Higher score is worse, scores range 8-40
Outcome 9	Secondary	Social function	Baseline, mid (4 wks), end of treatment (8 wks), followup (1 & 3 mos)	PROMIS - ability to participate in social activities	Higher score is worse, scores range 8-40
Outcome 10	Secondary	Life satisfaction	Baseline, mid (4 wks), end of treatment (8 wks), followup (1 & 3 mos)	Life satisfaction index - short form	Higher score is better, scores range 12-72
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Outcome 15	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Park 2016**				
Outcome 16	--	--	--	--	--
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (osteoarthritis)				
Study ID	**Park 2016**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Chi-square for examining group differences in recruitment, one-way analysis of variance (ANOVA) for measuring group difference in attendance between English and Spanish speaking participants, hierarchical linear modelling, missing value analysis				
Population analysed	Other (provide details)	ITT is specified however mITT is interpretted. One study publication utilises per protocol analysis, as Hispanic participants who completed the English yoga intervention were excluded.			
Missing data	19 participants did not complete the intervention as assigned (14.5%). This included 3 in the yoga group and 16 in the control group. Missing Value Analysis to assertain the extent, randomness and pattern of missing data was specified, but results not reported.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High risk of bias due to differential drop out rate between the intervention and control groups, which signifies a strong belief in the effectiveness of the yoga intervention that is likely to influence the outcome.				

Characteristics of included studies	Joint pain (rheumatoid arthritis)		
Study ID	**Bhandari 2009**		
Study reference	Bhandari, R. B. & Singh, V. K. 2009. A research paper on "effect of yogic package on rheumatoid arthritis". Indian Journal of Biomechanics 2009 Mar 7-8;1:175-179. Singh, V. K., Bhandari, R. B. & Rana, B. B. 2011. Effect of yogic package on rheumatoid arthritis. Indian Journal of Physiology and Pharmacology, 55, 329-335.		
Study design	RCT	quasirandomised	No mention of the randomisation sequence
Author affiliation	The authors were affiliated with several tertiary education and yoga research centres in India		
Source of funds	Not reported		
Declared interests of study authors	Not reported		
Setting / provider	Participants selected from hospitals		
Country(s) / region	India		
Enrolment period	MAR 2005 - NOV 2005		
Length of treatment / followup	7 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	80	Rheumatoid arthritis	
details	*Inclusion criteria:* age raneg 23-48, interested and capable to practice yoga *Exclusion criteria:* having medical complexities		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Bhandari 2009**				
Intervention	40	Yoga: 7 wks, 40x 90 min sessions total (1 daily except Sunday). The yoga program comprised cleansing practices, poses, healthy yoga diet, breathing and meditation.			
Comparator #1 (control)	40	Control (no intervention)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Usual care				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Qualified yoga teacher		
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pain intensity	Baseline, post intervention	Simple Descriptive Pain Intensity Scale	Higher score is worse, scores range 0-5
Outcome 2	Not specified	Stiffness	Baseline, post intervention	Early morning stiffness, in minutes	Lower score is better
Outcome 3	Not specified	Inflammed joints	Baseline, post intervention	Number of inflamed joints	Lower score is better
Outcome 4	Not specified	Pulse	Baseline, post intervention	Pulse rate	

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Bhandari 2009**				
Outcome 5	Not specified	Blood pressure	Baseline, post intervention	Systolic blood pressure	
Outcome 6	Not specified	Blood pressure	Baseline, post intervention	Diastolic blood pressure	
Outcome 7	Not specified	Inflammatory biomarkers	Baseline, post intervention	Lymphocyte count	
Outcome 8	Not specified	Inflammatory biomarkers	Baseline, post intervention	C-reactive protein	
Outcome 9	Not specified	Inflammatory biomarkers	Baseline, post intervention	Serum uric acid	
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Outcome 15	--	--	--	--	--

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Bhandari 2009**				
Outcome 16	--	--	--	--	--
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Bhandari 2009**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Mixed ANOVAs were used to analyse the difference among the pre and post means of participants and controls. Before and after scores were treated as a within factor, and group allocation was a between-subject factor				
Population analysed	Intent-to-treat	Not specified. ITT is interpretted			
Missing data	No drop outs were recorded during the intervention period				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns relating to lack of information provided on the randomisation process and blinding of research staff, and self-reported outcomes by non-blinded participants.				

Characteristics of included studies	Joint pain (rheumatoid arthritis)	
Study ID	**Evans 2011**	
Study reference	Evans, S., Cousins, L., Tsao, J. C. I., et al. 2011. A randomized controlled trial examining Iyengar yoga for young adults with rheumatoid arthritis: A study protocol. Trials, 19. Evans, S., Lung, K., Tsao, J., et al. 2012. Iyengar yoga for young adults with rheumatoid arthritis. Journal of Pain, 1), S90. Evans, S., Moieni, M., Lung, K., et al. 2013. Impact of iyengar yoga on quality of life in young women with rheumatoid arthritis. Clinical Journal of Pain, 29, 988-997. NCT01096823	
Study design	RCT	Computer generated random numbers, blocks of 4
Author affiliation	The authors were affiliated with a single univeristy in the USA	
Source of funds	This study was supported by NIAMS grant 1R21AR057318-01(PI: L Zeltzer), NCCAM grant K01AT005093 (PI: S Evans) and by a General Clinical Research Center grant M01-RR00865 (PI: L Zeltzer).	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community	
Country(s) / region	USA	
Enrolment period	AUG 2009 - JAN 2011	
Length of treatment / followup	6 wk intervention, 2 months follow up	
Description of population	*N=*	*Description*
# participants	30	Rheumatoid arthritis, female
details	*Inclusion criteria:* diagnosis of RA for at least 6 months, aged 16-35, concommitant use of disease modifying medications permitted if stable for 4 wks, ability to provide written informed consent, ability to speak and understand English *Exclusion criteria:* currently pregnant, recent injury, history or drug or alcohol abuse, experimental medications within previous 6 months	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Evans 2011**				
Intervention	14	Iyengar Yoga: 6 wks, 2x 90 min sessions per wk. Homework was suggested but not required.			
Comparator #1 (control)	16	Control (waitlist)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Usual care				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Classes were led by an experienced yoga instructor		
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Quality of life	Baseline, 6 wks, 2 months	SF-36	Lower score is worse, scores normalised 0-100
Outcome 2	Primary	Pain functioning	Baseline, 6 wks, 2 months	Pain Disability Index	Higher score is worse, scores range 0-70. MCID is 9.5 points
Outcome 3	Primary	Arthritis functioning	Baseline, 6 wks, 2 months	Health Assessment Questionnaire	Higher score is worse, scores range 0-3.0 in 0.125 increments
Outcome 4	Secondary	Disease activity	Baseline, 6 wks, 2 months	Disease Activity Scale 28	Higher score is worse

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Evans 2011**				
Outcome 5	Secondary	Pain	Baseline, 6 wks, 2 months	Numeric Rating Scale	Higher score is worse, scores range 0-10
Outcome 6	Secondary	Mood	Baseline, 6 wks, 2 months	Brief Symptom Inventory 18	Scores interpretted compared to age-standardised norms. T score over 63 is considered clinical
Outcome 7	Secondary	Blood pressure	Baseline, 6 wks, 2 months	Blood pressure	
Outcome 8	Secondary	Heart rate	Baseline, 6 wks, 2 months	Resting heart rate	
Outcome 9	Secondary	Inflammatory biomarkers	Baseline, 6 wks, 2 months	Cytokine assays	
Outcome 10	Secondary	Self-efficacy	Baseline, 6 wks, 2 months	Arthritis self-efficacy scale	Higher score is better, scores range 10-100
Outcome 11	Secondary	Pain acceptance	Baseline, 6 wks, 2 months	Chronic pain acceptance questionnaire	Higher score indicated greater pain acceptance, scores range from 0-120
Outcome 12	Secondary	Sleep Quality	Baseline, 6 wks, 2 months	Pittsburgh Sleep Quality Index	Higher score is worse, scores range 0-21
Outcome 13	Secondary	Fatigue	Baseline, 6 wks, 2 months	Functional Assessment of Chronic Illness Therapy - Fatigue	Higher score is better, scores range 0-160
Outcome 14	Secondary	Mindfulness	Baseline, 6 wks, 2 months	Five Factor Mindfulness Questionnaire	Higher scores indicate greater mindfulness
Outcome 15	Secondary	Medication Use	Baseline, 6 wks, 2 months	Medication use questionnaire	Data not published. Outcome inddicatedd in the study protocol.

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Evans 2011**				
Outcome 16	Secondary	Fatigue	Baseline, 6 wks, 2 months	Numeric Rating Scale	Higher score is worse, scores range 0-10
Outcome 17	Secondary	Anxiety	Baseline, 6 wks, 2 months	Numeric Rating Scale	Higher score is worse, scores range 0-10
Outcome 18	Secondary	Depression	Baseline, 6 wks, 2 months	Numeric Rating Scale	Higher score is worse, scores range 0-10
Outcome 19	Secondary	Sleep quality	Baseline, 6 wks, 2 months	Numeric Rating Scale	Higher score is worse, scores range 0-10
Outcome 20	Secondary	Symptom improvement	End of treatment	Global improvement scale	Higher score is better, scores range 1-7
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Evans 2011**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	t Tests and chi-squared tests to compare groups at baseline. Data analysed for skewness to ensure assumptions required for parametric tests. Minimum alpha 0.05 used for analyses. Inferential analysis took place in 2 stages: 1. Analysis of treatment effects in the trial data (pre to post treatment in the yoga vs control groups). Posttreatment group effects analysed using ANCOVA controlling for baseline. Significant differences in disease characteristics used as covariates. 2. Uncontrolled effects and treatment gains on a sample of all participants who began treatment (i.e. yoga and waitlist groups combined). Linear mixed models performed to assess significant linear trends over time for primary and wkly outcomes.				
Population analysed	Intent-to-treat	ITT analysis is reported in the protocol, it is interpretted from the publication that mITT was performed			
Missing data	4 participants dropped out during the intervention (13.3%). These participants were not included in the analysis. Reasons for drop out are provided, and do not appear to be related to the yoga intervention.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High risk of bias due to likely bias in self-reported outcomes, and non-adherence to the pre-specified analysis plan				

Characteristics of included studies	Joint pain (rheumatoid arthritis)	
Study ID	**Ganesan 2020**	
Study reference	Ganesan, S., Gaur, G. S., Negi, V. S., et al. 2020. Effect of Yoga Therapy on Disease Activity, Inflammatory Markers, and Heart Rate Variability in Patients with Rheumatoid Arthritis. Journal of Alternative and Complementary Medicine, 26, 501-507. CTRI/2017/07/009132	
Study design	RCT	Computer-generated simple randomisation method. Allocation concealment using sealed opaque envelopes.
Author affiliation	The authors were affiliated with several tertiary education and research centres in India	
Source of funds	This study was funded by Intramural Ph.D. research grant (JIP/Res/Intra-Ph.D/phs1/01/2015-18) of Jawaharlal In stitute of Postgraduate Medical Education and Research	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community	
Country(s) / region	India	
Enrolment period	Not reported	
Length of treatment / followup	12 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	166	Rheumatoid arthritis
details	*Inclusion criteria:* diagosis of RA (as per 2010 ACR/EULAR criteria), aged 30-60, nondeforming disease duration of <3 years, stable dose of disease modifying antirheumetic drugs, low, moderate or high disease activity *Exclusion criteria:* RA patients with diabetes, uncontrolled hypertension, any other neuromuscular or autoimmune disorder, history of alcohol or drug abuse, history of yoga therapy or biofeedback techniques	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Ganesan 2020**				
Intervention	83	Yoga: 12 wks, 3x 30 min sessions per wk + advised to practice at home. Yoga therapy consisted of warm up, sukshma vyayama, postures, breathing and meditation.			
Comparator #1 (control)	83	Control (waitlist)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Usual care				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Qualified and experienced yoga instructors		
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Disease activity	Baseline, end of treatment (12 wks)	Disease Activity Scale 28	Higher score is worse
Outcome 2	Primary	Inflammatory biomarkers	Baseline, end of treatment (12 wks)	IL-1a	
Outcome 3	Primary	Inflammatory biomarkers	Baseline, end of treatment (12 wks)	IL-6	
Outcome 4	Primary	Inflammatory biomarkers	Baseline, end of treatment (12 wks)	TNF-a	

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Ganesan 2020**				
Outcome 5	Primary	Antioxidants	Baseline, end of treatment (12 wks)	Cortisol	
Outcome 6	Primary	Antioxidants	Baseline, end of treatment (12 wks)	Adipokines	
Outcome 7	Primary	Cardiac autonomic function	Baseline, end of treatment (12 wks)	Heart rate variability	
Outcome 8	Secondary	Arthritis functioning	Baseline, end of treatment (12 wks)	Health Assessment Questionnaire	Higher score is worse, scores range 0-3.0 in 0.125 increments
Outcome 9	Not specified	Blood pressure	Baseline, end of treatment (12 wks)	Systolic blood pressure	
Outcome 10	Not specified	Blood pressure	Baseline, end of treatment (12 wks)	Diastolic blood pressure	
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Outcome 15	--	--	--	--	--

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Ganesan 2020**				
Outcome 16	--	--	--	--	--
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Ganesan 2020**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Paired samples t-test was used to compare the means between baseline and after 12 wks within groups. Between group analysis was conducted using Student's t-test. Analysis of covariance with baseline data as a covariate was used to compare differences between groups after 12 wks. P<0.05 was considered significant.				
Population analysed	Intent-to-treat	mITT is interpretted, with participants who were lost to follow up being excluded from the analysis			
Missing data	23 participants were lost to follow up (13.9%). This included 15 in the yoga arm and 8 in the control arm, reasons for drop out are not provided. No analysis presented to assess impact of missing data.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High risk of bias due to the high and differential rate of missing data between the intervention groups. Some concerns relating to the outcome measurement and statistical analysis.				

Characteristics of included studies	Joint pain (rheumatoid arthritis)	
Study ID	**Gautam 2019**	
Study reference	Gautam, S., Tolahunase, M., Kumar, U., et al. 2019. Impact of yoga based mind-body intervention on systemic inflammatory markers and co-morbid depression in active Rheumatoid arthritis patients: A randomized controlled trial. Restorative Neurology and Neuroscience, 37, 41-59. REF/2016/01/010500	
Study design	RCT	Computer generated permuted block randomisation. Sealed opaque enveloped used for allocation concealment
Author affiliation	The authors were affiliated with a single medical institution in India	
Source of funds	Not reported	
Declared interests of study authors	Not reported	
Setting / provider	Community	
Country(s) / region	India	
Enrolment period	APRIL 2016 - JUNE 2018	
Length of treatment / followup	8 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	72	Rheumatoid arthritis and co-morbid depression
details	*Inclusion criteria:* 18-60 years old, RA patients diagnosed per 2010 ACR/EULAR criteria, DAS28ESR was >2.6, routine medical treatment for at least 6 months *Exclusion criteria:* other autoimmune disorders, pregnant or lactating women, history of recent oral/intra-articular steroids in past 6 months, physically unfit for yoga, already enrolled in yoga	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Gautam 2019**				
Intervention	36	Yoga based mind body intervention: 8 wks, 5x 120 min sessions per wk. The yoga program incorporated components of classical yoga, including postures, breathing and meditation, modified to suit RA patients.			
Comparator #1 (control)	36	Control (usual care)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Usual care				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified and qualified yoga instructors		
Is the comparator clearly inactive?	Yes	Comparison= control	Usual care		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Systemic inflammation biomarker	Baseline, end of treatment (8 wks)	Erthyrocyte sedimentation rate	
Outcome 2	Primary	Systemic inflammation biomarker	Baseline, end of treatment (8 wks)	C reactive protein	
Outcome 3	Primary	Pro- and anti-inflammatory biomarkers	Baseline, end of treatment (8 wks)	IL-6	
Outcome 4	Primary	Pro- and anti-inflammatory biomarkers	Baseline, end of treatment (8 wks)	IL-17A	

Characteristics of included studies	Joint pain (rheumatoid arthritis)			
Study ID	**Gautam 2019**			
Outcome 5	Primary	Pro- and anti-inflammatory biomarkers	Baseline, end of treatment (8 wks)	TNF-a
Outcome 6	Primary	Pro- and anti-inflammatory biomarkers	Baseline, end of treatment (8 wks)	TGF-B
Outcome 7	Primary	Immunomodulatory biomarker	Baseline, end of treatment (8 wks)	HLA-G
Outcome 8	Primary	Neuroplasticity biomarker	Baseline, end of treatment (8 wks)	Brain derived neurotrophic fatcor (BDNF)
Outcome 9	Primary	Neuroplasticity biomarker	Baseline, end of treatment (8 wks)	B endorphins
Outcome 10	Primary	Neuroplasticity biomarker	Baseline, end of treatment (8 wks)	Serotonin
Outcome 11	Primary	Oxidative stress biomarker	Baseline, end of treatment (8 wks)	ROS
Outcome 12	Primary	Oxidative stress biomarker	Baseline, end of treatment (8 wks)	TAC
Outcome 13	Primary	DNA damage biomarker	Baseline, end of treatment (8 wks)	8OHdG
Outcome 14	Primary	Healthspan and longevity biomarker	Baseline, end of treatment (8 wks)	SIRT1
Outcome 15	Primary	Cellular aging	Baseline, end of treatment (8 wks)	Telomerase activity

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Gautam 2019**				
Outcome 16	Primary	Cellular aging	Baseline, end of treatment (8 wks)	Telomere length	
Outcome 17	Primary	Disease activity	Baseline, end of treatment (8 wks)	DAS28	Higher score is worse
Outcome 18	Primary	Arthritis functioning	Baseline, end of treatment (8 wks)	Health Assessment Questionnaire	Higher score is worse, scores range 0-3.0 in 0.125 increments
Outcome 19	Secondary	Depression	Baseline, mid (2, 4, & 6 wks), end of treatment (8 wks)	Beck Depression Inventory	Higher score is worse, scores range 0-63
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Gautam 2019**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	P<0.05 was significant. Chi-squared and Fisher's exact tests used to compare categorical characteristics at baseline. T-test and Wilcoxon signed rank test to compare continuous data at baseline. Paired t-test or Wilcoxon signed rank test to compare within group analysis pre- and post- intervention. Independent samples t-test to compare between groups post-intervention.				
Population analysed	Intent-to-treat	ITT analysis is specified with all available data included regardless of compliance with the protocol. It is unclear how missing data was handled.			
Missing data	Outcome data was missing for 10/72 (13.9%) of participants. Reasons for drop out are provided.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns due to the high rate of missing outcome data and lack of information regarding the pre-specified statistical analysis plan.				

Characteristics of included studies	Joint pain (rheumatoid arthritis)	
Study ID	**Ward 2014**	
Study reference	Ward, L., Stebbings, S., Athens, J., et al. 2014. Yoga for pain and sleep quality in rheumatoid arthritis: study protocol for a pilot randomized controlled trial. Physical therapy reviews, 19, 266-276. Ward, L., Stebbings, S., Athens, J., et al. 2014. Yoga for pain and sleep quality in rheumatoid arthritis: A pilot randomized controlled trial. Journal of Alternative and Complementary Medicine, 20 (5), A88. Ward, L., Stebbings, S., Athens, J., et al. 2018. Yoga for the management of pain and sleep in rheumatoid arthritis: a pilot randomized controlled trial. Musculoskeletal care, 16, 39-47. ACTRN12612001019897	
Study design	RCT	Computer generated block randomisation. Allocation concealment by sealed opaque envelopes.
Author affiliation	The authors were affiliated with universities in New Zealand and USA	
Source of funds	The lead author is supported by a University of Otago Postgraduate Scholarship. We thank Arthritis New Zealand for funding of the yoga equipment (yoga mat, yoga belt, and foam block), and Yogasupplies for supplying discounted yoga equipment.	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community	
Country(s) / region	New Zealand	
Enrolment period	Not reported	
Length of treatment / followup	8 wk intervention, 12 wks follow up	
Description of population	*N=*	*Description*
# participants	26	Rheumatoid arthiritis
details	*Inclusion criteria:* age >18 years, physician diagnosed RA, average self-reported pain over previous month of >=3 on a 10-point scale, average self-reported sleep disturbance over previous month of at least 30 mins per night, ability to self-mobilise up and down from a chair *Exclusion criteria:* current regular yoga practice, major surgery within past 6 monhts, planned surgery in following 6 months, ntra-articular steroid injections within the previous 4 wks, serious co-morbidities, inability to commit to the 13 wk study period	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Ward 2014**				
Intervention	13	Yoga: 8 wks, 1x 75 min yoga session per wk + 3x 20 min home pratcice sessions per wk. Each class consisted of a check in, breathing, postures, and relaxation.			
Comparator #1 (control)	13	Control (no intervention)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Usual care				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Classes conducted by a qualified yoga instructor		
Is the comparator clearly inactive?	Yes	Comparison= control	No intervention		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Per the protocol for this review, the primary outcome measures for this study are out of scope. Primary outcome measures include recruitment, retention, adherence, safety and satisfaction.			
Outcome 2	Secondary	Pain	Baseline, wk 9 (post intervention), wk 12 (follow up)	Visual analogue scale	Higher score is worse, scores rnage 0-10
Outcome 3	Secondary	Sleep quality	Baseline, wk 9 (post intervention), wk 12 (follow up)	Insomnia severity index	Higher score is worse, scores rnage 0-28
Outcome 4	Secondary	Arthritis functioning	Baseline, wk 9 (post intervention), wk 12 (follow up)	Health Assessment Questionnaire	Higher score is worse, scores range 0-3.0 in 0.125 increments

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Ward 2014**				
Outcome 5	Secondary	Disease activity	Baseline, wk 9 (post intervention), wk 12 (follow up)	Clinical Disease Activity Index	Higher score is worse, scores range 0-76
Outcome 6	Secondary	Quality of life	Baseline, wk 9 (post intervention), wk 12 (follow up)	EQ-5D-3L	Higher score is better, scores range 0-1
Outcome 7	Secondary	Quality of life	Baseline, wk 9 (post intervention), wk 12 (follow up)	EQ-5D-3L VAS	Higher score is better, scores range 0-100
Outcome 8	Secondary	Anxiety	Baseline, wk 9 (post intervention), wk 12 (follow up)	Hospital anxiety and depression scale - anxiety subscale	Higher score is worse, scores range 0-21
Outcome 9	Secondary	Depression	Baseline, wk 9 (post intervention), wk 12 (follow up)	Hospital anxiety and depression scale - depression subscale	Higher score is worse, scores range 0-21
Outcome 10	Secondary	Fatigue	Baseline, wk 9 (post intervention), wk 12 (follow up)	Bristol Rheumatoid Arthritis Fatigue Numeric Rating Scale - level	Higher score is worse, scores range 0-7
Outcome 11	Secondary	Fatigue	Baseline, wk 9 (post intervention), wk 12 (follow up)	Bristol Rheumatoid Arthritis Fatigue Numeric Rating Scale - effect	Higher score is worse, scores range 0-7
Outcome 12	Secondary	Fatigue	Baseline, wk 9 (post intervention), wk 12 (follow up)	Bristol Rheumatoid Arthritis Fatigue Numeric Rating Scale - coping	Higher score is worse, scores range 0-7
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Outcome 15	--	--	--	--	--

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Ward 2014**				
Outcome 16	--	--	--	--	--
Outcome 17	--	--	--	--	--
Outcome 18	--	--	--	--	--
Outcome 19	--	--	--	--	--
Outcome 20	--	--	--	--	--
Outcome 21	--	--	--	--	--
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (rheumatoid arthritis)				
Study ID	**Ward 2014**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Differences between baseline and wk 9 (primary time point) data will be calculated for each secondary outcome measure, and effect sizes calculated by univariate analysis of variance (UANOVA). P-values will not be reported.				
Population analysed	Per protocol	mITT is interpretted			
Missing data	1 participant in the control group did not have follow up data due to hospitalisation.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Some concerns due to the self-reported outcome measure by non-blinded participants who would plausibly be biased in their reporting of the outcome.				

Characteristics of included studies	Joint pain (rheumatoid arthritis or osteoarthritis)		
Study ID	**Moonaz 2015**		
Study reference	Moonaz, S. H., Bingham, C. O., Wissow, L., et al. 2015. Yoga in sedentary adults with arthritis: Effects of a randomized controlled pragmatic trial. Journal of Rheumatology, 42, 1194-1202. NCT00349869		
Study design	RCT	Web based randomiser. Allocation concealment by sealed opaque envelopes.	
Author affiliation	The authors were affiliated with tertiary education centres in the USA and Canada		
Source of funds	Supported by the US National Center for Complementary and Alternative Medicine pilot project (Bartlett), US National Institutes of Health predoctoral award 1F31AT003362-01A1, and Arthritis Foundation doctoral dissertation award (Moonaz).		
Declared interests of study authors	Not reported		
Setting / provider	Community		
Country(s) / region	Maryland, USA		
Enrolment period	JUNE 2005 - JULY 2008		
Length of treatment / followup	8 wk intervention, 9 month follow up		
Description of population	*N=*	*Description*	
# participants	75	Joint pain (rhematoid arthritis or osteoarthritis)	
details	*Inclusion criteria:* RA patients 18-70, OA patients 18+, sedentary (physically active for 20 mins <3x wkly), diagnosed with RA or OA or probable knee OA, medical clearance required for RA patients *Exclusion criteria:* use of cane, walker or wheelchair, other inflammatory conditions, surgery within 6 months		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	

Characteristics of included studies	Joint pain (rheumatoid arthritis or osteoarthritis)				
Study ID	**Moonaz 2015**				
Intervention	40	Yoga: 8 wks, 2x 60 min sessions per wk. The yoga intervention included breathing and chanting, warm up poses, isometric poses, relaxation, and meditation.			
Comparator #1 (control)	35	Control (waitlist)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Usual care				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Two yoga therapists with 10+ years experience taught the classes		
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist		
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Physical function	Baseline, 8 wks, 9 months	SF-36 - Physical component	Higher score is better, scores range 0-100. MCID is 5
Outcome 2	Secondary	Flexibility	Baseline, 8 wks, 9 months	Sit and reach	
Outcome 3	Secondary	Balance	Baseline, 8 wks, 9 months	One leg stand	Higher time is better, max 30 seconds
Outcome 4	Secondary	Strength	Baseline, 8 wks, 9 months	Hand dynamometer	

Characteristics of included studies	Joint pain (rheumatoid arthritis or osteoarthritis)				
Study ID	**Moonaz 2015**				
Outcome 5	Secondary	Mental health	Baseline, 8 wks, 9 months	SF-36 - Mental component	Higher score is better, scores range 0-100
Outcome 6	Secondary	Depressive symptoms	Baseline, 8 wks, 9 months	Centre for Epidemiologic Studies-Depression Scale	Higher score is worse, scores range 0-60
Outcome 7	Secondary	Mood	Baseline, 8 wks, 9 months	Positive and Negative Affect Scale - Positive	Higher score is better
Outcome 8	Secondary	Mood	Baseline, 8 wks, 9 months	Positive and Negative Affect Scale - Negative	Higher score is worse
Outcome 9	Secondary	Stress	Baseline, 8 wks, 9 months	Perceived Stress Scale	Total score ranges from 4-20, with higher scores indicating more severe stress.
Outcome 10	Secondary	Self-efficacy	Baseline, 8 wks, 9 months	Arthritis Self-Efficacy Scale	Higher score is better, scores range 0-10 for each subscale
Outcome 11	Secondary	RA symptoms	Baseline, 8 wks, 9 months	Tender and swollen joint count	RA only
Outcome 12	Secondary	RA symptoms	Baseline, 8 wks, 9 months	Visual Analogue Scale	0-100
Outcome 13	Secondary	Physical functioning	Baseline, 8 wks, 9 months	SF-36 - physical functioning	Physical functioning subscale of SF-36. Lower score indicates worse functioning.
Outcome 14	Secondary	Role physical	Baseline, 8 wks, 9 months	SF-36 - role physical	Role physical subscale of Sf-36. Lower score indicates worse quality.
Outcome 15	Secondary	Body pain	Baseline, 8 wks, 9 months	SF-36 - body pain	Body pain subscale of Sf-36. Lower score indicates worse pain.

Characteristics of included studies	Joint pain (rheumatoid arthritis or osteoarthritis)				
Study ID	**Moonaz 2015**				
Outcome 16	Secondary	General health	Baseline, 8 wks, 9 months	SF-36 - general health	General health subscale of Sf-36. Lower score indicates worse health.
Outcome 17	Secondary	Vitality	Baseline, 8 wks, 9 months	SF-36 - vitality	Vitality subscale of Sf-36. Lower score indicates worse vitality.
Outcome 18	Secondary	Social functioning	Baseline, 8 wks, 9 months	SF-36 - social functioning	Social functioning subscale of Sf-36. Lower score indicates worse functioning.
Outcome 19	Secondary	Role emotional	Baseline, 8 wks, 9 months	SF-36 - role emotional	Role emotional subscale of Sf-36. Lower score indicates worse quality.
Outcome 20	Secondary	Mental health	Baseline, 8 wks, 9 months	SF-36 - mental health	Mental health subscale of Sf-36. Lower score indicates worse health.
Outcome 21	Secondary	Functional mobility	Baseline, 8 wks, 9 months	6 minute walk test	Longer distance is better
Outcome 22	--	--	--	--	--
Outcome 23	--	--	--	--	--
Outcome 24	--	--	--	--	--
Outcome 25	--	--	--	--	--
Outcome 26	--	--	--	--	--
Outcome 27	--	--	--	--	--
Outcome 28	--	--	--	--	--

Characteristics of included studies	Joint pain (rheumatoid arthritis or osteoarthritis)				
Study ID	**Moonaz 2015**				
Outcome 29	--	--	--	--	--
Outcome 30	--	--	--	--	--
Method of analysis					
Statistics	Powered to detect an 8 point difference in SF-36 PCS. Groups were compared by arthritis type using student t-tests and Chi-squared tests. The primary RCT analysis was ANCOVA by group with adjustment for baseline values. Paired student t-tests also explored within group differences after 8 wks and 9 months. To assess the ffect of missing data for variables added after the study began, characteristics of the first 31 participants were compared with the last 44, and multiple imputation and LOCF was used.				
Population analysed	Intent-to-treat	Modified ITT is interpretted			
Missing data	Outcome data was missing for 22/75 (29.3%) of participants. Reasons for drop out were provided. Drop out rates are not balanced between groups.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	High risk of bias due to the high and uneven drop out rate in the trial.				

Characteristics of included studies	Low back pain (nonspecific)
Study ID	**Aboagye 2015**
Study reference	Aboagye, E., Karlsson, M. L., Hagberg, J., et al. 2015. Cost-effectiveness of early interventions for non-specific low back pain: a randomized controlled study investigating medical yoga, exercise therapy and self-care advice. Journal of rehabilitation medicine, 47, 167-173. Brämberg EB, Bergström G, Jensen I, Hagberg J, Kwak L. Effects of yoga, strength training and advice on back pain: a randomized controlled trial. BMC Musculoskeletal Disorders. 2017;18(1):132. 10.1186/s12891-017-1497-1
Study design	RCT
Author/s affiliation	Intervention and Implementation Research Unit, Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden
Source of funds	The authors gratefully acknowledge the assistance of FORTE, the Swedish research council for health, working life and welfare, for funding the study
Declared interests of study authors	The authors have no conflict of interest to declare.
Setting / provider	University-based
Country(s) / region	Sweden
Enrolment period	None reported
Length of treatment / followup (wks or mos)	6 wks (6 months, 12 months)
Description of population	*N=* *Description*
# participants	159 Low back pain (nonspecific)
details	*Inclusion criteria* : having non-specific LBP; age range 18–60 years; having scored 90 points or more on the OMPSQ screening, questionnaire; and having a sufficient command of Swedish. *Exclusion criteria* : pregnancy; comorbidities that could affect the ability to perform exercise; ongoing regular wkly yoga practice or strength training; and ongoing sickness absences of 8 wks or more.
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (nonspecific)				
Study ID	**Aboagye 2015**				
Intervention	52	Yoga sessions twice a wk for 6 wks. Yoga was a Kundalini-based standardized programme performed in groups. Participants received a CD with instructions, and written information about the programme, and were encouraged to perform the programme as often as possible between the medical yoga sessions. After 6 wks, the participants were to carry on practicing medical yoga no less twice per wk.			
Comparator #1 (control)	55	Individuals received brief oral recommendation from a back specialist to stay active and a booklet containing self-care advice.			
Comparator #2 (other)	52	Exercise intervention once every second wk. In the first wk of intervention start, the participants and the physiotherapist met twice in order to individually design the training programme. Participants were followed-up after 2, 4 and 6 wks. Subsequently, participants were to continue practicing the exercise therapy programme at least twice per wk.			
Comparator #3 (other)	--	--			
Co-interventions	None reported	--			
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is there an inactive comparator?	Yes	Comparison= control	Educational advice (considered non-active)		
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	HRQoL	Baseline, end of treatment (6 wks), follow up (6 & 12 mos)	EQ-5D	EQ-5D is a standardised measure of health-related quality of life with scores ranging from 0-1
Outcome 2	--	--	--	--	--

Characteristics of included studies	Low back pain (nonspecific)				
Study ID	**Aboagye 2015**				
Outcome 3	--	--	--	--	--
Outcome 4	--	--	--	--	--
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (nonspecific)				
Study ID	**Aboagye 2015**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	HRQL was estimated using regression analysis. In order to evaluate the intervention effect on HRQL, the utility were adjusted for baseline utility scores and the resulting coefficient for the treatment dummy was stated as the mean incremental QALY. The adjustment was important, *since the baseline EQ-5D score tends to correlate with the follow-up scores of participants.* Interactional effects between the treatment groups and the number of days a participant trained were also considered, since our initial analysis showed that there was a strong interaction between treatment group and training frequency per wk. A generalized linear model was used for dichotomous outcomes and a linear model for continuous outcomes to account for such strong interactional effects. For each number of training days, a unique difference between treatment groups was calculated with corresponding confidence intervals. Baseline age and mean number of training days were used as covariates in the model. The analyses were performed in SPSS version 20.				
Population analysed	Intent-to-treat	mITT analysis performed for all randomised participants			
Missing data	the response rate for the 3 follow-up periods after the baseline assessment was 89% for medical yoga, 69% for exercise therapy and 63% for self-care advice				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Low back pain (nonspecific)
Study ID	**Aboagye 2015**
Summary (descriptive)	Participants in the exercise therapy and self-care advice groups had higher mean EQ-5D scores at baseline than did individuals in the medical yoga group, participants were aware of the intervention they were receiving therefore this could have influenced self-reported outcomes, which by nature involve some judgement, Missingness of the data considered to affect true value of the outcome as droppouts not balanced between groups and lack of pre-specified analysis plan infer high risk of bias.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Cox 2010a**
Study reference	Cox, H., Tilbrook, H., Aplin, J., et al. 2010. A randomised controlled trial of yoga for the treatment of chronic low back pain: Results of a pilot study. Complementary Therapies in Clinical Practice, 16, 187-193.
Study design	RCT
Author/s affiliation	Department of Health Sciences, SRB Area 4, University of York, York YO10 5DD, United Kingdom Division of Human Development, St Mary's Hospital, Manchester, United Kingdom British Wheel of Yoga Teacher, Friends Meeting House, Friargate, York, United Kingdom Iyengar Yoga Teacher, ZedShed, Jubilee Wharf, Penryn, United Kingdom
Source of funds	Funded by York Trials Unit, Department of Health Sciences, University of York.
Declared interests of study authors	None reported
Setting / provider	General Practice in York, UK
Country(s) / region	UK
Enrolment period	None reported
Length of treatment / followup (wks or mos)	12 wk treatment , No follow up
Description of population	*N=* *Description*
# participants	10 Lower back pain (nonspecific)
details	*Inclusion criteria:* aged 18-65 years; a score of 4 or more on the Roland and Morris Disability Scale ; had presented to their GP in the previous 18 months with LBP; can attend yoga classes (times and dates); sufficiently physically mobile *Exclusion criteria* : pregnant women; psychosis or recent substance abuse; already participating in yoga; already in a trial for their LBP; not currently suffering an episode of LBP; previous spinal surgery, and; clinical indications of serious spinal or neurological pathology
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Cox 2010a**				
Intervention	10	wkly yoga sessions for 12 wks with differing themes each wk. 75 min classes which included breathing exercises, a variety of postures for 45-50 minutes and a guided deep relaxation			
Comparator #1 (control)	10	No intervention			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	None reported	--			
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Functional disability	Baseline, 4 wks, end of treatment (12 wks)	Roland and Morris Disability Scale (0-24)	24 statements describing back pain interference with the day's activities. Higher the score the greater the level of disability.
Outcome 2	Secondary	Pain	Baseline, 4 wks, end of treatment (12 wks)	Aberdeen Back Pain Scale	Higher score indicates more clinical problems. Scores ranging from 0-100

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Cox 2010a**				
Outcome 3	Secondary	Physcial wellbeing	Baseline, 4 wks, end of treatment (12 wks)	SF-12 Physical component score	Higher score indicates better general health status.
Outcome 4	Secondary	Mental wellbeing	Baseline, 4 wks, end of treatment (12 wks)	SF-12 Mental component score	Higher score indicates better general health status.
Outcome 5	Secondary	HRQoL	Baseline, 4 wks, end of treatment (12 wks)	EQ-5D	EQ-5D is a standardised measure of health-related quality of life with scores ranging from 0-100
Outcome 6	Secondary	Pain self-efficacy	Baseline, 4 wks, end of treatment (12 wks)	Pain Self-Efficacy Questionnaire	higher score represents greater self-efficacy. Scores ranging from 0-60
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Cox 2010a**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	The effects of treatment on the outcome measures using analysis of covariance, with the change scores as the dependant variable and adjustment being made for baseline scores.				
Population analysed	Intent-to-treat	mITT analysis performed for all randomised participants			
Missing data	Missing data at baseline, due to screening patients prior to randomisation then sending out baseline questionnaires to eligible patients who were randomised. Missing data for treatment due to holidays, childcare issues and illness, therefore unlikely to bias results.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Cox 2010a**
Summary (descriptive)	Significant difference between intervention and comparator was only seen at 4 wk follow up where intervention reported less pain in regard to the Aberdeen back pain scale. Aside from that no significant different between groups were shown. Additionally missing data was likely to have entered bias into study. Selection bias also present.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Cox 2010b**
Study reference	Cox, H., Tilbrook, H., Aplin, J., et al. 2010. A pragmatic multi-centred randomised controlled trial of yoga for chronic low back pain: Trial protocol. Complementary Therapies in Clinical Practice, 16, 76-80. Chuang LH, Soares MO, Tilbrook H, Cox H, Hewitt CE, Aplin J, et al. A pragmatic multicentered randomized controlled trial of yoga for chronic low back pain: Economic evaluation. Spine. 2012;37(18):1593-601. http://dx.doi.org/10.1097/BRS.0b013e3182545937 Tilbrook HE, Cox H, Hewitt CE, Kang'ombe AR, Chuang LH, Jayakody S, et al. Yoga for chronic low back pain: A randomized trial. Annals of Internal Medicine. 2011;155(9):569-78. http://dx.doi.org/10.7326/0003-4819-155-9-201111010-00003
Study design	RCT
Author/s affiliation	University of York, Heslington, York, United Kingdom Uni versity of Manchester, St. Mary's Hospital, Manchester, United Kingdom Yoga in York, York, United Kingdom SBRCP-Yoga Walsingham Clinic, Truro, Cornwall, United Kingdom.
Source of funds	Arthritis Research UK
Declared interests of study authors	None reported
Setting / provider	13 non–National Health Service premises in the United Kingdom.
Country(s) / region	UK
Enrolment period	July 2008- July 2009
Length of treatment / followup (wks or mos)	12 wk treatment, 3, 6 & 12 month follow up
Description of population	*N=* *Description*
# participants	313 low back pain (chronic & recurrent)
details	*Inclusion criteria:* a score of 4 or more on the RMDQ, musculo skeletal pain bounded by the lowest ribs and gluteal folds, and ability to attend 1 of the yoga venues *Exclusion criteria:* they 1) did not return a baseline questionnaire (second recruitment wave only), 2) had performed yoga in the previous 6 months, 3) could not get off the floor unaided, 4) could not use stairs, 5) were pregnant, 6) had life-threatening comorbid conditions, 7) had previously undergone spinal surgery, 8) had severe documented psychiatric problems or alcohol dependency, and 9) had indications of serious spinal neurologic abnormality (1 or more of the following: difficulty passing urine; numbness around their back passage, genitals, or inner thighs; numbness, pins and needles, or weakness in both legs; or unsteadiness on feet).
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Cox 2010b**				
Intervention	156	wkly yoga sessions for 12 wks with differing themes each wk. 75 min classes which included breathing exercises, a variety of postures for 45-50 minutes and a guided deep relaxation			
Comparator #1 (control)	157	Usual care			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Written information on how to manage LBP (The Back Book)				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Functional disability	Baseline, end of treatment (3 mos), follow up (6 & 12 mos)	Roland and Morris Disability Scale (0-24)	24 statements describing back pain interference with the day's activities. Higher the score the greater the level of disability.
Outcome 2	Secondary	Physcial wellbeing	Baseline, end of treatment (3 mos), follow up (6 & 12 mos)	SF-12 Physical component score	Higher score indicates better general health status.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Cox 2010b**				
Outcome 3	Secondary	Mental wellbeing	Baseline, end of treatment (3 mos), follow up (6 & 12 mos)	SF-12 Mental component score	Higher score indicates better general health status.
Outcome 4	Secondary	Pain	Baseline, end of treatment (3 mos), follow up (6 & 12 mos)	Aberdeeen Back Pain Scale	Higher score indicates more clinical problems. Scores ranging from 0-100
Outcome 5	Secondary	Pain self-efficacy	Baseline, end of treatment (3 mos), follow up (6 & 12 mos)	Pain Self-Efficacy Questionnaire	higher score represents greater self-efficacy. Scores ranging from 0-60
Outcome 6	--	HRQoL	Baseline, end of treatment (3 mos), follow up (6 & 12 mos)	EQ-5D	EQ-5D is a standardised measure of health-related quality of life with scores ranging from 0-1
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Cox 2010b**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	Analyses were performed by using SAS software, version 9.2. Analyses were conducted by using a linear mixed model to compare changes from baseline in RMDQ scores between the groups over time.				
Population analysed	Intent-to-treat	mITT analysis performed for all randomised participants			
Missing data	There were missing data for the primary outcome (yoga group, n= 21; usual care group, n = 18) and differential missing data (more in the yoga group) for secondary outcomes. To assess departures from the missing-at-random as sumption in the primary outcome model, a best-case and worst-case sensitivity analysis was undertaken.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Cox 2010b**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additionally no pre-specified analysis plan infers some risk of bias.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Demirel 2019**
Study reference	Demirel, A., Oz, M., Ozel, Y. A., et al. 2019. Stabilization exercise versus yoga exercise in non-specific low back pain: pain, disability, quality of life, performance: a randomized controlled trial [with consumer summary]. Complementary Therapies in Clinical Practice 2019 May;35:102-108. [with consumer summary]
Study design	RCT
Author/s affiliation	Hacettepe University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Ankara, Turkey
Source of funds	None reported
Declared interests of study authors	The authors have no conflict of interest to declare.
Setting / provider	Physiotherapy unit
Country(s) / region	Turkey
Enrolment period	Not reported
Length of treatment / followup (wks or mos)	6 wk treatment, no follow up
Description of population	*N=* *Description*
# participants	77 Chronic lower back pain
details	*Inclusion criteria:* ongoing pain for at least three months, and age between 20 and 65 years. *Exclusion criteria:* Patients who had structural scoliosis, neu rologic, metastatic, or metabolic diseases, had undergone spinal surgery
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Demirel 2019**				
Intervention	40	Group yoga exercises performed three times per wk for 60 min per session for 6 wks. Progression to more challenging poses over the 6 wk period.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	37	Group core stablisation exercises performed three times per wk for 60 min per session for 6 wks. Progression to more challenging positions and contractions over the 6 wk period.			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	physiotherapist who had practised yoga for more than 10 yrs		
Is there an inactive comparator?	No	Comparison= other			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pain severity	Baseline and end of treatment (6 wks)	Visual Analog Scale	Pain severity rated on 10-cm-long line where leftmost indicates 'pain free' and rightmost point was indicated as 'unbearable pain'
Outcome 2	Not specified	Physical performance	Baseline and end of treatment (6 wks)	Back Performance Scale	5 tests, using Likert-type scoring on scale of 0-3. Higher score indicates worsening back performance.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Demirel 2019**				
Outcome 3	Not specified	Changes in percieved health status	Baseline and end of treatment (6 wks)	Nottingham Health Profile	6 subscales, scored between 0-100 points. Higher NHP score indicates higher level of impairment.
Outcome 4	Not specified	Functional disability	Baseline and end of treatment (6 wks)	Oswestry Disability Index	range from 0 (no disability) - 100 (severe disability)
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Demirel 2019**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	The compatibility of the data with normal distribution was reviewed visually (probability plots and histograms) and through analytical methods (Kolmogorov-Simirnov/Shapiro-Wilk's test). The student-t test was conducted to identify the difference between the groups, while the paired sample-t test was conducted to determine the changes within groups. Changes from baseline to after interventions were computed for each outcome.				
Population analysed	Intent-to-treat	mITT analysis performed for all randomised participants			
Missing data	Despite 80 partipants enrolled in study only 77 were analysed due to drop out. No reporting of missing data.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Demirel 2019**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additional concerns over method of randomisation and lack of pre-specified analysis plan means that study has some concerns for bias.

Characteristics of included studies	Low back pain (chronic, nonspecific)	
Study ID	**Galantino 2004**	
Study reference	Galantino, M. L., Bzdewka, T. M., Eissler-Russo, J. L., et al. 2004. The impact of modified hatha yoga on chronic low back pain: A pilot study. Alternative Therapies in Health and Medicine, 10, 56-59.	
Study design	RCT	Pilot
Author/s affiliation	Program in Physical Therapy, Richard Sotckton College of New Jersey; Cape Atlantic Physical Therapy Clinic, Cape May Courthouse, NJ; Complete Health Fitness, Warren, NJ; University of Pennsylvania	
Source of funds	Not reported	
Declared interests of study authors	Not reported	
Setting / provider	Community (Self referred through local paper or health practitioner)	
Country(s) / region	United States	
Enrolment period	Not reported	
Length of treatment / followup (wks or mos)	6 wks, questionnaire sent out as follow up at 3 months from baseline for yoga participants only	
Description of population	*N=*	*Description*
# participants	22	Chronic lower back pain
details	*Inclusion criteria:* Men and women 30-65 years of age. Experienced pain for more than 6 months and had undergone more than 2 conservative medical interventions previously without prolonged relief. *Exclusion criteria:* Previous yoga experience, a current history of a chronic systemic disease, change in medication specifically for pain in last 14 days or during the study.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Galantino 2004**				
Intervention	11	2 wkly 1hr sessions for 6 wks. Hatha yoga includes breathing, poses, followed by relaxation and meditation. Participants also encouraged to complete 1hr a day session as frequently as possible.			
Comparator #1 (control)	11	"no treatment during the observation period". Usual care continued			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Functional disability	Baseline and end of treatment (6 wks)	Oswestry Disability Index	range from 0 (no disability) - 100 (severe disability)
Outcome 2	Not specified	Depression	Baseline and end of treatment (6 wks)	Beck Depression Inventory	Self-reported, Score range from 0-63

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Galantino 2004**				
Outcome 3	Not specified	Physical performance	Baseline and end of treatment (6 wks)	Sit and Reach Test	Measurement assigned based on test, the higher the measurement the better the flexibility of the participant
Outcome 4	Not specified	Physical performance	Baseline and end of treatment (6 wks)	Functional Reach Test	Measurement assigned based on test, the higher the measurement the better the flexibility of the participant
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Galantino 2004**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	Descriptive statistics include percent means and standard deviations of each group. To account for differences in baseline values, results are presented as percent change from baseline. Chi square inferential statistics were calculated.				
Population analysed	Intent-to-treat	mITT analysis performed for all randomised participants			
Missing data	6 subjects in control group did not return to complete the second set of questionnaires and are treated as failures in ITT analysis				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Galantino 2004**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additionally high percentage drop out for control group and lack of data analysis protocol infers high risk of bias. Differences between groups at baseline indicate issues with randomisation.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Groessl 2016**
Study reference	Groessl EJ, Schmalzl L, Maiya M, Liu L, Goodman D, Chang DG, et al. Yoga for veterans with chronic low back pain: Design and methods of a randomized clinical trial. Contemporary Clinical Trials. 2016;48:110-8. http://dx.doi.org/10.1016/j.cct.2016.04.006 Groessl EJ, Liu L, Chang DG, Wetherell JL, Bormann JE, Atkinson JH, et al. Yoga for Military Veterans with Chronic Low Back Pain: A Randomized Clinical Trial. American Journal of Preventive Medicine. 2017;53(5):599-608. http://dx.doi.org/10.1016/j.amepre.2017.05.019 Groessl EJ, Liu L, Schmalzl L, Chang DG, McCarthy A, Chun WI, et al. Secondary Outcomes from a Randomized Controlled Trial of Yoga for Veterans with Chronic Low-Back Pain. International journal of yoga therapy. 2019;11. http://dx.doi.org/10.17761/2020-D-19-00036
Study design	RCT
Author/s affiliation	VA San Diego Healthcare System, CA; University of California, San Diego, CA; University of San Diego, CA, USA
Source of funds	Grant from VA Rehabilitation Research and Development, VA RR&D grant # RX000474
Declared interests of study authors	The authors have no conflict of interest to declare.
Setting / provider	large VA Medical Center in southern California.
Country(s) / region	NSW, Australia
Enrolment period	33 months between 2013-2015
Length of treatment / followup (wks or mos)	12 wks treatment. Assessments will be conducted at baseline, 6-wks, 12-wks, and 6-months
Description of population	*N=* *Description*
# participants	150 Chronic lower back pain, military veterans (Veterinary Affairs = VA)
details	*Inclusion criteria:* VA patient over 18, Has a VA primary care provider, Diagnosis of chronic low back pain for greater than 6 months, Willingness to attend a yoga program or be assigned to delayed treatment with yoga, Willing to complete 4 assessments, English literacy, Has not begun new pain treatments or medications in the past month, Willing to not start or stop pain treatments during the intervention period unless medically necessary. *Exclusion criteria:* Back surgery within the last 12 months, Back pain due to specific systemic problem, morbid obesity, Significant sciatica or nerv compression less than 3 months or chronic lumbar radicular pain longer than 3 months, unstable serious coexisting medical illness, unstable serious psychiatric illness, insufficient data to rule out acute metastatic disease, attended aor practice yoga more than once in the past 12 months, Positive Romberg test.
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Groessl 2016**				
Intervention	75	Yoga intervention group: 2 x 60 min sessions per wk for 12 wks. Sessions are Hatha Yoga classes beginning with seated breathing exercises followed by warm-up stretches then aseries of standing, seated and floor postures that will increase in difficulty over the 12 wks. Encouraged to complete home practice session, as guide by provided manual, for 15 min at least twice a wk.			
Comparator #1 (control)	75	Delayed treatment group: ongoing usual care, invited to atend same yoga intervention 6 onths following randomisation			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	Yes	Comparison= control	Waitlist		
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Functional disability	Baseline, mid (6 wks), end of treatment (12 wks), followup (6 mos)	24-item Roland-Morris Disability Ques-tionnaire	24 statements describing back pain interference with the day's activities, scores range from 0 to 24. Higher the score the greater the level of disability.
Outcome 2	Secondary	Pain intensity	Baseline, mid (6 wks), end of treatment (12 wks), followup (6 mos)	Brief Pain Inventory	Shortened version used. 13-item measure. Mean of the 13 interference items can be used as a measure of pain interference.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Groessl 2016**				
Outcome 3	Secondary	Pain interference	Baseline, mid (6 wks), end of treatment (12 wks), followup (6 mos)	Brief Pain Inventory	Shortened version used. 7-item measure. Mean of the 7 interference items can be used as a measure of pain interference.
Outcome 4	Secondary	Fatigue	Baseline, mid (6 wks), end of treatment (12 wks), followup (6 mos)	Fatigue Severity Scale (FSS)	9 items describing functional impact of fatigue on daily life rated from 1(strongl disagree) to 7 (strongly agree). Higher scores reflect greater fatigue.
Outcome 5	Secondary	Quality of Life	Baseline, mid (6 wks), end of treatment (12 wks), followup (6 mos)	SF-12	Higher score indicates better general health status. Physical and mental component score given.
Outcome 6	Secondary	Quality of Life	Baseline, mid (6 wks), end of treatment (12 wks), followup (6 mos)	EQ-5D	EQ-5D is a standardised measure of health-related quality of life with scores ranging from 0-100
Outcome 7	Secondary	Self-efficacy	Baseline, mid (6 wks), end of treatment (12 wks), followup (6 mos)	Not reported	"The questions are based on self-efficacy items developed by Lorig et al. in mixed chronic diseases"
Outcome 8	Secondary	Anxiety	Baseline, mid (6 wks), end of treatment (12 wks), followup (6 mos)	Brief Anxiety Inventory	21 items, self administered. Items scored on a scale of 0 to 4 summed to generate total score.
Outcome 9	Secondary	Depression	Baseline, mid (6 wks), end of treatment (12 wks), followup (6 mos)	Short Depression Scale (CES-D 10	10 items that target the frequency of moood symptoms, rated on a 4-point Likert scale ranging from 0(Never) to 3(All of the time). Number of items are reverse scored and score of 10 or > is considered indicative of depression.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Groessl 2016**				
Outcome 10	Secondary	Sleep quality	Baseline, mid (6 wks), end of treatment (12 wks), followup (6 mos)	Pittsburgh Sleep Quality Index (PSQI)	19 self-rated questions combined to form seven component scores that range form 0 (no difficulty) to 3 (sever dificulty). Total score ranging from 0-21. Global score .5 considered to be suggestive of significant sleep disturbance.
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	Wilcoxon rank sum and Fisher's exact tests were used to compare demogrpahic and baseline clinical variables between study groups and also between the subset of study group participants with missing data. Linear mixed-effects modeling was used to examine the change score across measured time points.				
Population analysed	Intent-to-treat	An “intent-to-treat” approach was followed for all study outcomes and all analyses were conducted using statistical software R, version 3.3.0 in 2016			
Missing data	The authors also compared the baseline characteristics of participants with missing data by group to examine whether attrition was related to baseline characteristics. The sensitivity of the results to missing data was also examined using imputation by carrying the last data point forward, a conservative method commonly used in clinical trials.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Groessl 2016**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additionally unbalanced drop out due to trial context infer high risk of bias.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Highland 2018**
Study reference	Highland, K. B., Schoomaker, A., Rojas, W., et al. 2018. Benefits of the restorative exercise and strength training for operational resilience and excellence yoga program for chronic lower back pain in service members: a pilot randomized control trial. Archives of Physical Medicine and Rehabilitation 2018 Jan;99(1):91-98.
Study design	RCT
Author/s affiliation	University of the Health Scienes, Rockville, MD; The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc.; Walter Reed National Military Medical Center, Bethesda, MD; YogaMedics, Huntington Woods, MI.
Source of funds	None reported
Declared interests of study authors	None reported
Setting / provider	Military medical center
Country(s) / region	USA
Enrolment period	December 2013 to January 2015
Length of treatment / followup (wks or mos)	8 wks, 3 and 6 month follow up
Description of population	*N=* *Description*
# participants	68 Chronic lower back pain, active and ex-military personnel
details	*Inclusion criteria:* 18-68 yrs old, able to read and understand english, score of ³ 4 on Defense & Veterans Pain Rating Scale 2.0 for > 3 months, eligible for Departmnet of Defense healthcare and have LBP diagnosis documented within electronic health record. *Exclusion criteria* : if medically advised against mild/moderate exercise, unable to sit on floor for 2 mins or stand independently, had complex regional pain syndrome, fibromyalgia, chronic fatigue syndrome, autoimmune disease-related pain, other chronic medical conditions or history of sever traumatic brain injury, practiced yoga within the past 6 months, scheduled for back surgery in the following 3 months, had back surgery withiin the past year, was pregnant, or undergoing a Medical Evaluation Board assessment to determine discharge.
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Highland 2018**				
Intervention	34	RESTORE + treatment-as-usual group: Intervention participants were asked to attend 2 individual yoga sessions per wk during wks 1-4 then attend wkly sessions in wks 5 to 8. Each session involved 10 min of breathing work and centering followed by 40 min of poses based on the ability to intesify or modify each pose, finishing with 10mins of guided meditation. Dependent on instructor judgement and participant receptivity, partipcants used props and completed repetitive lifting with controlled breathing. Also provided with CD for optional home practice.			
Comparator #1 (control)	34	Treatment as usual group: referred to participant treatment based on their provider's treatment planning and recommendations. This could include pain medications, physical therapy, chiropractic care, injections, acupuncture, massage, supplements, or other therapies.			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Yes, treatment as usual refers to treatment as outlined by participant's healthcare provider				
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Past 24 hr Pain	Baseline, mid (4 wks), end of treatment (8 wks), followup (3 & 6 mos)	Defense & Veterans Pain Rating Scale	Responses placed along a colour-coded, 11-point numerical pain rating scale (1= no pain, 11= worst possible pain). Each response point contains a functional impact statement and corresponding illustrate facial expression.
Outcome 2	Secondary	Disability	Baseline, mid (4 wks), end of treatment (8 wks), followup (3 & 6 mos)	Roland and Morris Disability Scale (0-24)	24 statements describing back pain interference with the day's activities. Higher the score the greater the level of disability.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Highland 2018**				
Outcome 3	Secondary	Physical functioning	Baseline, mid (4 wks), end of treatment (8 wks), followup (3 & 6 mos)	4-item PROMIS-29 Physical Functioning subscale	Each item is provided on a 5-point Likert scale. Total scores are transformed to standardized t-scores on the basis of the U.S. general population. Higher scores indicate higher physical functioning.
Outcome 4	Secondary	Symptom burden	Baseline, mid (4 wks), end of treatment (8 wks), followup (3 & 6 mos)	PROMIS-29 Sleep Disturbance, Pain Interference, Anxiety,Depression, and Fatigue subscales	Subscales scores are averaged into a composite score (range from 0-100) with higher scores indicating higher symptom burden.
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Highland 2018**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	Generalised linear mixed models with sequential Bonferroni-adjusted pariwaise significance tests and chi-square analyses examined longitudinal primary and secondary outcomes. Secondary outcome significance tests were Bonferroni adjusted for multiple outcomes.				
Population analysed	Intent-to-treat	mITT analysis performed for all randomised participants			
Missing data	6/68 missing 3 month follow up, 9/68 missing 6 month follow up. Only 38% finished all 12 yoga sessions with 47% completing between 9 and 11 sessions				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Highland 2018**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Concerns relating to the drop-out rate were addressed using appropriate analysis to estimate the impact. Lack of pre-specified analysis plan infer some concerns for bias.

Characteristics of included studies	Low back pain (mechanical)
Study ID	**Jacobs 2004**
Study reference	Jacobs, B. P., Mehling, W., Goldberg, H., et al. 2004. Feasibility of conducting a clinical trial on hatha yoga for chronic low back pain: Methodological lessons. Alternative Therapies in Health and Medicine, 10, 80-83.
Study design	RCT
Author/s affiliation	Osher Center for Integrative Medicine Department of Family and Community Medicine, University of California San Francisco; Kaiser Permanente Department of Medicine, UCSF; Permeanente Medical Group; BKS Iyengar Yoga Institute of Northern California
Source of funds	None reported
Declared interests of study authors	None reported
Setting / provider	Community (self-referral thourhg advertisment, newsletters) or through physician referral)
Country(s) / region	USA
Enrolment period	Jan to March 2003
Length of treatment / followup (wks or mos)	12 wks with outcome measurements at 1 and 3 months with 6 month follow up
Description of population	*N=* *Description*
# participants	52 Chronic lower back pain.
details	*Inclusion criteria:* participants aged between 18-65 years, at least 3 visits to health provider for non-specific mechanical low back pain in previous 12 months, any pain symptoms for at least 6 months and to score a minimum of 3/10 on the Visual Analogue Pain scale over the past wk. Required to have no plans to move out of study region within 9 months and to have life expectancy of more than 9 months. *Exclusion criteria:* If back pain was secondary to malignancy, infectious disease, inflammatory spondyloarthropathies, veterbral fracture or dislocation, acute radicular syndrome or sevee neurological signs, systemic or visceral causes of pain and severe concurrent illness, pregnancy, back-related compensation or litigation, history of back surgery, regular participation (>1/wk) in Iyengar yoga for the past 3 months.
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (mechanical)				
Study ID	**Jacobs 2004**				
Intervention	28	Yoga intervention: 2x 90 min sessions of Iyengar style of Hatha yoga. Participants also encourages to practice yoga at home 5 days wkly for 30 minutes. Initial standing poses followed by seated or lying poses and concluding with corpse poses. General themes of each class included instruction on how to breathe. Home practice prescribed for 30 mins on 5 days/wk. Participants were provided an illustrated pamphlet explaining the poses and 'a yoga mat, block, belts and blankets for their home-based practice".			
Comparator #1 (control)	24	waitlist control group:			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Usual care	referred to participant treatment based on their provider's treatment planning and recommendations. This could include pain medications, physical therapy, chiropractic care, injections, acupuncture, massage, supplements, or other therapies. Back pain educational booklet also provided.			
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Pain	Baseline, 1 month, end of treatment (3 months), follow up (6 months)	Visual Analog Scale	Pain severity rated on 10-cm-long line where leftmost indicates 'pain free' and rightmost point was indicated as 'unbearable pain'
Outcome 2	Primary	Quality of Life	Baseline, 1 month, end of treatment (3 months), follow up (6 months)	SF-36	Higher score indicates better general health status. Physical and mental component score, andd individual domain scores given

Characteristics of included studies	Low back pain (mechanical)				
Study ID	**Jacobs 2004**				
Outcome 3	Primary	Functional disability	Baseline, 1 month, end of treatment (3 months), follow up (6 months)	24-item Roland-Morris Disability Ques-tionnaire	24 statements describing back pain interference with the day's activities, scores range from 0 to 24. Higher the score the greater the level of disability.
Outcome 4	Primary	Functional disability	Baseline, 1 month, end of treatment (3 months), follow up (6 months)	Oswestry Disability Index	range from 0 (no disability) - 100 (severe disability)
Outcome 5	Secondary	Depression	Baseline, 1 month, end of treatment (3 months), follow up (6 months)	Short Depression Scale (CES-D 10)	10 items targeting the frequency of moood symptoms, rated on a 4-point Likert scale ranging from 0(Never) to 3(All of the time). Number of items are reverse scored. Score of 10 or > is considered indicative of depression.
Outcome 6	Secondary	Anxiety	Baseline, 1 month, end of treatment (3 months), follow up (6 months)	State-Trait Anxiety Inventory (STAI)	20 item test with all items rated on a 4-point scale from almost never to almost always. Higher scores are related to higher levels of anxiety.
Outcome 7	Secondary	Healthcare utilisation	Baseline, 1 month, end of treatment (3 months), follow up (6 months)	Number of back pain-related outpatient vists	Higher score indicates better general health status. Physica and mental component score given.
Outcome 8	Other outcomes	Bothersomeness		'bothersomeness of back pain during past 4 wks	
Outcome 9	Not specified	Pain	--	mean low-back pain over the past 4 wks, worst back pain over last 4 wks, best back pain over last 4 wks	--

Characteristics of included studies	Low back pain (mechanical)				
Study ID	**Jacobs 2004**				
Outcome 10	Not specified	insomnia	--	--	--
Outcome 11	Not specified	Mood (positive and negative affect)	--	PANAS-PA, PANAS-NA,	--
Outcome 12	Not specified	biological markers	--	--	--
Outcome 13	Not specified	healthcare utilisation	--	--	--
Outcome 14	Not specified	Drug usage.	--	--	--
Method of analysis					
Statistics	Data collection included measures of potential covariates such as patient expectations, general health, insomnia, depression, anxiety and adherence to class and home-based practice.				
Population analysed	Other (provide details)	No analysis of population is reported therefore no data extraction completed.			
Missing data	64% of intervnetion participants attended classes over the 3 months. Data collection for the 3-month time interval was completed by 84% of all participants without differences across groups.				
INTERNAL VALIDITY Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Low back pain (mechanical)
Study ID	**Jacobs 2004**
Summary (descriptive)	Article was to outline and discuss feasibility of conducting a hatha yoga clinical trial. As a result no analysis or results are provided. If results were provided a better assessment of this trial's RoB could be performed to assess whether results out contribute to clinical evidence on yoga.

Characteristics of included studies	Low back pain (chronic, nonspecific)	
Study ID	**Kim 2014**	
Study reference	Kim, S. S., Min, W. K., Kim, J. H., et al. 2014. The effects of VR-based Wii Fit Yoga on physical function in middle-aged female LBP patients. Journal of Physical Therapy Science 2014 Apr;26(4):549-552.	
Study design	RCT	
Author/s affiliation	Graduate School of Physical Therapy, Sahmyook University	
Source of funds	None reported	
Declared interests of study authors	None reported	
Setting / provider	K Hospital	
Country(s) / region	Seoul, South Korea	
Enrolment period	Not reported	
Length of treatment / followup (wks or mos)	4 wk treatment period, no follow up	
Description of population	*N=*	*Description*
# participants	30	Middle aged female patients with LBP.
details	*Inclusion criteria* : Middle aged, female, Experiencing chronic LBP for longer than 2 months. *Exclusion criteria:* Anyone with lowered muscle strength or sensory or cauda equine synrome.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Kim 2014**				
Intervention	15	Yoga group: 3 x a wk, 30 min, virtual reality-based Wii Fit yoga program (7 available) for 4 wks			
Comparator #1 (control)	--	--			
Comparator #2 (other)	15	Core stablisation group: 3x a wk, 30 min, trunk stabilising exercise plus 30 min normal physical therapy for 4 wks. Trunk stabilizing exercise entaled dead bugs, opposite arma nd leach reach exercises, bridge, plank and balancing on unstable surfaces. Each movement was comprised of two sets lasting 30 minutes. Each set included 10 repetitions.			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	No	Comparison= other			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pain	Baseline and end of treatment (4 wks)	Visual Analog Scale	Pain severity rated on 10-cm-long line where leftmost indicates 'pain free' and rightmost point was indicated as 'unbearable pain'
Outcome 2	Not specified	Mechanical pain sensitivity	Baseline and end of treatment (4 wks)	Pressure Algometry	applying controlled pressure to given body point.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Kim 2014**				
Outcome 3	Not specified	Functional disability	Baseline and end of treatment (4 wks)	Oswestry Disability Index	range from 0 (no disability) - 100 (severe disability)
Outcome 4	Not specified	Functional disability	Baseline and end of treatment (4 wks)	24-item Roland-Morris Disability Ques-tionnaire	24 statements describing back pain interference with the day's activities, scores range from 0 to 24. Higher the score the greater the level of disability.
Outcome 5	Not specified	Fear of lower back pain	Baseline and end of treatment (4 wks)	Fear avoidance beliefs questionnaire	5 categories for physical activity and 11 categorties for work.
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Kim 2014**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	SPSS version 17.0 was used for statistical analysis. A paired t-test was used to determine the changes in pre- and post-test scores within a group, and the interaction effect between group and time was assessed by using repeated-measures analysis of covariance (ANCOVA) with the baseline as the covariate.				
Population analysed	Intent-to-treat	ITT analysis performed for all randomised participants			
Missing data	No missing data reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Kim 2014**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. There are also concerns for bias surrounding the lack of information presented for randomisation of particpant group allocation and lack of pre-specified analysis plan.

Characteristics of included studies	Low back pain (mechanical)	
Study ID	**Monro 2015**	
Study reference	Monro, R., Bhardwaj, A. K., Gupta, R. K., et al. 2015. Disc extrusions and bulges in nonspecific low back pain and sciatica: Exploratory randomised controlled trial comparing yoga therapy and normal medical treatment. Journal of Back and Musculoskeletal Rehabilitation, 28, 383-392. (a) Telles, S., et al. 2016. "A randomized controlled trial to assess pain and magnetic resonance imaging-based (MRI-based) structural spine changes in low back pain patients after yoga practice." Medical Science Monitor 22: 3238-3247. (b) Telles, S., et al. 2016. Heart rate variability in chronic low back pain patients randomized to yoga or standard care. BMC Complementary and Alternative Medicine 16 (1) (no pagination)(279).	
Study design	RCT	
Author/s affiliation	Yoga Biomedical Trust, London, UK Patanjali Research Foundation, Haridwar, India Faculty of Medicine, University of Southampton, Southampton, UK	
Source of funds	None reported	
Declared interests of study authors	None reported	
Setting / provider	Patanjali Yogpeeth Yoga university, Haridwar	
Country(s) / region	India	
Enrolment period	May to June 2011	
Length of treatment / followup (wks or mos)	2 wks of yoga classes followed by daily practice up to 3 months.	
Description of population	*N=*	*Description*
# participants	61	From rural population with nsLBP or sciatica and disc extrusions or bulges.
details	*Inclusion criteria* : 20-45 yrs, RMDQ score > 3 and/or acute sciatica in past 3 months, presence of at least 1 disc extrusion or bulge, willingness to comply with treatment randomly assigned. *Exclusion criteria* : Severe motor weakness, Previous spinal surgery, Central canal stenosis, Severe structural deformity, Severe osteoporosis, Fresh fracture, Pregnancy, Tumours, Ankylosing spondylitis , Spinal infection, Severe cardiovascular or metabolic disease, other corresponding disorders preventing active participation in therapy programme, Recent history of psychosis or alcohol abuse, Lack of cooperation, Pending litigation	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (mechanical)				
Study ID	**Monro 2015**				
Intervention	30	Yoga group: 2 or > classes per wk for 2 wks then asked to continue daily for the rest of the trial (3 months). Yoga therapy comprised psotural, breathing and relaxation exercises devised by orthopaedic surgeon. For disc extrusion in the acute phase only supine relaxation and breathing exercises are used.			
Comparator #1 (control)	31	Usual care group: normal medical care normally consisting of advice on painkillers and NSAID's. Educational classes offered but quickly discontinued.			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Disability	Baseline and end of treatment (3 months)	24-item Roland-Morris Disability Ques-tionnaire	24 statements describing back pain interference with the day's activities, scores range from 0 to 24. Higher the score the greater the level of disability.
Outcome 2	Primary	Pain	Baseline and end of treatment (3 months)	MCQ	Worst pain in past fortnight. Coded as none, mild, moderate, severe and intolerable

Characteristics of included studies	Low back pain (mechanical)				
Study ID	**Monro 2015**				
Outcome 3	Secondary	Pain	Baseline and end of treatment (3 months)	Aberdeen Back Pain Scale	Higher score indicates more clinical problems. Scores ranging from 0-100
Outcome 4	Secondary	Functional leg strength	Baseline and end of treatment (3 months)	straight leg raising test	Positive test defined as radiating pain observed at 30 to 70 degrees of hip flexion, with a smaller angle indicating more significantly positive resutl.
Outcome 5	Secondary	Palpation of the spine	Baseline and end of treatment (3 months)	dermatome and myotome test	Pin prick tests
Outcome 6	Secondary	MRI scans	Baseline and end of treatment (3 months)	MRI	effects of MRI-detected structural abnormalities at baseline on primary outcome measures
Outcome 7	Secondary	Changes in MRI-detected disc abnormalities	Baseline and end of treatment (3 months)	MRI	N/A
Outcome 8	Primary (subgroup)	Pain	Baseline and end of treatment (3 months)	Visual Analog Scale	Pain severity rated on 10-cm-long line where leftmost indicates 'pain free' and rightmost point was indicated as 'unbearable pain'
Outcome 9	Secondary (subgroup)	State anxiety	Baseline and end of treatment (3 months)	State-Trait Anxiety Inventory (STAI)	20 item test with all items rated on a 4-point scale from almost never to almost always. Higher scores are related to higher levels of anxiety.

Characteristics of included studies	Low back pain (mechanical)				
Study ID	**Monro 2015**				
Outcome 10	Secondary (subgroup)	Spinal flexibility	Baseline and end of treatment (3 months)	Sit and Reach Test	Measurement assigned based on test, the higher the measurement the better the flexibility of the participant
Outcome 11	Secondary (subgroup)	MRI scans	Baseline and end of treatment (3 months)	MRI	Sagittal T2-weighted turbo spin echo, Sagittal T1-weighted spin echo, Axial T2-weighted turbo spin echo over levels of intervertbral discs of the lumbar spine.
Outcome 12	Secondary (subgroup)	heart rate variability	Baseline and end of treatment (3 months)	EKG	recorded using Ag/AgCl pre-gelled electrodes and a standard bipolar Limb Lead II configuration. EKG data were acquired at the sampling rate of 1024 Hz.
Outcome 13	Secondary (subgroup)	rate of respiration	Baseline and end of treatment (3 months)	Respiratory stethograph transducer	Transducer fixed around the trunk about 8cm below the lower costal margin when the patients sat erect.
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	The analyses were carried out in Stata version 11 on an intention-to-treat basis. The control and intervention group RMDQ scores were compared using a linear regression model, controlling for RMDQ score at baseline, age and sex. For Telles, 2016 (a&b), a repeated measures analysis of variance (ANOVA) with Bonferroni correction for post-hoc analyses was used.				
Population analysed	Intent-to-treat	ITT analysis performed for all randomised participants			
Missing data	Missing data similar between classes. 12 for intervention and 9 for treatment as usual group.				
INTERNAL VALIDITY Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (mechanical)
Study ID	**Monro 2015**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. In relation to results, the numbers were too small to detect possible effects of yoga. 21 participants dropped out from Telles,2016(a). Lack of pre-specific analysis plan also infers some concerns for bias.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Nambi 2014**
Study reference	Nambi, G. S., Inbasekaran, D., Khuman, R., et al. 2014. Changes in pain intensity and health related quality of life with Iyengar yoga in nonspecific chronic low back pain: A randomized controlled study. International Journal of Yoga, 7, 48-53.
Study design	RCT
Author/s affiliation	Department of Physiotherapy, C.U. Shah Physiotherapy College C.U. Shah Medical College, Surendranagar, Gujarat, India
Source of funds	None reported
Declared interests of study authors	None reported
Setting / provider	C. U. Shah physiotherapy college outpatient department (OPD), Surendranagr, Gujarat
Country(s) / region	India
Enrolment period	Jan-Dec 2012
Length of treatment / followup (wks or mos)	4 wks, 6 month follow up
Description of population	*N=* *Description*
# participants	60 Nonspecific chronic lower back pain
details	*Inclusion criteria* : History of nLBP with symptoms persisting for 3 months. Subjects had to be 18 years of age and ambulatory. *Exclusion criteria* : if their LBP was due to nerve root compression, disc prolapse, spinal stenosis, tumor, spinal infection, ankylosing spondylosis, spondylolisthesis, kyphosis or structural scoliosis, or a widespread neurological disorder, if they presented as presurgical candidates, were involved in litigation or compensation, displayed a compromised cardiopulmonary system, were pregnant, had a body mass index (BMI) of more than 35, were experiencing major depression or substance abuse, and were practitioners of yoga
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Nambi 2014**				
Intervention	30	Yoga group intervention: 1hr classes per wk for 4 wks. Also asked to practice yoga at home 30min, 5 days a wk. Iyengar yoga sessions consisted of 29 postures. Starting with restorative poses then lengthening poses, standing poses, twists and inversions.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	30	Exercise group: 3 days a wks for 4 wks. Prior to exercise program class soft tissue flexibility and range of motion was increased through stretching exercises with 5-10min relaxation periods. In exercise program 5 repetitions in 3 sets with 30 sec pauses per set to begin with and repetitions were gradually increased until they reached 15.			
Comparator #3 (other)	--	--			
Co-interventions	All participants received 1 hr lecture and instructional handbook regarding nsLBP.				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	No	Comparison= other			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pain	Baseline, end of treatment (4 wks), follow up (6 months)	Visual Analog Scale	Pain severity rated on 10-cm-long line where leftmost indicates 'pain free' and rightmost point was indicated as 'unbearable pain'
Outcome 2	Not specified	Physical distress	Baseline, end of treatment (4 wks), follow up (6 months)	HRQOL-4	"How many days was your physical health, which includes physical illness or injury, not good?" in previous 30 days

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Nambi 2014**				
Outcome 3	Not specified	Mental distress	Baseline, end of treatment (4 wks), follow up (6 months)	HRQOL-4	"How many days was your mental health, which includes stress, depression, and problems with emotions, not good?" in previous 30 days
Outcome 4	Not specified	Activity limitation	Baseline, end of treatment (4 wks), follow up (6 months)	HRQOL-4	"How many days did poor physical or mental health keeps you from doing your usual activities, such as self-care, work, or recreation?" in previous 30 days
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Nambi 2014**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	The obtained data was analyzed with SPSS-16 for inter and intragroup comparisons. Inter group analysis was done using independent t-test and intragroup analysis was done using repeated measures ANOVA.				
Population analysed	Intent-to-treat	mITT analysis performed for all randomised participants			
Missing data	Missing data similar across groups, reasons provided for all except 1.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Nambi 2014**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement.There are also concerns for bias surrounding the lack of information presented for randomisation of particpant group allocation and lack of pre-specificed analysis plan.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Neyaz 2019**
Study reference	Neyaz, O., Sumila, L., Nanda, S., et al. 2019. Effectiveness of Hatha Yoga Versus Conventional Therapeutic Exercises for Chronic Nonspecific Low-Back Pain. Journal of Alternative and Complementary Medicine, 25, 938-945.
Study design	RCT
Author/s affiliation	Department of Physical Medicine and Rehabilitation, All India Institute of Medical Sciences, Ansari Nagar, New Delhi 110029, India
Source of funds	None reported
Declared interests of study authors	None to declare
Setting / provider	Tertiary care hospital.
Country(s) / region	New Dehli, India
Enrolment period	Feb 2017- April 2018
Length of treatment / followup (wks or mos)	6 wk tretment.Followed up after 6 wks.
Description of population	*N=* *Description*
# participants	70 Nonspecific chronic lower back pain
details	*Inclusion criteria:* Patients aged between 18 and 55 years who were attending outpatient at PMR department with complaint of CNLBP persisting >=12 wks and pain rating >=4 on a 0–10 numerical rating scale *Exclusion criteria* : individuals whose back pain was due to severe scoliosis, sciatica, previous back surgery, or diagnosed spinal stenosis, potentially attributable to specific underlying diseases or conditions (e.g., pregnancy, meta static cancer, spondylolisthesis, fractured bones or dislocated joints, large herniated disk, sciatica pain equal to or greater than back pain) or minimal pain (rating of £4 on a 0–10 numerical rating scale), conditions overlapping with symptoms of back pain or confound treatment effects (rheumatoid arthritis, spondyloarthropathy, and severe fibromyalgia), individuals who were currently receiving other back pain treatments or had participated in Yoga or CTE training for back pain and those with unstable medical or severe psychiatric conditions or dementia. Patients who had contraindications (e.g., progressive neurologic deficits) or schedules that precluded class participation, those with history of active substance or alcohol abuse, those who were unwilling to practice at home, or those who have plans to move out of the area in the next 1 month.
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Neyaz 2019**				
Intervention	35	Yoga group: wkly 35 min sessions for 6 wks. Encouraged to practice at home for 30min on non-session days. Yoga therapy developed from traditional Hatha Yoga practices in collaboration with CIMR.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	35	Conventional therapeutic exercises group: wkly 35 min sessions for 6 wks. Encouraged to practice at home for 30min on non-session days. Simple warm up, 3 different stretching and 5 different strengthening exercises that emphasize hip, adbominal and back muscles. 10 reps held for 10 sec each. Sessions concluded with deep slow breathing.			
Comparator #3 (other)	--	--			
Co-interventions	Education regarding postural care for CNLBP was given in both groups				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	No	Comparison= other			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Pain	Baseline, end of treatment (6 wks), follow up (12 wks)	Defense & Veterans Pain Rating Scale	Colour-coded, 11-point numerical pain rating scale (0= no pain, 10= worst possible pain). Each response point contains a functional impact statement and corresponding illustrate facial expression.
Outcome 2	Primary	Disability	Baseline, end of treatment (6 wks), follow up (12 wks)	24-item Roland-Morris Disability Ques-tionnaire	24 statements describing back pain interference with the day's activities, scores range from 0 to 24. Higher the score the greater the level of disability.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Neyaz 2019**				
Outcome 3	Secondary	Pain medication usage	Baseline, end of treatment (6 wks), follow up (12 wks)	Pills consumed per week	
Outcome 4	Secondary	Perceived recovery	Baseline, end of treatment (6 wks), follow up (12 wks)	Patient reported	Scored on a seven-point Liekrt scale indicating very large improvement to very much worse.
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Neyaz 2019**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	Two-group comparisons were used to describe the effect of Yoga in comparison to CTEs using Wilcoxon's signed-rank test for intention-to-treat protocol and Mann–Whitney U-test for per-protocol analysis. Multiple group comparisons were used to describe the effect of each therapy on back pain (within group comparisons) using Friedman test for intention-to-treat protocol and Kruskal–Wallis H-test for per-protocol analysis. Categorical data were analyzed using Chi-square test.				
Population analysed	Other (provide details)	Both intent to treat and per protocol compared			
Missing data	24/70 discontinued interventions (13 from yoga and 11 from CTE group) without specified reasons. Missing data was imputed by last value carried forward.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Neyaz 2019**
Summary (descriptive)	High proportion of drop outs in both groups that is greater than reported sample size to accurately measure effect of intervention. Lack of pre-specificed analysis plan and use of intent to treat and per protocol analysis also raises questions in relation to bias of results.

Characteristics of included studies	Low back pain (chronic, nonspecific or mechnical)	
Study ID	**Patil 2018**	
Study reference	Patil, N. J., Nagaratna, R., Tekur, P., et al. 2018. A Randomized Trial Comparing Effect of Yoga and Exercises on Quality of Life in among nursing population with Chronic Low Back Pain. International Journal of Yoga, 11, 208-214.	
Study design	RCT	
Author/s affiliation	Sri Devaraj Urs Academy of Higher Education and Research, Sri Devaraj Urs Medical College, Kolar, S-VYASA Yoga University, Division of Yoga and Life Sciences, S-VYASA Yoga University ,Integrated Centre for Yoga (NICY), NIMHANS, Bengaluru, Karnataka, India	
Source of funds	None reported	
Declared interests of study authors	None reported	
Setting / provider	Workers in the tertiary care teaching hospital in Kolar district of Karnataka state	
Country(s) / region	India	
Enrolment period	Jan 2015-Dec2016	
Length of treatment / followup (wks or mos)	6 wks, no follow up	
Description of population	*N=*	*Description*
# participants	88	Female nurses with chronic lower back pain
details	*Inclusion criteria:* female nurses with diagnosis of either nonspecific LBP, lumbar spondylosis, or intervertebral disc prolapse, suffering from LBP for 3 months or more as diagnosed by an orthopedician and knowledge of English, Hindi, and Kannada language. *Exclusion criteria:* patients with pain due to organic causes such as infective and inflammatory conditions, metabolic disorders, and posttraumatic condition, patients with degenerative disorders of muscles, patients with comorbid cardiac or neuropsychiatric illness, history of major surgery or injury in the past, pregnant women, and patients with neurological complications of CLBP.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific or mechnical)				
Study ID	**Patil 2018**				
Intervention	44	Yoga group: 1hr yoga module, 5 days/wk for 6 wks. Seated psotures, standing postures, quick relaxation techniques and deep relaxation techniques with yogic colon cleansing once a wk.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	44	Exercise group: 1hr of physical exercises, 5 days/wk for 6 wks.Included stretching and calisthenics.			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	No	Comparison= other			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Physical health	Baseline and end of treatment (6 wks)	The World Health Organization Quality of Life-brief (WHOQOL-BREF) questionnaire	Higher score denotes higher QoL. Seven items of brief. Scores range from 4-20
Outcome 2	Not specified	Psychological health	Baseline and end of treatment (6 wks)	The World Health Organization Quality of Life-brief (WHOQOL-BREF) questionnaire	Higher score denotes higher QoL. Six items of brief. Scores range from 4-21

Characteristics of included studies	Low back pain (chronic, nonspecific or mechnical)				
Study ID	**Patil 2018**				
Outcome 3	Not specified	Social relationships	Baseline and end of treatment (6 wks)	The World Health Organization Quality of Life-brief (WHOQOL-BREF) questionnaire	Higher score denotes higher QoL. Three items of brief. Scores range from 4-22
Outcome 4	Not specified	Environmental health	Baseline and end of treatment (6 wks)	The World Health Organization Quality of Life-brief (WHOQOL-BREF) questionnaire	Higher score denotes higher QoL. Eight items of brief. Scores range from 4-23
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific or mechnical)				
Study ID	**Patil 2018**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	Statistical Package for the Social Sciences used for all analyses. Data of all four domains were normally distributed on Shapiro–Wilk test. “Paired-samples t-test” and “Independent-samples t-test” were used to analyze within- and between-group data, respectively				
Population analysed	Intent-to-treat	ITT analysis performed for all randomised participants			
Missing data	Study had no missing data				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (chronic, nonspecific or mechnical)
Study ID	**Patil 2018**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. There are also concerns for bias surrounding, lack of pre-specified analysis plan and the lack of information presented for randomisation of particpant group allocation.

Characteristics of included studies	Low back pain (acute and/or chronic, nonspecific)
Study ID	**PushpikaAttanayake 2010**
Study reference	Pushpika Attanayake, A. M., Somarathna, K. I., Vyas, G. H., et al. 2010. Clinical evaluation of selected Yogic procedures in individuals with low back pain. Ayu, 31, 245-50.
Study design	RCT
Author/s affiliation	Institute for Yoga, Naturopathy Education and Research, Gujarat Ayurved University, Jamnagar; Institute of Indigenous Medicine, University of Colombo, Rajgiriya, Sri Lanka; Institute of Ayurvedic Pharmaceutical Sciences, Gujarat Ayurved University, Jamnagar, India.
Source of funds	None reported
Declared interests of study authors	None reported
Setting / provider	Gujarat Ayurved University, Jamnagar
Country(s) / region	India
Enrolment period	None reported
Length of treatment / followup (wks or mos)	3 wks, no follow up
Description of population	*N=* *Description*
# participants	12 Non specific lower back pain
details	*Inclusion criteria:* Patients having back pain for more than 3 wks were selected, irrespective of their religion, sex, occupation, caste and socioeconomic status. Age limit 30–60 years *Exclusion criteria:* Patients suffering from any major concurrent illness which affects one or more systems of the body were excluded, e.g., ischemic heart disease, diabetes mellitus, tuberculosis, bone malignant tumors, etc. Patients having back pain due to non-spinal illnesses were excluded, e.g., Urinary tract infection (UTI), gastrointestinal GI diseases, uterine diseases. Patients having positive neurological signs were excluded.Patients of age below 30 years and above 60 years were excluded.
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (acute and/or chronic, nonspecific)				
Study ID	**PushpikaAttanayake 2010**				
Intervention	6	Yoga group: wkly 1 hr sessions of yoga classes. Classes started with stretches then supine, prine and sitting postures finishing with relaxation.			
Comparator #1 (control)	6	Control group: no intervention			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Diet and lifestyle modification plan				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pain	Baseline and post treatment (3 wks)	10 subjective individual scores and total score.	10 criteria: pain intensity, sleeping, personal care, travel, work, recreation, frequency of pain, lifting, walking, standing. All rated on scale of 0(no pain)-4(worst pain). Total score is cumulative score of 10 items divided by 40.
Outcome 2	Not specified	Pain	Baseline and post treatment (3 wks)	3 assessments of objective pain	Forward flexion, left lateral flexion and right lateral flexion. All measured in cm.

Characteristics of included studies	Low back pain (acute and/or chronic, nonspecific)				
Study ID	**PushpikaAttanayake 2010**				
Outcome 3	--	--	--	--	--
Outcome 4	--	--	--	--	--
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (acute and/or chronic, nonspecific)				
Study ID	**PushpikaAttanayake 2010**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	Used standard statistical protocols, such as paired and unpaired Student's t-test.				
Population analysed	Intent-to-treat	ITT analysis for all randomised participants			
Missing data	No missing data reported				
INTERNAL VALIDITY Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Low back pain (acute and/or chronic, nonspecific)
Study ID	**PushpikaAttanayake 2010**
Summary (descriptive)	Incomplete reporting of statistical analysis, unreported randomisation and concealment process, participant awareness of treatment and lack of a pre-specified analysis plan all contribute to high risk of bias associated with this study.

Characteristics of included studies	Low back pain (chronic, nonspecific)	
Study ID	**Saper 2009**	
Study reference	Saper, R. B., Sherman, K. J., Cullum-Dugan, D., et al. 2009. Yoga for chronic low back pain in a predominantly minority population: a pilot randomized controlled trial. Alternative therapies in health and medicine, 15, 18-27.	
Study design	RCT	
Author/s affiliation	Boston University School of Medicine, Boston Medical Center, and Beth Israel Deaconess Medical Center Harvard Medical School, Boston, Massachusetts; Center for Health Studies, Group Health Cooperative, Seattle, Washington;	
Source of funds	Funded by the Commonwealth of Massachusetts, Free Care is a managed health plan that provided basic health insurance to uninsured low-income residents not meeting criteria for Medicaid	
Declared interests of study authors	None reported	
Setting / provider	Boston, Massachusetts. Study was run from 2 community health centres. Yoga classes were held at 1 of the 2 community health centres.	
Country(s) / region	USA	
Enrolment period	February to March 2007	
Length of treatment / followup (wks or mos)	12 wks, 26 wk follow up	
Description of population	*N=*	*Description*
# participants	30	Chronic lower back pain
details	*Inclusion criteria:* needed to be 18 to 64 years old and have current low back pain persisting ≥12 wks. Mean pain intensity for the 2 wks prior to enrollment needed to be ≥4 on a numerical rating scale of 0 to 10. Sufficient understanding of English to follow class instructions and complete surveys was required *Exclusion criteria:* yoga use in the previous year; new pain medicine or other low back pain treatments started within the previous month or anticipated to begin in the next 6 months; pregnancy; back surgery in the previous 3 years; nonmuscular pathologies (eg, spinal canal stenosis, spondylolisthesis, infection, malignancy, fracture); severe or progressive neurological deficits; sciatica pain equal to or greater than back pain; active substance or alcohol abuse; serious systemic disease, medical, or psychiatric comorbidities precluding yoga practice; active or planned worker's compensation, disability, or personal injury claims; and inability to attend classes at the times and location offered.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Saper 2009**				
Intervention	15	Yoga : 12 wkly 75-minute yoga classes divided into four 3-wk segments. Each class began and ended with Svasana, a relaxation exercise. Classes included postures and breathing techniques. "Home practice for 30 minutes daily was strongly encouraged. We provided participants with an audio CD of the protocol; a portable CD player; a handbook describing and depicting the exercises; and a yoga mat, strap, and block."			
Comparator #1 (control)	15	Waitlist: were offered the yoga intervention after 26 wks.			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Routine medical care (with/without medications) and educational book describing self-care management strategies.				
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Pain	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	Numerical rating scale	Average pain level for previous wk using 11 point scale (0=no pain, 10=worst possible pain)
Outcome 2	Primary	Disability	Baseline, 6 wks, end of treatment (12 wks), followup (26 wks)	23-item Roland-Morris Disability Questionnaire (modified)	23 statements describing back pain interference with the day's activities, scores range from 0 to 23. Higher the score the greater the level of disability.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Saper 2009**				
Outcome 3	Secondary	Pain medication use during the preceding wk	Baseline, 6 wks, end of treatment (12 wks), followup (26 wks)	Medication use	including NSAIDs, opiates, muscle relaxants, acetaminophen, or other
Outcome 4	Secondary	Global improvement	Baseline, 6 wks, end of treatment (12 wks), followup (26 wks)	Numerical rating scale	7-point Likert scale (0=extremely worsened, 6=extremely improved)
Outcome 5	Secondary	Quality of Life	Baseline, 6 wks, end of treatment (12 wks), followup (26 wks)	SF-36	Higher score indicates better general health status.
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Saper 2009**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	All analyses used an intention-to-treat approach and a 2-sided P criteria of <.05 for statistical significance.				
Population analysed	Intent-to-treat	mITT analysis used for all randomised participants			
Missing data	Missing data were imputed using the last-value-carried-forward approach. Authors note: *none of our results changed significantly when outcomes were reanalyzed without imputing missing data.*				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Saper 2009**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additionally lack of pre-specified analysis plan contributes to concerns for bias.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Saper 2014**
Study reference	Saper, R. B., Sherman, K. J., Delitto, A., et al. 2014. Yoga vs. physical therapy vs. education for chronic low back pain in predominantly minority populations: study protocol for a randomized controlled trial. Trials, 15, 67.
Study design	RCT
Author/s affiliation	Boston University School of Medicine, Boston Medical Center, Harvard Medical School, and Boston University School of Public Health, Boston, Massachusetts; University of Pittsburgh Group Health Research Institute and University of Washington, Seattle;
Source of funds	grant 5R01-AT005956 from the National Center for Complementary and Integrative Health of the Na tional Institutes of Health.
Declared interests of study authors	The authors have no conflict of interest to declare.
Setting / provider	Community; Boston, Massachusetts.
Country(s) / region	USA
Enrolment period	June 2012-November 2013
Length of treatment / followup (wks or mos)	12 wk treatment phase, follow up at 26, 40 and 52 wks.
Description of population	*N=* *Description*
# participants	320 Nonspecific lower back pain from low-income and racially diverse areas.
details	*Inclusion criteria* : Aged 18 to 64, reporting nonspecific lower back pain at least 12 wks with an average pain intensity of in the previosu wk of 4 or greater on 11-point scale. English fluency sufficient to follow treatment instructions and answer survey questions. *Exclusion criteria* : New CLBP treatments started within the previous month or anticipated to begin in the next 3 months, Known pregnancy, Inability to understand English at a level necessary to understand treatment instructions and survey questions, Previous back surgery or back fracture, Specific CLBP pathologies (including spinal canal stenosis, severe scoliosis, spondylolisthesis, ankylosing spondylitis, large herniated disk), Severe or progressive neurological deficits, Sciatica pain equal to or greater than back pain, Active or recent cervical radiculopathy, Active or planned worker's compensation, disability, or personal injury claims, Lack of consent, Significant participation in yoga or physical therapy in the last six months, Has read The Back Pain Helpbook or the Back Book in the previous six months, participant to be unable to participate in the study due to serious medical and/or psychiatric comorbidities, Has previously participated in the Yoga Dosing Study or the Physical Therapy Pilot, Plans to move out of the Boston area in the next year
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Saper 2014**				
Intervention	127	Yoga group: 12 wkly 75 minute classes. Each class began with relaxation and meditation exercises, yoga breathing, and yoga philosophy. It continued with yoga poses and concluded with relaxation. Those that completed at least 1 class in treatment phase continued into maintenance phase and were rnadomly assigned to wkly drop -in yoga classes or home practic only. Thirty minute daily home practice using DVD,manual and take-home yoga supplies were storngly encouraged.			
Comparator #1 (control)	64	Education group: Particpants received *The Back Pain Helpbook* , which includes information on cLBP self-management, stretching, strengthening and role of emotions and fear avoidance. Provided recommended reading schedule. Every 3 wks, participants recieved a 1-2 page newsletter summarising main point from assigned chapters and 5- to 10- minute check-in call from staff.			
Comparator #2 (other)	129	Physical therapy group: Incorporated treatment based classification, graded exercise and screening for fear-avoidance beliefs. Participants advised to attend 15, 60-minute appointments over 12 wks. Appointment included one on one work with therapist and supervised aerobic exercise. Particpants recieved written instructions and supplies for home practice and logged numbert of exercises completed daily.			
Comparator #3 (other)	--	--			
Co-interventions	Usual care was utilised across all 3 groups.				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	Yes	Comparison= control	This could be considered "active" given the participants were contacted and reminded to follow the advice provided in the Back Pain Help Book.		
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Disability	Baseline, 6 wks, end of treatment (12 wks), followup (26, 40 & 52 wks)	23-item Roland-Morris Disability Ques-tionnaire	23 statements describing back pain interference with the day's activities, scores range from 0 to 23. Higher the score the greater the level of disability.
Outcome 2	Primary	Pain	Baseline, 6 wks, end of treatment (12 wks), followup (26, 40 & 52 wks)	Numerical scale	11-point scale. 0 indicates no pain, 10 indicates worst possible pain.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Saper 2014**				
Outcome 3	Secondary	Pain medication use	Baseline, 6 wks, end of treatment (12 wks), followup (26, 40 & 52 wks)	self-reported	Medication use in prvious wk. Indicated by yes or no.
Outcome 4	Secondary	Global improvement	Baseline, 6 wks, end of treatment (12 wks), followup (26, 40 & 52 wks)	7 point scale	Scaled from extremely worsened to extremely improved
Outcome 5	Secondary	Patient satisfaction with intervention	Baseline, 6 wks, end of treatment (12 wks), followup (26, 40 & 52 wks)	5 point scale	Scaled from very dissatisfied to very satisfied
Outcome 6	Secondary	Quality of Life	Baseline, 6 wks, end of treatment (12 wks), followup (26, 40 & 52 wks)	SF-36	Higher score indicates better general health status. Physica and mental component score given
Outcome 7	Secondary	Sleep quality	Baseline, 6 wks, end of treatment (12 wks), followup (26, 40 & 52 wks)	Pittsburgh Sleep Quality Index (PSQI)	19 self-rated questions combined to form seven component scores that range form 0 (no difficulty) to 3 (severe dificulty). Total score ranging from 0-21. Global score >5 suggestive of significant sleep disturbance.
Outcome 8	Secondary	Anxiety	Baseline, 6 wks, end of treatment (12 wks), followup (26, 40 & 52 wks)	GAD-7	Scored out fo 21. Higher score represents higher level of anxiety.
Outcome 9	Secondary	Depression	Baseline, 6 wks, end of treatment (12 wks), followup (26, 40 & 52 wks)	PHQ-8	Scored out of 24. Higher score represents higher levels of depression.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Saper 2014**				
Outcome 10	Not specified	Treatment response	Baseline, 6 wks, end of treatment (12 wks), followup (26, 40 & 52 wks)	Response based on group	Comparison of outcomes to assess which trial group resulted in greater response rate.
Outcome 11	Secondary	Percieved Stress	Baseline, 6 wks, end of treatment (12 wks), followup (26, 40 & 52 wks)	Percieved Stress Scale (PSS-10)	Higher scores indicate greater percieved stress.
Outcome 12	Not specified	Percieved effects of treatment		Individual semi-structured interviews	The protocol included open-ended questions about motivation for participation, experience with treatment, and perceived effects associated with participation.
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	We used analysis of variance and chi-square tests to assess between-group differences in baseline variables. We present findings based on multiple imputation using regression modeling in SAS PROC MI. For secondary outcomes, we used the last observation carried forward to manage missing data and did not adjust for multiple testing. All analyses were performed with SAS, version 9.3				
Population analysed	Intent-to-treat	ITT analysis used for all randomised participants. Intention-to-treat analyses of the full study population used multiple imputation to account for missing data at 6 and 12 wk			
Missing data	" Follow-up was lower in PT than in yoga or education at 12 wks (88% vs. 98% and 95%, respectively) and 52 wks (84% vs. 93% and 93%, respectively)."				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Saper 2014**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additionally lack of pre-specified analysis plan and baseline differences contributes to high risk of bias.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Sherman 2005**
Study reference	Sherman, K. J., Cherkin, D. C., Erro, J., et al. 2005. Comparing yoga, exercise, and a self-care book for chronic low back pain: a randomized, controlled trial. Annals of internal medicine, 143, 849-856.
Study design	RCT
Author/s affiliation	Group Health Cooperative University of Washington, Seattle, Washington
Source of funds	By the National Center for Complementary and Alternative Medicine (grant R21AT 001215) and the National Institute for Arthritis and Musculoskeletal and Skin Diseases (grant P60AR48093).
Declared interests of study authors	The authors have no conflict of interest to declare.
Setting / provider	Group Health facilities
Country(s) / region	USA
Enrolment period	None reported
Length of treatment / followup (wks or mos)	12 wks treatment, 26 wk follow up
Description of population	*N=* *Description*
# participants	101 Chronic lower back pain
details	*Inclusion criteria:* men and women aged 20 to 64 years with a recent primary care visit for low-back pain. *Exclusion criteria:* "individuals whose back pain was complicated (for example, sciatica, previous back surgery, or diagnosed spinal stenosis), potentially attributable to specific underlying diseases or conditions (for example, pregnancy, metastatic cancer, spondylolisthesis, fractured bones, or dislocated joints), or minimal (rating of less than 3 on a “bothersomeness” scale of 0 to 10), individuals who were currently receiving other back pain treatments or had participated in yoga or exercise training for back pain in the past year, those with a possible disincentive to improve (such as patients receiving workers’ compensation or those involved in litigation), and those with unstable medical or severe psychiatric conditions or dementia, Patients who had contraindications (for example, symptoms consistent with severe disk disease) or schedules that precluded class participation, those who were unwilling to practice at home, or those who could not speak or understand English."
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Sherman 2005**				
Intervention	36	Yoga group: 12 wkly 75 minutes classes. Participants also asked to practice at home. Each class included a Q&A period, initial and final breathing exercises, 5 to 12 postures and a guided deep relaxation.			
Comparator #1 (control)	30	Self-care book group: Participants mailed a copy of *The Back Pain Helpbook.*			
Comparator #2 (other)	35	Exercise group: 12 wkly 75 minutes classes. Participants also asked to practice at home. Each session began with educational talk, feedback from previous wk, simple warm ups to increase heart rate and repetitions of a series of 7 aerobic exercises and 10 strengthening exercises that emphasized leg, hip, adbominal and back muscles. Repetitions increased over course of trial. Classes finished with short, unguided period of deep, slow breathing.			
Comparator #3 (other)	--	--			
Co-interventions	Access to usual care retained during trial				
Is practitioner/ instructor certified?	Not specified	Included in subgroup C			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Disability	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	23-item Roland-Morris Disability Ques-tionnaire	23 statements describing back pain interference with the day's activities, scores range from 0 to 23. Higher the score the greater the level of disability.
Outcome 2	Primary	Symptom bothersomeness	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	Symptom bothersomeness score	11-point scale. 0 indicates no bother, 10 indicates worst possible bothersomeness.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Sherman 2005**				
Outcome 3	Secondary	Quality of Life	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	SF-36	Higher score indicates better general health status. Physica and mental component score given
Outcome 4	Secondary	Pain medication use	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	Self-reported	Medication use in previous wk. Indicated by yes or no.
Outcome 5	Secondary	Degree of restricted activity	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	Self-reported	3 questions
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Sherman 2005**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	We compared baseline characteristics across the randomization groups by us ing chi-square tests and analysis of variance; when comparing medians, we used the Mann–Whitney U test.				
Population analysed	Intent-to-treat	ITT analysis for all randomised participants			
Missing data	Lost to follow up only in exercise group (2/30).				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Sherman 2005**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Lack of pre-specified analysis plan. Reporting bias as present as results for degree of restricted activity and symptom bothersomeness score at 12 wks was not reported.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Sherman 2010**
Study reference	Sherman, K. J., Cherkin, D. C., Cook, A. J., et al. 2010. Comparison of yoga versus stretching for chronic low back pain: protocol for the Yoga Exercise Self-care (YES) trial. Trials, 11, 36-36.
Study design	RCT
Author/s affiliation	Group Health Research Institute, Seattle, Washington; University of Washington, Seattle Department of Family Medicine, Oregon Health and Science University, Portland
Source of funds	Cooperative Agreement Number U01 AT003208 from the National Center for Complementary and Alternative Medicine (NCCAM). Discussions with several NCCAM staff influenced the study design
Declared interests of study authors	The authors have no conflict of interest to declare.
Setting / provider	Group Health facilities
Country(s) / region	USA
Enrolment period	None reported
Length of treatment / followup (wks or mos)	12 wk treatment, 26 wk follow up.
Description of population	*N=* *Description*
# participants	228 Chronic lower back pain
details	*Inclusion criteria:* Group Health Cooperative enrollee between 20-64 yrs old, with ICD-9 diagnoses indicative of non-specific low back pain with pain persisting for at least 3 month and would rate their pain as at least a 3 on a 0 to 10 back pain bothersomeness scale and give informed consent, lives within 45 minutes travel time from class location. *Exclusion criteria:* Low back pain not chronic (lasted less than 3 months), Back pain too mild to be able to detect improvement (bothersomeness score < 3), Back pain due to, or possibly result of, specific disease/condition, Back problem of complicated nature, including medico-legal issues, Condition might make it difficult to attend the classes or practice at home, Condition/circumstance might confound treatment effects or interpretation of data, Condition would make it difficult for fully informed consent
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Sherman 2010**				
Intervention	92	Yoga group: 12 wkly 75 minutes classes. Participants also asked to practice at home. Each class included a Q&A period, initial and final breathing exercises, 5 to 12 postures and a guided deep relaxation.			
Comparator #1 (control)	45	Self-care group: Participants recieved a copy of *The Back Pain Helpbook*.			
Comparator #2 (other)	91	Exercise group: 12 wkly 75 minutes classes. Participants also asked to practice at home. Each session began with educational talk, feedback from previous wk, simple warm ups to increase heart rate and repetitions of a series of 7 aerobic exercises and 10 strengthening exercises that emphasized leg, hip, adbominal and back muscles. Repetitions increased over course of trial. Classes finished with short, unguided period of deep, slow breathing.			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Yes	Included in subgroup A			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Functional disability	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	23-item Roland-Morris Disability Questionnaire	23 statements describing back pain interference with the day's activities, scores range from 0 to 23. Higher the score the greater the level of disability.
Outcome 2	Primary	Symptom bothersomeness	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	Symptom bothersomeness score	11-point scale. 0 indicates no bother, 10 indicates worst possible bothersomeness.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Sherman 2010**				
Outcome 3	Secondary	Fear avoidance	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	Tampa Scale of Kinesiophobia	Higher scores associated with greater pain-related fear of movement.
Outcome 4	Secondary	Self-efficacy	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	Arthritis Self-Efficacy scale	Higher scores indicates higher certainty in relation to performing certain tasks.
Outcome 5	Secondary	Awareness	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	Body Awareness Questionnaire	higher score indicates better body awareness
Outcome 6	Secondary	Awareness	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	Body Responsiveness Questionnaire	higher score indicates better body responsiveness
Outcome 7	Secondary	Mental health	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	SF-36-mental health subscale	Higher score indicates better general health status
Outcome 8	Secondary	Percieved stress	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	Percieved Stress Scale (PSS-10)	Higher scores indicate greater percieved stress.
Outcome 9	Secondary	Positive states of mind	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	Positive States of Mind Scale	Higher score indicates more positive state of mind

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Sherman 2010**				
Outcome 10	Secondary	Sleep Quality	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	One question usig Roland-Morris Disability Index	Yes or No to question "I sleep less well because of my back"
Outcome 11	Secondary	Endocrine function	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	NR	DHEA levels
Outcome 12	Secondary	Endocrine function	Baseline, 6 wks, end of treatment (12 wks), follow up (26 wks)	NR	Cortisol levels
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	Primary outcomes, RDQ, and symptom bothersomeness were analyzed using regression with generalized estimating equations (GEE). Similar methods were used to analyze secondary outcomes with modification of the estimating equations for use with binary outcomes. All analyses were conducted assuming intent-to-treat principles using SAS statistical software				
Population analysed	Intent-to-treat	ITT analysis for all randomised participants			
Missing data	5/92 and 5/91 declined follow up in yoga and exercise group respectively. Sensitivity analysis applying a nonignorable imputation approach to handle missing data confirmed our conclusions.				
INTERNAL VALIDITY Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Sherman 2010**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Very small concerns over bias

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Tekur 2008**
Study reference	Tekur, P., Singphow, C., Nagendra, H. R., et al. 2008. Effect of short-term intensive yoga program on pain, functional disability and spinal flexibility in chronic low back pain: A randomized control study. Journal of Alternative and Complementary Medicine, 14, 637-644.
Study design	RCT
Author/s affiliation	Division of Yoga and Life Sciences, Swami Vivekananda Yoga Research Foundation (SVYASA), Bangalore, India
Source of funds	SVYASA (Institutional).
Declared interests of study authors	The authors have no conflict of interest to declare.
Setting / provider	Residential integrative health center in Bangalore, South India.
Country(s) / region	India
Enrolment period	None reported
Length of treatment / followup (wks or mos)	1 wk intensive program, no follow up
Description of population	*N=* *Description*
# participants	80 Chronic lower back pain
details	*Inclusion criteria* : history of CLBP of more than 3 months, pain in the lumbar spine with or without radiation to legs, and age between 18 to 60 years. *Exclusion criteria:* CLBP caused by organic pathology in the spine, such as malignancy (primary or secondary), or chronic infections checked by an X-ray of lumbar spine, severe obesity, and critical illness
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Tekur 2008**				
Intervention	40	Yoga group: 7 day program. Daily routine included Om meditation, Back-pain specific yoga techniques, yogic breathing, deep relaxation techniques, hymms and meditation.			
Comparator #1 (control)	--	--			
Comparator #2 (other)	40	Control (exercise) group: 7 day program. Daily routine included physical movement exercises such as curls ups, cat and camel stretches, lecture on healthy lifestyle, breathing technique, counseling and walking.			
Comparator #3 (other)	--	--			
Co-interventions	--	--			
Is practitioner/ instructor certified?	Yes	Included in subgroup A			
Is there an inactive comparator?	No	Comparison= other			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Spinal mobility	Baseline, end of treatment (day 7)	Dial type goniometer	Measures range of motion. Higher score the ebtter the range of motion
Outcome 2	Not specified	Functional disability	Baseline, end of treatment (day 7)	Oswestry Disability Index	range from 0 (no disability) - 100 (severe disability)

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Tekur 2008**				
Outcome 3	Not specified	HRQoL	Baseline, end of treatment (day 7)	The World Health Organization Quality of Life-brief (WHOQOL-BREF) - physical	Higher score denotes higher QoL. Seven items of brief. Scores range from 4-20
Outcome 4	Not specified	HRQoL	Baseline, end of treatment (day 7)	WHOQOL-BREF - psychological health	Higher score denotes higher QoL. Six items of brief. Scores range from 4-21
Outcome 5	Not specified	HRQoL	Baseline, end of treatment (day 7)	WHOQOL-BREF social	Higher score denotes higher QoL. Three items of brief. Scores range from 4-22
Outcome 6	Not specified	HRQoL	Baseline, end of treatment (day 7)	WHOQOL-BREF - environmental	Higher score denotes higher QoL. Eight items of brief. Scores range from 4-23
Outcome 7	Not specified	Percieved Stress	Baseline, end of treatment (day 7)	Percieved Stress Scale (PSS-10)	Higher scores indicate greater percieved stress.
Outcome 8	Not specified	Mobility	Baseline, end of treatment (day 7)	Straight leg raising test	Higher the angle recorded the greater mobility. Recorded using goniometer)
Outcome 9	Not specified	State anxiety	Baseline, end of treatment (day 7)	State-Trait Anxiety Inventory (STAI)	20 item test with all items rated on a 4-point scale from almost never to almost always. Higher scores are related to higher levels of anxiety.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Tekur 2008**				
Outcome 10	Not specified	Depression	Baseline, end of treatment (day 7)	Beck Depression Inventory	Self-reported, Score range from 0-26
Outcome 11	Not specified	Numerical rating scale for pain	Baseline, end of treatment (day 7)	Visual Analog Scale	Pain severity rated on 10-cm-long line where leftmost indicates 'pain free' and rightmost point was indicated as 'unbearable pain'
Outcome 12	Not specified	Flexibility	Baseline, end of treatment (day 7)	Sit and Reach Test	Measurement assigned based on test, the higher the measurement the better the flexibility of the participant
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	Data was analyzed using SPSS version 10.0. The Kolmogorov–Smirnov's test was used to check the normality of baseline data. Independent samples 't' for baseline matching of the two groups,				
Population analysed	Other (provide details)	mITT analysis for all randomised participants			
Missing data	No drop outs' included in analysis.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Tekur 2008**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additionally lack of pre-specified analysis plan and use of per protocol analysis contributes to high risk of bias.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Teut 2016**
Study reference	Teut, M., Knilli, J., Daus, D., et al. 2016. Qigong or Yoga Versus No Intervention in Older Adults with Chronic Low Back Pain - A Randomized Controlled Trial. Journal of Pain, 17, 796-805.
Study design	RCT
Author/s affiliation	Charite – Universit atsmedizin Berlin, Berlin, Germany; University Hospital Zurich and University of Zurich, Z urich, Switzerland.
Source of funds	This study was performed as part of the grant for the professorship for complementary medicine funded by the Karl and Veronica Carstens Foundation. The Yoga intervention was funded by Berliner Yoga Zentrum.
Declared interests of study authors	J.K. is a Viniyoga teacher trained by the Berliner Yoga Zentrum. All other authors have no conflicts of interest to declare.
Setting / provider	Charité University Berlin, Institute for Social Medicine, Epidemiology, Health Economics, Berlin, Germany, 10117. Gymnastic rooms of retirement homes.
Country(s) / region	Germany
Enrolment period	None reported
Length of treatment / followup (wks or mos)	3 months, 6 month follow up
Description of population	*N=* *Description*
# participants	176 Geriatrics with chronic lower back pain
details	*Inclusion criteria:* adults 65 years of age or older, chronic LBP for at least 6 months, intensity of back pain according to the pain item of the Functional Rating Index (FRI) >=2 over the past 7 days, and providing written informed consent. *Exclusion criteria* : acute disc prolapse or protrusion with acute neurological symptoms within the past 3 months, severe organic or psychiatric disease precluding participation in the trial, pain due to cancerous effects on bones, use of pain medication that works over the central nervous system pain agents (eg, opioids), drug and/or alcohol addiction, participation in another clinical trial within the past 6 months, participation in yoga or qigong training within the past 12 months, and preplanned start of a physiotherapy within the study duration.
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Teut 2016**				
Intervention	61	Yoga: Viniyoga approach used, 2x45 mins classes per wk for 3 months. Each class included physical, breathing, and concen tration exercises that occurred while sitting, standing, and lying, following the Viniyoga method. These exercises were adapted to the individual needs of the participants			
Comparator #1 (control)	57	Control group: Participants waitlisted			
Comparator #2 (other)	58	Qigong group: wkly 90 min class for 3 months. "Standardized program of qigong and Nei Yang Gong exercises from the Training System Liu Ya Fei was applied.". Qigong combines gentle body movements with breathing and mindfulness.			
Comparator #3 (other)					
Co-interventions	Usual care	Participants were allowed to continue usual care but use of physiotherapy and intake of pain medication that works on the CNS were not permitted.			
Is practitioner/ instructor certified?	Not specified	Included in subgroup C			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Pain	Baseline, end of treatment (3 months), follow up (6 months)	Functional Rating Index	0-no pain, 4- worst possible pain
Outcome 2	Secondary	Pain	Baseline, end of treatment (3 months), follow up (6 months)	Visual Analog Scale	Pain severity rated on 10-cm-long line where leftmost indicates 'pain free' and rightmost point was indicated as 'unbearable pain'

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Teut 2016**				
Outcome 3	Secondary	Functional disability	Baseline, end of treatment (3 months), follow up (6 months)	Hannover functional ability questionnaire	Scale of 0-100. Higher value indcates better back pain-related disability
Outcome 4	Secondary	Pain medication	Baseline, end of treatment (3 months), follow up (6 months)	proportion using pain medication	Percentage change compared to baseline and between groups.
Outcome 5	Secondary	Frequency of falls	Baseline, end of treatment (3 months), follow up (6 months)	NR	Percentage change compared to baseline and between groups.
Outcome 6	Secondary	Risk of falls	Baseline, end of treatment (3 months), follow up (6 months)	Tinetti test	Scale of 0-100. Higher value indicates better status.
Outcome 7	Secondary	Quality of life	Baseline, end of treatment (3 months), follow up (6 months)	SF-36	Scale of 0-100. Higher value indicates better status.
Outcome 8	Secondary	Depression	Baseline, end of treatment (3 months), follow up (6 months)	Geriatric Depression Scale	Scale of 0-15. Lower value indicates better status.
Outcome 9	Secondary	Body self-efficacy	Baseline, end of treatment (3 months), follow up (6 months)	NR	Scale of 1-4. Lower value indicates better status

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Teut 2016**				
Outcome 10	Secondary	Handgrip strength test	Baseline, end of treatment (3 months), follow up (6 months)	NR	Measured in kg. Higher value indicates better status.
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	The study was designed to detect a SMD of .57 that reflected a clinically relevant effect with a power of 80%, as shown by a 2-tailed t-test with a significance level of 5%. When analyzing the primary outcome parameter, pain intensity according to the FRI, a GEE analysis of covari ance using the GENMOD procedure in the SAS software was applied. All secondary outcome parameters were analyzed using similar generalized equation estimations models without hierarchical testing or multiplicity adjustments, and these P values were considered exploratory				
Population analysed	Intent-to-treat	ITT analysis for all randomised participants			
Missing data	No imputation of missing data (as per ITT analysis). 7/61 participants lost in follow up for yoga. 5/58 participants lost in follow up for qigong. 4/57 participants lost in follow up for control.				
INTERNAL VALIDITY Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Teut 2016**
Summary (descriptive)	Dropping out may have been influenced by participants perception about the group to which they were assigned. Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additionally lack of pre-specified analysis plan contributes to high risk of bias.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Williams 2005**
Study reference	Williams, K. A., Petronis, J., Smith, D., et al. 2005. Effect of Iyengar yoga therapy for chronic low back pain. Pain, 115, 107-117.
Study design	RCT
Author/s affiliation	West Virginia University; University of California; Washington Hospital Center; BKS Iyengar Institute of Champaign-Urbana, IL, USA
Source of funds	Funded by the Clinical Studies request for proposals at West Virginia University.
Declared interests of study authors	None reported
Setting / provider	Community yoga studio
Country(s) / region Enrolment period	USA
Length of treatment / followup (wks or mos)	16 wk treatment, 3 month follow up
Description of population	*N=* *Description*
# participants	60 Chronic lower back pain
details	*Inclusion criteria* : history of non-specific LBP with symptoms persisting for > 3 months. Subjects had to be > 18 years of age, English-speaking, and ambulatory *Exclusion criteria:* if their LBP was due to nerve root compression, disc prolapse, spinal stenosis, tumor, spinal infection, alkylosing spondylosis, spondy lolisthesis, kyphosis or structural scoliosis, or a widespread neurological disorder. if their LBP was due to nerve root compression, disc prolapse, spinal stenosis, tumor, spinal infection, alkylosing spondylosis, spondy lolisthesis, kyphosis or structural scoliosis, or a widespread neurological disorder.
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Williams 2005**				
Intervention	30	Yoga: wkly 90 min classes for 16 wks of Iyengar yoga classes. Intervention consisted of 29 postures categorised as supine, seated, standing, forward bends, twists and inversions. Program started with restorative poses, then standing poses, twits and inversions. Participants were gradually progressed from simple poses to more challenging poses. Participants also encouraged to pracitce yoga at home for 30mins, 5 days a wk.			
Comparator #1 (control)	30	Control (no intervention)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Both groups received 2x 1hr lectures regarding occupational/physical therapy education regarding chronic lower back pain. Both groups received 16 wkly newsletters on back care written by senior entry-level physical therapy students while also being permitted to continue medical care for LBP.				
Is practitioner/ instructor certified?	Not specified	Included in subgroup C			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Functional disability	Baseline, end of treatment (16 wks), follow up (3 month)	Seven-item Pain Disability Index	Higher score indicates higher level of disability. 0-70 score as 7 items assessed on 0-10 scale and component scores combined.
Outcome 2	Secondary	Pain	Baseline, end of treatment (16 wks), follow up (3 month)	Short Form-McGill Pain Questionnaire	Presents pain using Visual analogue scale and Present Pain index.

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Williams 2005**				
Outcome 3	Secondary	Fear of movement	Baseline, end of treatment (16 wks), follow up (3 month)	Tampa Scale of Kinesiophobia	Higher scores associated with greater pain-related fear of movement.
Outcome 4	Secondary	Pain attitudes	Baseline, end of treatment (16 wks), follow up (3 month)	Survey of Pain attitudes	Higher score indicates an increase in the beliefs or attitudes that influence chronic pain and disability in a negative way with exception of control and emotion subscales.
Outcome 5	Secondary	Coping strategies	Baseline, end of treatment (16 wks), follow up (3 month)	Coping Strategies Questionnaire - Revised	27-item questionnaire measure use of strategiesd for coping with pain in six domains. Each domain is scored separately with higher scores indicating greater use.
Outcome 6	Secondary	Pain self-efficacy	Baseline, end of treatment (16 wks), follow up (3 month)	Back Pain Self-Efficacy Scale	Higher score correspond to greater self-efficacy beliefs toward LBP.
Outcome 7	Secondary	Range of motion	Baseline, end of treatment (16 wks), follow up (3 month)	Saunders Digital Inclinometer	Performed in the standing position and included hip flexion and extension, lumbar flexion, extension, and right and left lateral flexion (side bending). Isolates ROM of lumbar flexion and extension.
Outcome 8	Secondary	Pain medication usage	Baseline, end of treatment (16 wks), follow up (3 month)	Telephone-screening interview	Questions asked to determine use of pain-relieving prescriptions, non-prescription medications and herbal and dietary supplements. Assessed as changes from baseline.
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Williams 2005**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	Repeated measures mulitivariate analysis was conducted on functional (functional disability and pain intensity), psychological (pain attitudes, fear of movement and self-efficacy), and behavioral (coping strategies) outcomes to control for type I error. For spinal range of motion, only pre- and post-intervention scores were obtained and included in the multivariate analysis. Changes in pain medication usage were analyzed with chi-squared test and were assessed for their significance after Bonferroni correction of the significance level for the number of outcomes included in the analysis.				
Population analysed	Other (provide details)	no mention of ITT, non-completers compared with completers			
Missing data	16/60 dropped out. Majority had reasons provided.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Williams 2005**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Unexplained drop out rate and poor indication of the effect of this on outcome data inferred high risk of bias. Additinally baseline differences and lack of pre-specified analysis plan indicate risk of bias.

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Williams 2009**
Study reference	Williams, K., Abildso, C., Steinberg, L., et al. 2009. Evaluation of the effectiveness and efficacy of iyengar yoga therapy on chronic low back pain. Spine, 34, 2066-2076.
Study design	RCT
Author/s affiliation	West Virginia University; Columbia Health Centre; BKS Iyengar Institute of Champaign-Urbana
Source of funds	Funding for this research was provided by the National Institutes of Health's National Center for Complementary & Alternative Medicine (NIH-NCCAM), Grant No.1 R21 AT001679-01A2. I
Declared interests of study authors	No benefits in any form have been or will be received from a commercial party related directly or indirectly to the subject of this manuscript.
Setting / provider	None reported
Country(s) / region	USA
Enrolment period	None reported
Length of treatment / followup (wks or mos)	24 wks, 48 wk follow up
Description of population	*N=* *Description*
# participants	90 Chronic lower back pain
details	*Inclusion criteria:* age 18 – 70, live within one hour drive of Morgantown, insured by a participating provider,English speaking, BMI <37; LBP with symptoms persisting for > 3 months, ODI score 10–60, VAS score of 3–8 cm. Ability to get up and down from the floor and rise to a standing position without assistance. Agree to not get chiropractic treatment, massage therapy, Pilates, or acupuncture or to participate in any other yoga program. If randomized to yoga therapy group, agree to : - attend at least 20 of 24 wks, attend at least 40 of 48 classes, agree to practice at home for 30 minutes on non-class days *Exclusion criteria:* LBP due to: spinal stenosis with Quasiclaudication, abdominal or spine tumors, spinal infection, osteoporosis with vertebral fractures, ankylosing spondylitis, spondylolisthesis w/ radiculopathy, structural kyphosis or scoliosis, radicular pain with weakness or loss of reflexes, failed back syndrome, other conditions: pregnancy, pre-surgical spine candidates, actively undergoing cancer treatment, confirmed fibromyalgia, abdominal hernia ,compromised cardiopulmonary system, major depression (BDI-II score ≥ 20), substance abuse issues, - idespread neurological disorder, currently involved in litigation or have open workers compensation case concerning LBP practiced yoga 1x/wk for >3 months within last year.
Description of intervention/ comparator	*n=* *Description (include # treatment sessions, session duration, program duration)*

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Williams 2009**				
Intervention	43	Yoga group: 2x90 min Iyengar yoga sessions wkly for 24 wks. Participants also directed to practice 30 mins of yoga at home on non-class days and were supplied with props.			
Comparator #1 (control)	47	Control group: Those participants adherent to study requirements were waitlisted for 6 months of yoga classes.			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Usual care	Continued self-directed standard medical care.			
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (measure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Functional disability	Baseline, mid (12 wks), end of treatment (24 wks), follow up (48 wks)	Oswestry Disability Index	range from 0 (no disability) - 100 (severe disability)
Outcome 2	Primary	Present pain intensity	Baseline, mid (12 wks), end of treatment (24 wks), follow up (48 wks)	Visual Analog Scale	Pain severity rated on 10-cm-long line where leftmost indicates 'pain free' and rightmost point was indicated as 'unbearable pain'

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Williams 2009**				
Outcome 3	Primary	Depression	Baseline, mid (12 wks), end of treatment (24 wks), follow up (48 wks)	Beck Depression Inventory	Self-reported, Score range from 0-63
Outcome 4	Primary	Medication usage	Baseline, mid (12 wks), end of treatment (24 wks), follow up (48 wks)	Self-reported	NR
Outcome 5	--	--	--	--	--
Outcome 6	--	--	--	--	--
Outcome 7	--	--	--	--	--
Outcome 8	--	--	--	--	--
Outcome 9	--	--	--	--	--

Characteristics of included studies	Low back pain (chronic, nonspecific)				
Study ID	**Williams 2009**				
Outcome 10	--	--	--	--	--
Outcome 11	--	--	--	--	--
Outcome 12	--	--	--	--	--
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Method of analysis					
Statistics	Treatment effectiveness with regard to the study's three continuous dependent variables (i.e., ODI, VAS, BDI-II) was assessed using 2 × 3 (treatment group × time) repeated measures analysis of variance (ANOVA) tests. Chi-square analyses were used to determine whether there was a relationship between treatment group and change in pain medication use at 12 and 24 wks. Significant differences for the four primary outcomes were reported at a Bonferroni corrected alpha level of 0.0125. Data are presented as mean ± standard error of the mean (SEM).				
Population analysed	Intent-to-treat	Both presented but data extracted was from intent to treat analysis n			
Missing data	12/43 lost to follow up in yoga group and 4/47 lost to follow up in control group .Missing baseline data were replaced by group means while missing data at 12 and 24 wks were replaced using the last observation carried forward.				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				

Characteristics of included studies	Low back pain (chronic, nonspecific)
Study ID	**Williams 2009**
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Unexplained drop out rate, poor indication of the effect of drop out on outcome data and lack of pre-specified analysis plan inferred high risk of bias.

Characteristics of included studies	Neck pain (chronic,non-specific)	
Study ID	**Cramer 2013**	
Study reference	Cramer H, Lauche R, Hohmann C, Ludtke R, Haller H, Michalsen A, et al. Randomized-controlled trial comparing yoga and home-based exercise for chronic neck pain. Clinical Journal of Pain. 2013;29(3):216-23.	
Study design	RCT	
Author/s affiliation	Department of Integrative Medicine, Duisburessen, Germany	
Source of funds	Research Grant from Karl and Veronica Carstens Foundation, Essen, Germany	
Declared interests of study authors	None	
Setting / provider	University-based	
Country(s) / region	Germany	
Enrolment period	None reported	
Length of treatment and follow up (wks or mos)	9 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	51	Neck pain
details	*Inclusion criteria:* 18-60 years, self reported, non-specific neck pain for a minimum of 5 daysper wk for at least the proceeding three months, mean NPI on a VAS of 100mm was at least 40mm. *Exclusion criteria:* Participants with causes of neck pain (radicular syndrome, congenital spine deformity, whiplash, disc protrusion, spinal canal stenosis, rheumatic and oncological diseases), invasive spinal treatment during the previous month, spinal surgery in the previous 12 months, pregnant women, participants not able to practice yoga due to physical disabilities	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	25	Iyengar yoga sessions 90 minutes long once per wk for 9 wks. Yoga classes were 10-15 participants big and were based on Iyengar teachings. Each class consisted of 8 to 11 yoga postures chosen from a pool of 14 standing, sitting, and supine postures, starting with relatively simple postures and succeeding to more complex ones. Patients were required to practice at home for 10 mi nutes each day. Patients received a manual describing and depicting basic standing and sitting postures. Before home practice, postures were introduced in the class. Patients indicated daily home practice time (minutes) in a diary.
Comparator #1 (control)	--	--

Characteristics of included studies	Neck pain (chronic,non-specific)	
Study ID	**Cramer 2013**	
Comparator #2 (other)	26	Self directed exercise sessions 10 minnutes long once per day for 9 wks. Participants in this group received a self-care manual designed by a large statutory German health insurance company to relieve neck pain and stiffness. The program began with taking a proper upright sitting posture, followed by stretching exercises for the neck and shoulders. Then, strengthening exercises and isometric exercises for the neck-shoulder region were performed. The program ended with combined stretching and strengthening exercises for the neck-shoulder region using a towel as an aid. At the beginning of the study, patients were informed that they would be offered the same yoga classes as the yoga group after the conclusion of the study.
Comparator #3 (other)	--	--
Co-interventions	None specified	
Is practitioner/ instructor certified?	Yes	Include in subgroup A
Is there an inactive comparator?	No	Comparison= other

Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Pain	Baseline, end of treatment (wk 9)	Visual analogue scale (0-100)	Self reported items measured on a scale from 0-100, where a higher score corresponds to more severe pain
Outcome 2	Secondary	Pain - in 6 movement directions	Baseline, end of treatment (wk 9)	Visual analogue scale (0-100)	Patients were asked to move their head (flexion, extension, lateral flexion left/right, rotation left/right) successively and to score on a scale from 0-100, where a higher score corresponds to more severe pain
Outcome 3	Secondary	Function/ Disability	Baseline, end of treatment (wk 9)	Neck Disability Index	10 self-reported items ranked on scale ranging from 0-5, where a higher score corresponds to more severe percieved disability due to neck pain

Characteristics of included studies	Neck pain (chronic,non-specific)				
Study ID	**Cramer 2013**				
Outcome 4	Secondary	Quality of life	Baseline, end of treatment (wk 9)	SF-36	Higher score means better quality of life
Method of analysis					
Statistics	Linear mixed model used to investigate non-linear changes, average NPI per wk per participant calculated, fit nested models using resitrcted maimum-likelyhood estimation, tested fixed effects with Wald test p-values and random effects with the likelihood test				
Population analysed	Intent-to-treat	mITT analysis performed for all randomised participants			
Missing data	2/51 participants lost to follow up				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement.				

Characteristics of included studies	Neck pain (chronic)	
Study ID	**Michalsen-2012**	
Study reference	Michalsen A, Traitteur H, Ludtke R, Brunnhuber S, Meier L, Jeitler M, et al. Yoga for chronic neck pain: A pilot randomized controlled clinical trial. Journal of Pain. 2012;13(11):1122-30.	
Study design	RCT	
Author/s affiliation	Charite-University Medical Center, Berlin, Germany. Immanuel Hospital Berlin, Department of Internal Medicine, Berlin, Germany. Karl and Veronica Carstens Foundation, Essen, Germany. University Hospital Salzburg, Department for Psychiatry and Psychotherapy, Salzburg, Austria. University Witten-Herdecke, Chair of Integrative Medicine, Witten, Germany	
Source of funds	Research Grant from Karl and Veronica Carstens Foundation, Essen, Germany	
Declared interests of study authors	None	
Setting / provider	University-based	
Country(s) / region	Germany	
Enrolment period	February and June 2010	
Length of treatment and follow up (wks or mos)	9 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	77	Neck pain
details	*Inclusion criteria* : 18-60 years, self reported restriction of cervial spine mobility for at least 3 months *Exclusion criteria:* invasive treatment (surgery, facet joint nerve blocks, epidural injections, neurotomy) within the last 6 wks or had such treatment planned within the next 10 wks, complicated neck pain (for example, spinal stenosis or herniated vertebral disk), neck pain attributable to specific underlying diseases (for example, congenital anomalies in the cervical spine area or fractured bones), subjects who had whiplash injury, frozen shoulder syndrome, a coexisting serious comorbidity, or those who were participating in another study or had previously experienced treatments with yoga.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	38	Iyengar yoga sessions 90 minutes long once per wk for 9 wks. Yoga classes were lead by a certified instructor. Subjects were also requested to practice selected postures at home for 10 to 15 minutes, 2 to 3 times a wk.
Comparator #1 (control)	--	--

Characteristics of included studies	Neck pain (chronic)				
Study ID	**Michalsen-2012**				
Comparator #2 (other)	38	Self directed exercise sessions 10 minnutes long three time per wk for 9 wks. Participants in this group received a self-care manual designed by a large statutory German health insurance company to relieve neck pain and stiffness. A total of 12 exercises were described focusing on muscle stretching and strengthening, and joint mobility At the beginning of the study, patients were informed that they would be offered the same yoga classes as the yoga group after the conclusion of the study.			
Comparator #3 (other)	--	--			
Co-interventions	None specified				
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is there an inactive comparator?	No	Comparison= other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Pain	Baseline, after 4 wks, end of treatment (wk 10)	Visual analogue scale (0-100)	Self reported items measured on a scale from 0-100, where a higher score corresponds to more severe pain
Outcome 2	Secondary	Pain - in 6 movement directions	Baseline, after 4 wks, end of treatment (wk 10)	Visual analogue scale (0-100)	Patients were asked to move their head (flexion, extension, lateral flexion left/right, rotation left/right) successively and to score on a scale from 0-100, where a higher score corresponds to more severe pain
Outcome 3	Secondary	Function/ Disability	Baseline, after 4 wks, end of treatment (wk 10)	Neck Disability Index	10 self-reported items ranked on scale ranging from 0-5, where a higher score corresponds to more severe percieved disability due to neck pain

Characteristics of included studies	Neck pain (chronic)				
Study ID	**Michalsen-2012**				
Outcome 4	Secondary	Quality of life	Baseline, after 4 wks, end of treatment (wk 10)	SF-36	Higher score means better quality of life
Method of analysis					
Statistics	This study was powered to detect a difference of 17 mm on the main outcome criterion between both treatment groups. For each outcome, Fitted a generalized estimation equation, analysis of covariance (ANCOVA), which included treatment group (binary covariate), the respective baseline value (linear co-variable), the patients' expectation (linear co-variable), and time (repeated measurement factor) as independent variables. The within-patient correlation was assumed to be autoregressive of first order. Treatment effects were estimated within these models and reported as adjusted group differences including their respective 95% confidence intervals (CIs) and P values.				
Population analysed	Intent-to-treat	mITT analysis performed for all randomised participants			
Missing data	23/77 participants lost to follow up				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	Participants were aware of the intervention they were receiving which likely influenced self-reported outcomes, which by nature involve some judgement. Concerns relating to the high drop-out rate were largely addressed using appropriate analysis to estimate the impact.				

Characteristics of included studies	Neck pain (chronic, mechanical)	
Study ID	**Rajalaxmi-2018**	
Study reference	Rajalaxmi V, Jasim A, Sudhakar S, Mohan Kumar G. To analyse the effectiveness of yoga, pilates and tai chi exercise for chronic mechanical neck pain -a randomized controlled trial. Biomedicine (India). 2018;38(1):147-51.	
Study design	RCT	
Author/s affiliation	Educational & Research Institute University, Velappanchavadi, Chennai Meenakshi college of Physiotherapy, Meenakshi University, Chenna	
Source of funds	None reported	
Declared interests of study authors	None reported	
Setting / provider	Outpatient department of Physiotherapy at A.C.S.Medical College and Hospital	
Country(s) / region	India	
Enrolment period	Not reported	
Length of treatment and follow up (wks or mos)	3 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	40	Neck pain
details	*Inclusion criteria* : Painful restriction of cervical spine, neck pain, more than 40% of Tampa scale for kinesiophobia and Northwick pain park questionnaire. *Exclusion criteria* : Patients with Whiplash injury, frozen shoulder syndrome prolapsed or protrusion, invasive treatment within last 6 wks, spinal stenosis, and herniated vertebral disc	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	10	Yoga exercises were given for 5 repetitions, 2 session per day for 6 days per wk for 3 wks, progressed to 10 and 15 repetition in 2nd and 3rd wk respectively. Excersises included 1. Savasana, 2. Balasana, 3. Bitilasana, 4. Marjaryasana
Comparator #1 (control)	10	Control (12 x ?min sessions per wk, 3 wks)

Characteristics of included studies	Neck pain (chronic, mechanical)				
Study ID	**Rajalaxmi-2018**				
Comparator #2 (other)	10	Tai Chi exercises were given for 5 repetitions,2 session per day for 6 days per wk for 3 wks, progressed to 10 and 15 repetition in 2nd and 3rd wk respectively. Exercises inluded 1. Head Roll, 2. Carrying Moon, 3. Picking Fruit, 4. Dancing With Rainbow, 5. Spinning Wheel			
Comparator #3 (other)	10	Pilates exercises were given for 5 repetitions,2 session per day for 6 days per wk for 3 wks, progressed to 10 and 15 repetition in 2nd and 3rd wk respectively. Excersises included 1. Chest Lift, 2. Breast Strokes Arm, 3. Lower Trap Activation, 4. Swan Preparation.			
Co-interventions	None specified				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is there an inactive comparator?	Yes	Comparison= control			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pain	Baseline, end of treatment (wk 3)	Northwick pain park questionnaire	Self reported items measured on a scale from 0-4, where a higher score corresponds to more severe pain
Outcome 2	Not specified	Kinesiophobia	Baseline, end of treatment (wk 3)	Tampa scale for kinesiophobia	Self reported items measured on a scale from 0-4, where a higher score corresponds to more severe fear of movement due to pain
Outcome 3	NA	--	--	--	--

Characteristics of included studies	Neck pain (chronic, mechanical)				
Study ID	**Rajalaxmi-2018**				
Outcome 4	NA	--	--	--	--
Method of analysis					
Statistics	The collected data were tabulated and analyzed using both descriptive and inferential statistics. All the parameters were assessed using statistical package for social science (SPSS) version 24. One Way ANOVA includes of following tests (Test of Homogeneity of variance, ANOVA, Robust Equality of Means, Post Hoc test Tukey HSD) (multiple comparison) was adopted to find statistical difference between four groups				
Population analysed	Intent-to-treat	Limited information provided. Likely ITT or mITT. Unclear if any participants were lost to follow up			
Missing data	None reported				
INTERNAL VALIDITY					
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias				
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additional concerns related to a lack of reporting of baseline charateristics, allocation concealment and number of participants lost to follow up.				

Characteristics of included studies	Neck pain (chronic, nonspecific)	
Study ID	**Ulug-2018**	
Study reference	Ulug N, Yilmaz OT, Kara M, Ozcakar L. Effects of Pilates and yoga in patients with chronic neck pain: A sonographic study. Journal of rehabilitation medicine. 2018;50(1):80-5.	
Study design	RCT	
Author/s affiliation	All authors affiliated with tertiary institutions in Turkey	
Source of funds	None reported	
Declared interests of study authors	None to declare	
Setting / provider	University Medical School	
Country(s) / region	Turkey	
Enrolment period	March 2015 and April 2016	
Length of treatment and follow up (wks or mos)	6 wks (no follow up)	
Description of population	*N=*	*Description*
# participants	60	Adults with chronic neck pain
details	*Inclusion criteria* : Adults aged 18-50 years with chronic neck pain (>3 months duration). *Exclusion criteria* : those with a history of cervical spine surgery, cervical trauma, central nervous system diseases, cervical radiculopathy, acute inflammation and malignancy.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	20	Yoga sessions 7 times per wk for 6 wks.Participants received their exercise programme from a single physiotherapist (NU), using a written and photographic description. Participants were supervised for the first 3 wks (home-based therafter) and exercises were applied to the group for 6 wks. Four exercises from Iyengar Yoga asanas: Adho Mukha Virasana, Tadasana, Virabhadrasana and Chair Bharadvajasana, were taught to the patients. They were told to maintain each yoga posture starting from at least 10–20 s in the following days. They were encouraged to do these exercises in 2 sets of 10 repetitions per day
Comparator #1 (control)	--	--

Characteristics of included studies	Neck pain (chronic, nonspecific)				
Study ID	**Ulug-2018**				
Comparator #2 (other)	20	Isometric sessions 7 times per wk for 6 wks. Isometric group: Participants received their exercise programme from a single physiotherapist (NU), using a written and photographic description. Participants were supervised for the first 3 wks (home-based therafter) and exercises were applied to the group for 6 wks. Hands firstly on the front (then the other sides) of their heads and push forward, but resist any movement of the head while maintaining the head and neck in the neutral position for 5 s. They were encouraged to do these exercises in 2 sets of 30 repetitions per day			
Comparator #3 (other)	20	Pilates sessions 7 times per wk for 6 wks. Participants received their exercise programme from a single physiotherapist (NU), using a written and photographic description. Participants were supervised for the first 3 wks (home-based therafter) and exercises were applied to the group for 6 wks. Five key elements of Pilates: lateral costal breathing, centering (pelvic placement), ribcage placement, shoulder blade placement, head and neck placement, were taught. Four Pilates beginner mat exercises, including double-leg stretch level, shoulder bridge level, arm openings level and breast stroke level, were taught and patients were encouraged to perform these exercises in 2 sets of 10 repetitions per day. They were also told to pay attention and protect the neutral spine alignment and perform breathing control during all the exercises.			
Co-interventions	Before exercise training, all study groups were given information about chronic neck pain, the anatomy of the spine and postural alignment.. In addition, each group received physical therapy (5 days in a wk, a total of 15 sessions over a period of 3 wks) for neck pain, including hot pack, ultrasound and conventional transcutaneous electrical nerve stimulation (TENS).				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Physiotherapist provided programs.		
Is there an inactive comparator?	No	Comparison= other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pain	End of treatment (6 wks)	Short-Form McGill Pain Questionnaire	Higher score related to higher pain (Turkish version)
Outcome 2	Not specified	Quality of life	End of treatment (6 wks)	Nottingham Health Profile (Turkish version)	Higher score shows worse influence of QoL
Outcome 3	Not specified	Function/ Disability	End of treatment (6 wks)	Neck Disability Index (Turksih version)	10 self-reported items ranked on scale ranging from 0-5, where a higher score corresponds to more severe percieved disability due to neck pain

Characteristics of included studies	Neck pain (chronic, nonspecific)			
Study ID	**Ulug-2018**			
Outcome 4	Not specified	Range of motion	End of treatment (6 wks)	Universal goniometer in the sitting position
Method of analysis				
Statistics	Conducted using SPSS 21.0 package version. Distribution of data was evaluated using the Kolmogorov–Smirnov test. Comparison of the demographic characteristics was analysed using analysis of variance (ANOVA) for numerical data and $\chi 2$ or Fisher's exact test for categorical data. For comparison of the dependent variables within the groups; paired t-test or Wilcoxon test was used, where appropriate. To determine which group was more effective, improvement ratios (%) ((after treatment value – baseline value)/(baseline value)×100) with ANOVA/Student's t-test (for parametric data), or Kruskal–Wallis/Mann–Whitney U test (for non-parametric data) were used. Bonferroni post-hoc analysis was performed to determine whether there were statistically different variables among the 3 groups. However, no adjustment/correction was performed for multiple comparisons among the number of outcome variables that were tested. A p-value <0.05 was accepted as statistically significant.			
Population analysed	Other (provide details)	Numbers needed to treat		
Missing data				
INTERNAL VALIDITY				
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias			
Summary (descriptive)	Some concerns due to the insufficient information on missing data. Without reasons for drop out, it is difficult to assess this domain and such missingness will likely affect the true value of the outcome.			

Characteristics of included studies	Neck pain (chronic)	
Study ID	**Yogitha-2010**	
Study reference	Yogitha B, Ebnezar J. Effect of yoga therapy and conventional treatment in the management of common neck pain -- a comparative study. Journal of Yoga & Physical Therapy 2012 Apr;2(2):108. 2012.	
Study design	RCT	
Author/s affiliation	Ayurveda surgeon and yoga therapist, Ebnezar Orthopedic Centre, Bangalore, India Ebnezar Orthopedic Centre, Parimala Specialty Hospital, Bangalore, India	
Source of funds	None reported	
Declared interests of study authors	None to declare	
Setting / provider	Orthopedic centre	
Country(s) / region	Louisiana, USA	
Enrolment period	None reported	
Length of treatment and follow up (wks or mos)	10 days (no follow up)	
Description of population	*N=*	*Description*
# participants	60	Adults with common neck pain
details	*Inclusion criteri* a: Patients with CNP due to spasm (myalgia) or strain of the neck muscles, ligament strain, cervical spondylosis without any neurological impairment and who were advised physiotherapy by the consulting orthopedic surgeon were included in the study. It was ensured that these were literate patients in the age group of 20–70 years with no previous exposure to yoga. *Exclusion criteria:* Those with uncommon neck pains (UCNP) due to organic causes such as congenital conditions like wry neck, infective conditions like tuberculosis, inflammatory conditions like rheumatoid arthritis, metabolic disorders like osteoporosis, neoplastic conditions and post traumatic conditions with ligament or bone injuries were excluded.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	30	Yoga sessions 20 minutes long for 10 days. The yoga group received yogic MSRT in supine position after the conventional physiotherapy program for 30 minutes using pre-recorded audio CD.
Comparator #1 (control)	--	--

Characteristics of included studies	Neck pain (chronic)				
Study ID	**Yogitha-2010**				
Comparator #2 (other)	30	Attention control: Non-guided supine rest 20 minutes long for 10 days			
Comparator #3 (other)	--	--			
Co-interventions	Conventional schedule of physiotherapy				
Is practitioner/ instructor certified?	Yes	Include in subgroup A			
Is there an inactive comparator?	No	Comparison= other			
Outcomes (meaure, description, tool, timing)	***Primary?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Pain	Baseline, end of treatment (day 10)	Pain Analog Scale	Higher score related to higher pain
Outcome 2	Not specified	Pain (tenderness)	Baseline, end of treatment (day 10)	Tenderness survey	Grade 1 = tenderness on deep palpation of para-cervical muscles, Grade 2 = patient winces on pressure, Grade 3 = patient winces and withdraws and Grade 4 = patient does not allow one to touch
Outcome 3	Not specified	Function/ Disability	Baseline, end of treatment (day 10)	Neck Disability Score	60 questions (on 6-point scale ranging from 0 to 5) related to pain intensity, personal care, work, concentration, lifting, reading, driving, recreation, headache and sleeping.

Characteristics of included studies	Neck pain (chronic)				
Study ID	**Yogitha-2010**				
Outcome 4	--	--	--	--	--
Method of analysis					
Statistics	Data were analyzed using statistical package for social sciences (SPSS, version 10.0). The base line values of the two groups were checked for normal distribution by using Shapiro-Wilk's Test. Since the parameters were not normally distributed, non-parametric tests were used. Wilcoxon's signed ranks test was done to compare the means before and after intervention. The differences between the two groups for all variables were assessed by Mann-Whitney U test				
Population analysed	Intent-to-treat	mITT analysis performed for all randomised participants			
Missing data					
INTERNAL VALIDITY					
Overall risk of bias (select from list)	High risk of bias in one or more key domains				
Summary (descriptive)	Participants were aware of the intervention they were receiving, therefore this could have influenced self-reported outcomes, which by nature involve some judgement. Additional concerns about neck-pain releated drops out which were disproportionatly higher in the control group, which may bias in favour of the control group.				

Characteristics of included studies	Employment related		
Study ID	**Granath 2006**		
Study reference	Granath J, Ingvarsson S, von Thiele U, Lundberg U. Stress management: A randomized study of cognitive behavioural therapy and yoga. Cognitive Behaviour Therapy. 2006;35(1):3-10.		
Study design	RCT	quasirandomised	No mention of the randomisation sequence or allocation concealment.
Author affiliation	The authors were affiliated with a university in Sweden		
Source of funds	Financial support was obtained from the Bank of Sweden Tercentenary Foundation (UL)		
Declared interests of study authors	Not reported		
Setting / provider	Financial company employees		
Country(s) / region	Sweden		
Enrolment period	Winter/Spring 2000		
Length of intervention and follow up (months)	4 month intervention		
Description of population	*N=*	*Description*	
# participants	37	Employees with self-reported stress-related problems	
details	*Inclusion criteria:* self-reported stress-related problems *Exclusion criteria:* not reported		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	
Intervention	18	Kundalini yoga: 10 wks, 1x ? min session per wk. The main focus of the yoga program was physical exercise. Movements used were normally an introduction to Kundalini Yoga. Participants were given a compendium with a theoretical account of a specific theme, advice and suggestions to practice yoga at home.	

Characteristics of included studies	Employment related				
Study ID	**Granath 2006**				
Comparator #1 (control)	--	--			
Comparator #2 (other)	19	10 wks, 1x ? min session per wk. Each session was divided into 5 sections: relaxation, discussion, psycho-education, management techniques, and introduction of home assignments.			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Trained yoga instructor		
Is the comparator clearly inactive?	No	Comparison= other	Cognitive behavioural therapy		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Percieved Stress	Baseline, post intervention (4 months)	Perceived Stress Scale (14-items)	14-item scale assesses stress experienced over the past 2 wks. Total score ranges from 4-20, with higher scores indicating more severe stress.
Outcome 2	Not specified	Stress experience	Baseline, post intervention (4 months)	Daily Stressors scales (20-items)	Measures stress experience in daily activities
Outcome 3	Not specified	Exhaustion	Baseline, post intervention (4 months)	Masstricht Questionnaire (19-items)	Measures degress of vital exhaustion. Total score ranges from 0-38, higher score represents more exhaustion.
Outcome 4	Not specified	Anger	Baseline, post intervention (4 months)	MMPI-2 Anger subscale	14 items.
Outcome 5	Not specified	HR QoL	Baseline, post intervention (4 months)	Quality of Life Inventory (32-items)	32 items. Higher score indicates higher quality of life.

Characteristics of included studies	Employment related				
Study ID	**Granath 2006**				
Outcome 6	Not specified	Stress biomarker	Baseline, post intervention (4 months)	Urinary catecholamine - adrenaline	
Outcome 7	Not specified	Stress biomarker	Baseline, post intervention (4 months)	Urinary catecholamine - noradrenalide	
Outcome 8	Not specified	Stress biomarker	Baseline, post intervention (4 months)	Salivary cortisol	
Outcome 9	Not specified	Physiological markers	Baseline, post intervention (4 months)	Blood pressure (systolic, diastolic)	Median of 3 measurements
Outcome 10	Not specified	Physiological markers	Baseline, post intervention (4 months)	Heart Rate	Median of 3 measurements
Outcome 11		--	--	--	--
Outcome 12		--	--	--	--
Outcome 13		--	--	--	--
Outcome 14		--	--	--	--
Outcome 15		--	--	--	--
Outcome 16		--	--	--	--

Characteristics of included studies	Employment related			
Study ID	**Granath 2006**			
Outcome 17	--	--	--	--
Outcome 18	--	--	--	--
Outcome 19	--	--	--	--
Outcome 20	--	--	--	--
Outcome 21	--	--	--	--
Outcome 22	--	--	--	--
Outcome 23	--	--	--	--
Outcome 24	--	--	--	--
Outcome 25	--	--	--	--
Outcome 26	--	--	--	--
Method of analysis				
Statistics	Mean score for pre- and post-treatment for both groups analyses by 2-way ANOVA. Group differences at pre- and post-treatment tested using independent samples t-test. Positive effect sizes represent improvement in stress symptopms with the exception of QoL.			

Characteristics of included studies	Employment related	
Study ID	**Granath 2006**	
Population analysed	Intent-to-treat	Modified intention to treat with participants who were lost to follow up excluded from the data.
Missing data	4 participants (11%) dropped out and an additional 2 were missing physiological data at follow up. No mention of how this missing data was adjusted.	
INTERNAL VALIDITY		
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias	
Summary (descriptive)	Some concerns relating to lack of allocation concealment, missing outcome data, self-reported outcomes by non-blinded participants and lack of pre-specified analysis plan	

Characteristics of included studies	Employment related	
Study ID	**Grensman 2018**	
Study reference	Grensman A, Acharya BD, Wandell P, Nilsson GH, Falkenberg T, Sundin O, et al. Effect of traditional yoga, mindfulness-based cognitive therapy, and cognitive behavioral therapy, on health related quality of life: a randomized controlled trial on patients on sick leave because of burnout. BMC Altern Med. 2018;18(1):80. NCT01168661	
Study design	RCT	Block randomisation, sealed non-transparent envelopes before the start of each treatment round.
Author affiliation	The authors were affiliated with a university in Sweden	
Source of funds	Stockholm County Council, grant 2003–5.	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Presenting to primary health care	
Country(s) / region	Sweden	
Enrolment period	SEP 2007 - NOV 2009	
Length of intervention and follow up (months)	20 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	94	Patients on sick leave due to burnout. Diagnosed ehxuastion syndrome.
details	*Inclusion criteria:* 18-65 years old, on at least 50% sick leave at interview (sick leave for max 1 year full-time or 3 years part-time), BMI between 18 and 26, meets diagnostic criteria for Exhaustion Syndrome *Exclusion criteria:* other diseases that could give similar symptoms or hamper recovery, not speeking Swedish well enough to understand study instructions, using medication (except antidepressants, sedatives, contraceptives and hormone replacement therapy)	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	32	Traditional yoga: 20 wks, 3 hours per wk group training + 60-90 mins home training 3-4x per wk (total 7 hours per wk). Traditional yoga is a variation of Ashtanga yoga which uses gentle movements and postures, breathing exercises and meditation. Program was deisgned specifically for this group of patients.

Characteristics of included studies	Employment related				
Study ID	**Grensman 2018**				
Comparator #1 (control)	--	--			
Comparator #2 (other)	31	Mindfulness-based cognitive therapy: 20 wks, 3 hours per wk group training + 60-90 mins home training 3-4x per wk (total 7 hours per wk). Designed to teachmindfulness and cognitive skills as a means to note distressing throughts and feelings. Skills such as how to plan a successful day, plan and execute mivro-pauses, and accept negative feelings without being overwhelmed.			
Comparator #3 (other)	31	Cognitive behavioural therapy: 20 wks, 3 hours per wk group training + 60-90 mins home training 3-4x per wk (total 7 hours per wk). Consisted of components such as cognitive restructuring, applied relaxation technique, identifying stressors, coping with stress, and how to reduce experience of daily stress.			
Co-interventions					
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Trained yoga teacher		
Is the comparator clearly inactive?	No	Comparison= other	Mindfulness-based cognitive therapy and CBT		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL	67 self-assessed questions, score ranges 0-100. Higher scores indicate higher quality of life.
Outcome 2	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - Physical functioning subscale	Health interference with ability to perform physical activities. 7 items.
Outcome 3	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - Satisfaction with physical functioning subscale	Satisfaction with physical functioning. 1 item.
Outcome 4	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - role-physical subscale	Extent to which physical problems interfere with ADL. 3 items.
Outcome 5	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - bodily pain subscale	Frequency, intensity and interference of pain. 6 items.

Characteristics of included studies	Employment related				
Study ID	**Grensman 2018**				
Outcome 6	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - role-emotional subscale	Extent to which emotional problems interfere with ADL. 3 items.
Outcome 7	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - Positive affect subscale	Is a person happy, well liked. 6 items.
Outcome 8	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - Negative affect subscale	Feels nervous, tense, down, sad. 6 items.
Outcome 9	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - Cognitive subscale	Concentration, memory. 6 items.
Outcome 10	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL sleep subscale	Sleep initiation and maintenance. 7 items.
Outcome 11	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - general health perceptions subscale	General health. 8 items.
Outcome 12	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - family functioning subscale	Satisfaction with family life. 4 items.
Outcome 13	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - partner functioning subscale	Relation to spouse. 6 items.
Outcome 14	Secondary	HR QoL	Baseline, post intervention (20 weeks)	SWED-QUAL - sexual functioning subscale	Interest in sex, capability to enjoy. 5 items
Outcome 15		--	--	--	--
Outcome 16		--	--	--	--

Characteristics of included studies	Employment related			
Study ID	**Grensman 2018**			
Outcome 17	--	--	--	--
Outcome 18	--	--	--	--
Outcome 19	--	--	--	--
Outcome 20	--	--	--	--
Outcome 21	--	--	--	--
Outcome 22	--	--	--	--
Outcome 23	--	--	--	--
Outcome 24	--	--	--	--
Outcome 25	--	--	--	--
Outcome 26	--	--	--	--
Method of analysis				
Statistics	Wilcoxon sum rank test conducted to compare subscale scores at baseline and for comparison of the between-group treatment effect. Wilcoxon's sign rank was used for comparison of treatment effects. Holm-Bonferroni correction to adjust for multiple analyses.			

Characteristics of included studies	Employment related
Study ID	**Grensman 2018**
Population analysed	Intent-to-treat mITT interpretted. Participants who discontinued the intervention were excluded from the analy
Missing data	14 participants (14.9%) either discontinued the intervention (n=11, 11.7%) or were lost to follow up (n=3, 3.2%). Reasons provided included disliking group therapy, time commitment, sickness, moving, returning to work, and personal reasons.
INTERNAL VALIDITY	
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias
Summary (descriptive)	Some concerns primarily due to the proportion of missing data and the self-reported outcome measure by non-blinded participants

Characteristics of included studies	Employment related	
Study ID	**Harkess 2016**	
Study reference	Harkess KN, Delfabbro P, Cohen-Woods S. The longitudinal mental health benefits of a yoga intervention in women experiencing chronic stress: A clinical trial. Cogent Psychology Vol 3(1), 2016, ArtID 1256037. 2016;3(1). Harkess KN, Ryan J, Delfabbro PH, Cohen-Woods S. Preliminary indications of the effect of a brief yoga intervention on markers of inflammation and DNA methylation in chronically stressed women. Translational Psychiatry. 2016;6 (11) (no pagination)(e965). Harkess KN, Delfabbro P, Mortimer J, Hannaford Z, Cohen-Woods S. Brief report on the psychophysiological effects of a yoga intervention for chronic stress: Preliminary findings. Journal of Psychophysiology. 2017;31(1):38-48. ACTRN12616000612415	
Study design	RCT	Randomisation software, stratified by the level of psychological distress. The authors do not report on allocation concealment.
Author affiliation	The authors were affiliated with a university in Australia	
Source of funds	The authors received no direct funding for this reasearch	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community	
Country(s) / region	Australia	
Enrolment period	APR 2013 - AUG 2013	
Length of intervention and follow up (months)	8 wk intervention, 1 month follow up	
Description of population	*N=*	*Description*
# participants	116	Females with high levels of psychological distress (K10 scale)
details	*Inclusion criteria:* Female, aged 35-65, non-obese (BMI), experiencing moderate to high levels of psychological distress for at least 1 month measured using the K10 scale *Exclusion criteria:* Regular yoga practice over past year	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	60	Yoga: 8 wks, 2x 60 min classes per wk. Conducted at a local community centre, Ashtanga-based yoga with guided meditation and a series of postures.

Characteristics of included studies	Employment related				
Study ID	**Harkess 2016**				
Comparator #1 (control)	56	Control (waitlist)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified instructor		
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist control		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Psychological Distress	Baseline, end of treatment (8 wks), followup (1 mos)	Kessler Psychological Distress Scale	10 items, higher scores indicate more severe distress
Outcome 2	Primary	Percieved Stress	Baseline, end of treatment (8 wks), followup (1 mos)	Perceived Stress Scale	14-item scale assesses stress experienced over the past 2 wks. Total score ranges from 4-20, with higher scores indicating more severe stress.
Outcome 3	Secondary	Mindfulness	Baseline, end of treatment (8 wks), followup (1 mos)	Mindfulness Attention Awareness Scale	15 items, higher scores indicative of greater mindfulness and lower negative emotional states
Outcome 4	Secondary	Life Satisfaction	Baseline, end of treatment (8 wks), followup (1 mos)	Psychological Wellbeing Index-Adult	7 domains, higher scores indicate greater satisfaction with life
Outcome 5	Primary	Emotional wellbeing	Baseline, end of treatment (8 wks), followup (1 mos)	Positive and Negative Affect Schedule (PANAS)	20 items, 5-point Likert scale for scoring. Scores range from 10-50 for both the positive and negative scales. Higher scores indicate greater levels of positive/negative affect.

Characteristics of included studies	Employment related				
Study ID	**Harkess 2016**				
Outcome 6	Secondary	Energy cost of physical activity	Baseline, end of treatment (8 wks), followup (1 mos)	International Physical Activity Questionnaire (MET/min)	Physical activity over last wk converted to Metabolic Equivalence of Task (MET)
Outcome 7	Secondary	Disease risk (obesity)	Baseline, end of treatment (8 wks), followup (1 mos)	Waist-Height ratio	
Outcome 8	Secondary	Stress biomarker, inflammatory	Baseline, end of treatment (8 wks), followup (1 mos)	C-reactive protein	Biological analysis
Outcome 9	Secondary	Stress biomarker, inflammatory	Baseline, end of treatment (8 wks), followup (1 mos)	IL-6	Biological analysis
Outcome 10	Secondary	Stress biomarker, inflammatory	Baseline, end of treatment (8 wks), followup (1 mos)	TNFa	Biological analysis
Outcome 11	Secondary	Stress biomarker, genetic	Baseline, end of treatment (8 wks), followup (1 mos)	estimated global DNA methylation (LINE-1)	Biological analysis
Outcome 12	Secondary	Physical function	Baseline, end of treatment (8 wks), followup (1 mos)	Motives for physical Activity Measure	5 motives for partaking in phsyical activity
Outcome 13	Secondary	Anger	Baseline, end of treatment (8 wks), followup (1 mos)	State Trait Anger Expression Inventory	44 items, designed to measure anger as an emotional situational response and a dispositional quality. Higher scores indicate greater anger
Outcome 14	Secondary	Loneliness	Baseline, end of treatment (8 wks), followup (1 mos)	UCLA Loneliness Scale	20 items, higher score indicates greater loneliness
Outcome 15	Secondary	Physiological markers	Baseline, end of treatment (8 wks), followup (1 mos)	Heart rate	
Outcome 16	Secondary	Physiological markers	Baseline, end of treatment (8 wks), followup (1 mos)	Blood pressure	

Characteristics of included studies	Employment related				
Study ID	**Harkess 2016**				
Outcome 17	Secondary	Flexibility	Baseline, end of treatment (8 wks), followup (1 mos)	Sit and reach test	
Outcome 18	Secondary	Stress biomarker, genetic	Baseline, end of treatment (8 wks), followup (1 mos)	RNA gene expression in wholebloods	Biological analysis
Outcome 19	Secondary	Patient experience	Baseline, end of treatment (8 wks), followup (1 mos)	Helping Alliance Questionnaire	
Outcome 20		--	--	--	--
Outcome 21		--	--	--	--
Outcome 22		--	--	--	--
Outcome 23		--	--	--	--
Outcome 24		--	--	--	--
Outcome 25		--	--	--	--
Outcome 26		--	--	--	--
Method of analysis					
Statistics	Alpha of 0.05 was considered significant. Mean change in the outcome variables between yoga and control groups. Mean change in the outcome variable from baseline to follow up was examined to see differences between the groups. A 2x3 mixed factorial design with between-subjects factor of group and a within-subjects factor of time. Mixed-level models with maximum likelihood estimated were also used.				

Characteristics of included studies	Employment related
Study ID	**Harkess 2016**
Population analysed	Other (provide details): Both mITT and per protocol (excluding participants who did not receive at least 1 yoga session pe
Missing data	In the ITT analysis, there was missing data for n=13 (21.7%) in the yoga group and n=9 (16.1%) of the control group. It is unclear why participants were lost to follow up or how this missing data was addressed in the analysis.
INTERNAL VALIDITY	
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias
Summary (descriptive)	Some concerns relating to the self-reported outcome measure by non-blinded participants and the proportion of missing outcome data.

Characteristics of included studies	Employment related	
Study ID	**Hartfiel 2012**	
Study reference	Hartfiel N, Burton C, Rycroft-Malone J, Clarke G, Havenhand J, Khalsa SB, et al. Yoga for reducing perceived stress and back pain at work. Occupational Medicine. 2012;62(8):606-12.	
Study design	RCT Stratified and randomised by the Bangor Trials Unit.	
Author affiliation	The authors were affiliated with universities in the UK, USA and Sweden	
Source of funds	This study was made possible by a Knowledge Transfer Partnership (KTP) Grant, funded by the Technology Strategy Board and the Welsh Government.	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Government employees	
Country(s) / region	UK	
Enrolment period	JAN 2011 - APR 2011	
Length of intervention and follow up (months)	8 wk intervention, no follow up	
Description of population	*N=*	*Description*
# participants	74	Workers with perceived stress and/or back pain
details	*Inclusion criteria: bothersomeness score of >=2 for stress and/or back pain* *Exclusion criteria: 'at risk' health conditions (recent surgery, spinal disc problems, first trimester pregnancy, etc.), already practicing yoga, Tai Chi or pilates once per wk or more.*	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	37	Dru yoga: 8 wks, 1x 50 min session per wk. Content of the classes included activation exercises, energy block release movements, postures and relaxation. Participants were also invited to practice at home at least twice per wk using a 20 min DVD.

Characteristics of included studies	Employment related				
Study ID	**Hartfiel 2012**				
Comparator #1 (control)	37	Control (waitlist). Offered yoga training after the intervention period.			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C	The authors do not specify whether the instructor is qualified.		
Is the comparator clearly inactive?	Yes	Comparison= control	No intervention/waitlist control group		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Percieved Stress	Baseline, post intervention (8 weeks)	Perceived Stress Scale (10-items)	10-item scale assesses stress experienced over the past 2 wks. Total score ranges from 4-20, with higher scores indicating more severe stress.
Outcome 2	Not specified	Functional disability	Baseline, post intervention (8 weeks)	Roland Morris Disabilty Questionnaire (24-items)	Higher score means worse disability
Outcome 3	Not specified	Emotional wellbeing	Baseline, post intervention (8 weeks)	Positive and Negative Affect Schedule Expanded form (PANAS-X) (60-item)	60 items, 5-point Likert scale for scoring. Higher scores indicate greater levels of positive/negative afect.
Outcome 4	Not specified	Serenity	Baseline, post intervention (8 weeks)	PANAS-X subscale	Higher score indicates improvement in affect
Outcome 5	Not specified	Reduced hostility	Baseline, post intervention (8 weeks)	PANAS-X subscale	Higher score indicates improvement in affect

Characteristics of included studies	Employment related				
Study ID	**Hartfiel 2012**				
Outcome 6	Not specified	Self-assured	Baseline, post intervention (8 weeks)	PANAS-X subscale	Higher score indicates improvement in affect
Outcome 7	Not specified	Attentiveness	Baseline, post intervention (8 weeks)	PANAS-X subscale	Higher score indicates improvement in affect
Outcome 8	Not specified	Jovial	Baseline, post intervention (8 weeks)	PANAS-X subscale	Higher score indicates improvement in affect
Outcome 9	Not specified	Reduced fatigue	Baseline, post intervention (8 weeks)	PANAS-X subscale	Higher score indicates improvement in affect
Outcome 10	Not specified	Reduced fear	Baseline, post intervention (8 weeks)	PANAS-X subscale	Higher score indicates improvement in affect
Outcome 11	Not specified	Reduced shyness	Baseline, post intervention (8 weeks)	PANAS-X subscale	Higher score indicates improvement in affect
Outcome 12	Not specified	Reduced guilt	Baseline, post intervention (8 weeks)	PANAS-X subscale	Higher score indicates improvement in affect
Outcome 13	--	--	--	--	--
Outcome 14	--	--	--	--	--
Outcome 15	--	--	--	--	--
Outcome 16	--	--	--	--	--

Characteristics of included studies	Employment related			
Study ID	**Hartfiel 2012**			
Outcome 17	--	--	--	--
Outcome 18	--	--	--	--
Outcome 19	--	--	--	--
Outcome 20	--	--	--	--
Outcome 21	--	--	--	--
Outcome 22	--	--	--	--
Outcome 23	--	--	--	--
Outcome 24	--	--	--	--
Outcome 25	--	--	--	--
Outcome 26	--	--	--	--
Method of analysis				
Statistics	P< 0.05 was considered significant. Generalised linear models were constructed to analyse differences between the yoga group and the control group at baseline and at the end of program for the three domains: stress, back pain, and well-being. All data were checked for homogeneity of variances and regression lines. Normality examined using Q-Q plots and Box-plots. Using baseline scores as covariates, effects of the intervention were determined using analysis of variance (ANOVA) and multiple linear regression when appropriate for end-of-program scores.			

Characteristics of included studies	Employment related	
Study ID	**Hartfiel 2012**	
Population analysed	Intent-to-treat	Modified intention to treat, participants lost to follow up were excluded from the analysis.
Missing data	Pairwise deletion to treat the missing values from each of the outcome measures. 15 participants (20%) had missing outcome data.	
INTERNAL VALIDITY		
Overall risk of bias (select from list)	High risk of bias in one or more key domains	
Summary (descriptive)	High risk of bias due to the high and uneven proportion of missing outcome data.	

Characteristics of included studies	Employment related	
Study ID	**Maddux 2018**	
Study reference	Maddux RE, Daukantaite D, Tellhed U. The effects of yoga on stress and psychological health among employees: an 8- and 16-wk intervention study. Anxiety, stress, and coping. 2018;31(2):121-34.	
Study design	RCT	Research randomiser generated list. The authors do not report on allocation concealment
Author affiliation	The authors were affiliated with a univeristy in Sweden	
Source of funds	Not reported	
Declared interests of study authors	The authors declared no conflict of interest.	
Setting / provider	Community, university employee	
Country(s) / region	Louisiana, USA	
Enrolment period	Not reported	
Length of intervention and follow up (months)	16 wk intervention, 8 wk comparison phase and 8 wk continuation phase. No follow up reported.	
Description of population	*N=*	*Description*
# participants	90	University employees with elevated perceived stress
details	*Inclusion criteria:* Working at least 50% full time, moderate level of stress (>=8 using 4 items from the Perceives Stress Scale), available during the intervention period. *Exclusion criteria:* practicing yoga or meditation in the past year, known physical limitation preventing yoga practice, major mental distress	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	45	Power yoga: 16 wks, 2x 1 hour sessions per wk. Uses the physical body to build strength and flexibility while relying on regulated breathing to stay in a calm physiological space. Classes occurred at a local fitness centre and did not follow a strict pre-determined series of postures.

Characteristics of included studies	Employment related				
Study ID	**Maddux 2018**				
Comparator #1 (control)	45	Control (waitlist/crossover): No yoga during the first 8 wks. For Phase 2, participants in this group switched and began the active intervention.			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	All instructors completed a 9-month training program for instructing power yoga		
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist control		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Percieved Stress	Baseline, 8 wks, 16 wks	Perceived Stress Scale (10-items)	10-item scale assesses stress experienced over the past 2 wks. Total score ranges from 4-20, with higher scores indicating more severe stress.
Outcome 2	Not specified	Psychological Distress	Baseline, 8 wks, 16 wks	GHQ-12	12 items assessed on a 4 point scale. Higher score indicates worse conditons.
Outcome 3	Not specified	Anxiety	Baseline, 8 wks, 16 wks	Hospital Anxiety and Depression Scale-Anxiety subscale (7-items)	7 items scored from 0-3. Higher scores indicate higher anxiety.
Outcome 4	Not specified	Depression	Baseline, 8 wks, 16 wks	Hospital Anxiety and Depression Scale-Depression subscale (7-items)	7 items scored from 0-3. Higher scores indicate higher depression.
Outcome 5	Not specified	Sleep problems	Baseline, 8 wks, 16 wks	Insomnia Severity Index	7 items, rated 0-4. Higher scores indicate worse insomnia.

Characteristics of included studies	Employment related				
Study ID	**Maddux 2018**				
Outcome 6	Not specified	Life Satisfaction	Baseline, 8 wks, 16 wks	Life Satisfaction (3-items)	Measures actual and expected life circumstances. Higher score indicates greater satisfaction.
Outcome 7	Not specified	Harmony in life	Baseline, 8 wks, 16 wks	Harmony in Life Scale (5-items)	Measures psychological balance and flexibility in life. Higher scores indicate greater harmony.
Outcome 8	Not specified	Mindfulness	Baseline, 8 wks, 16 wks	Kentucky Inventory of Mindfulness Skills-Short (20-items)	20 items, 3 subscales selected. Higher score indicates greater mindfulness
Outcome 9	Not specified	Avoidance behaviour	Baseline, 8 wks, 16 wks	Brief Experiential Avoidance Questionnaire (15-items)	15 items, rated on a 6 point scale. Higher score indictaes greater avoidance.
Outcome 10		--	--	--	--
Outcome 11		--	--	--	--
Outcome 12		--	--	--	--
Outcome 13		--	--	--	--
Outcome 14		--	--	--	--
Outcome 15		--	--	--	--
Outcome 16		--	--	--	--

Characteristics of included studies	Employment related			
Study ID	**Maddux 2018**			
Outcome 17	--	--	--	--
Outcome 18	--	--	--	--
Outcome 19	--	--	--	--
Outcome 20	--	--	--	--
Outcome 21	--	--	--	--
Outcome 22	--	--	--	--
Outcome 23	--	--	--	--
Outcome 24	--	--	--	--
Outcome 25	--	--	--	--
Outcome 26	--	--	--	--
Method of analysis				
Statistics	Independent t-test to compare groups on all continuous variables, and Fischer exact test for categorical variables at T1. Hierarchical linear modelling was used to test the effects of the intervention, with intervention condition, time, and interaction of intervention and time as fixed effects. Time was centred at 8 wks to test hypotheses related to group differences at post-intervention. Models included both linear and quadratic effects for time.			

Characteristics of included studies	Employment related
Study ID	**Maddux 2018**
Population analysed	Intent-to-treat: Modified intention to treat, participants with missing outcomes data were excluded.
Missing data	At the end of the randomised controlled period (8 wk follow up) outcome data was missing for 34 participants (37.8%) including 14 in the yoga group (31.1%) and 20 in the control group (44.4%). Reasons for discontinuation are not reported. It is reported that those who dropped out were not significantly difference to those who remained, except for the Harmony in Life Scale for the control group.
INTERNAL VALIDITY	
Overall risk of bias (select from list)	High risk of bias in one or more key domains
Summary (descriptive)	High risk of bias due to the large proportion of missing outcome data and deviations from the intended intervention beyond what would be expected in usual practice.

Characteristics of included studies	General community		
Study ID	**Daukantaite 2018**		
Study reference	Daukantaitė, D., Tellhed, U., Maddux, R. E., et al. 2018. Five-wk yin yoga-based interventions decreased plasma adrenomedullin and increased psychological health in stressed adults: a randomized controlled trial. PloS one, 13, e0200518. NCT03428542		
Study design	RCT	Web based randomisation by research staff who were blinded to study interventions and hypotheses.	
Author affiliation	The authors were affiliated with several univeristies in Sweden and Japan		
Source of funds	The study was supported by Knut and Alice Wallenberg Foundation, Goran Gustafsson Foundation, the Swedish Heart- and Lung Foundation, the Swedish Research Council, the Novo Nordisk Foundation, and		
Declared interests of study authors	The authors declared no conflict of interest.		
Setting / provider	Community		
Country(s) / region	NSW, Australia		
Enrolment period	FEB-MAR 2016		
Length of intervention and follow up (months)	5 wk intervention, no follow up reported		
Description of population	*N=*	*Description*	
# participants	105	General population with moderate to high stress	
details	*Inclusion criteria:* experiencing moderate to high stress in everyday life for the past month (i.e. score 8 or higher on 4 selected items of PSS), physically fit enough to perform slow but deep yoga postures, could participate during the intervention period, aged 40-65 years old *Exclusion criteria:* previous yoga or midfulness practice (more than 6 months in past year), current psychological or psychopharmalogical treatment, inability to attend more than 5 of the 10 scheduled sessions		
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*	
Intervention	34	Yin yoga: 5 wks, 2x 60 min sessions per wk.	

Characteristics of included studies	General community				
Study ID	**Daukantaite 2018**				
Comparator #1 (control)	37	Control (waitlist). After the post-intervention testing, control group participants received a single, three-hour Yin yoga workshop.			
Comparator #2 (other)	34	YOMI program: 5 wks, 2x 60 min yoga sessions + 30 min psychoeduction sessions per wk.			
Comparator #3 (other)					
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Interventions led by two licensed clinical psychologists who were also trained yoga instructors		
Is the comparator clearly inactive?	Yes	Comparison= control	No intervention		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Percieved Stress	Baseline, Post intervention (5 wks)	Perceived Stress Scale (10-items)	10-item scale assesses stress experienced over the past 2 wks. Total score ranges from 4-20, with higher scores indicating elevated percieved stress.
Outcome 2	Primary	Anxiety	Baseline, Post intervention (5 wks)	Hospital Anxiety and Depression Scale-Anxiety subscale (7-items)	7 items scored from 0-3. Higher scores indicate higher anxiety.
Outcome 3	Primary	Depression	Baseline, Post intervention (5 wks)	Hospital Anxiety and Depression Scale-Depression subscale (7-items)	7 items scored from 0-3. Higher scores indicate higher depression.
Outcome 4	Primary	Sleep quality	Baseline, Post intervention (5 wks)	Insomnia Severity Index	7 items, rated 0-4. Higher scores indicate worse insomnia.
Outcome 5	Primary	Stress biomarker	Baseline, Post intervention (5 wks)	Serum Adrenomedullin, fasting	

Characteristics of included studies	General community				
Study ID	**Daukantaite 2018**				
Outcome 6	Primary	Coping strategies	Baseline, Post intervention (5 wks)	COPE inventory	
Outcome 7	Primary	Diet	Baseline, Post intervention (5 wks)	Exploratory questionnaire	2 questions, open ended
Outcome 8	Primary	Psychological Distress	Baseline, Post intervention (5 wks)	General Health Questionnaire	12 items assessed on a 4 point scale. Higher score indicates worse conditons.
Outcome 9	Primary	Life satisfaction	Baseline, Post intervention (5 wks)	Harmony in Life Scale	Measures psychological balance and flexibility in life. Higher scores indicate greater harmony.
Outcome 10	Primary	Mindfulness	Baseline, Post intervention (5 wks)	Kentucky Inventory of Mindfulness Skills	20 items, 3 subscales selected. Higher score indicates greater mindfulness
Outcome 11	Primary	Avoidance	Baseline, Post intervention (5 wks)	Brief Experiential Avoidance Questionnaire	15 items, rated on a 6 point scale. Higher score indictaes greater avoidance.
Outcome 12	Primary	Compassion	Baseline, Post intervention (5 wks)	Self-Compassion Scale	
Outcome 13	Primary	Stress biomarkers, fasting	Baseline, Post intervention (5 wks)	Inflammatory biomarkers, stress hormones, cortisol, glucose	
Outcome 14	Primary	Glucose tolerance	Baseline, Post intervention (5 wks)	Fasting and 120-min glucose tolerance test	
Outcome 15	Primary	Cardiorespiratory health	Baseline, Post intervention (5 wks)	Heart rate variability	
Outcome 16	Primary	Gut microbiota	Baseline, Post intervention (5 wks)	Fecal sample	

Characteristics of included studies	General community				
Study ID	**Daukantaite 2018**				
Outcome 17	Primary	Cardiometabolic health	--	cardiometabolic markers, cholesterol, triglycerides	
Outcome 18	Primary	Cardiometabolic health	--	creatinine, catecholamines, renin	
Outcome 19		--	--	--	--
Outcome 20		--	--	--	--
Outcome 21		--	--	--	--
Outcome 22		--	--	--	--
Outcome 23		--	--	--	--
Outcome 24		--	--	--	--
Outcome 25		--	--	--	--
Outcome 26		--	--	--	--
Method of analysis					
Statistics	The effects of the intervention on the main study outcomes were investigated by estimating models with the full-information maximum likelihood (FIML) method in SPSS AMOS, which allows analyses of all available data (i.e. without excluding individuals who did not complete the study). Outcome variables were all study variables calculated as the difference between pre-intervention and post-intervention scores, and the predictor was the dummy coded group variable (1 = experimental, 0 = control) and relevant controls, including age (continuous) and participant sex (1 = female, 0 = male). Analyses with ADM as the dependent variable were further adjusted for BMI and pre-intervention kidney function (i.e. levels of cystatin C at T1) because of the known association between elevated plasma ADM concentrations and high BMI/				

Characteristics of included studies	General community	
Study ID	**Daukantaite 2018**	
Population analysed	Per protocol	ITT is mentioned in the protocol but participants who did not receive the allocated intervention appear to have been excluded.
Missing data	Data from 8 participants (7.6%) appears to have been excluded from the analysis. This included 1 participant in the YOMI group and 7 participants in the control group. All participants in the yoga group are included in the analysis.	
INTERNAL VALIDITY		
Overall risk of bias (select from list)	High risk of bias in one or more key domains	
Summary (descriptive)	High risk of bias due to the large proportion of missing outcome data and inappropriate method of analysis (PP).	

Characteristics of included studies	General community	
Study ID	**Godse 2015**	
Study reference	Godse AS, Shejwal BR, Godse AA. Effects of suryanamaskar on relaxation among college students with high stress in Pune, India. Int. 2015;8(1):15-21.	
Study design	RCT	Random number table. No mention of allocation concealment.
Author affiliation	The authors were affiliated with several universities in India	
Source of funds	The authors report no funding	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Single centre, college students	
Country(s) / region	Pune,India	
Enrolment period	Not reported	
Length of intervention and follow up (months)	14 day intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	124	College students with elevated stress (Smith Stress Symptoms Inventory)
details	*Inclusion criteria:* above the 75th percentile on a minimum of 4/6 subscales of the SSSI, without any severe pyhsical illnes, 17-22 years old, not practicing any other exercise/sport *Exclusion criteria:* none reported	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	62	Suryanamaskar yoga: 14 days, 1x 20 min session per day. The session included warm up, 13 rounds of suryanamaskar with mantras and breathing and cooling down.

Characteristics of included studies	General community				
Study ID	**Godse 2015**				
Comparator #1 (control)	62	Control (waitlist). The control group were offered the Suryanamaskar program after the intervention period.			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Qualified instructors with five years experience		
Is the comparator clearly inactive?	Yes	Comparison= control	Waitlist control		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Stress disposition, somatic stress	Baseline, post-intervention (2 wks)	Smith Relaxation Disposition Inventory (SRDI) somatic stress subscale	the propensity of experiencing stressed states over a period of 2 weeks. These subscales of Stress include somatic stress, worry, and negative emotion.
Outcome 2	Not specified	Stress disposition, worry	Baseline, post-intervention (2 wks)	SRDI worry subscale	the propensity of experiencing stressed states over a period of 2 weeks. These subscales of Stress include somatic stress, worry, and negative emotion.
Outcome 3	Not specified	Stress disposition, negative emotion	Baseline, post-intervention (2 wks)	SRDI negative emotion subscale	the propensity of experiencing stressed states over a period of 2 weeks. These subscales of Stress include somatic stress, worry, and negative emotion.
Outcome 4	Not specified	Sleepiness	Baseline, post-intervention (2 wks)	SRDI subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:
Outcome 5	Not specified	Physical relaxation	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:

Characteristics of included studies	General community				
Study ID	**Godse 2015**				
Outcome 6	Not specified	Rested/refreshed	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:
Outcome 7	Not specified	Ease/peace	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:
Outcome 8	Not specified	Energised	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:
Outcome 9	Not specified	Joyful	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:
Outcome 10	Not specified	Mental quiet	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:
Outcome 11	Not specified	Mystery	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:
Outcome 12	Not specified	Positive detachment	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:
Outcome 13	Not specified	Awe/wonder	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:
Outcome 14	Not specified	Thankfulness/ love	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:
Outcome 15	Not specified	Prayerfulness	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:
Outcome 16	Not specified	Timeless/boundle ss/at one	Baseline, post-intervention (2 wks)	SRDI-subscale	tests one's propensity to be relaxed over a period of 2-weeks. It taps 14 Relaxation States:

Characteristics of included studies	General community				
Study ID	**Godse 2015**				
Outcome 17	Not specified	Striated muscular tension	Baseline, post-intervention (2 wks)	Smith Stress Symptoms Inventory (SSSI) subscale	
Outcome 18	Not specified	Autonomic arousal/ anxiety	Baseline, post-intervention (2 wks)	SSSI-subscale	
Outcome 19	Not specified	Depression	Baseline, post-intervention (2 wks)	SSSI-subscale	
Outcome 20	Not specified	Interpersonal conflict/ anger	Baseline, post-intervention (2 wks)	SSSI-subscale	
Outcome 21	Not specified	Worry/ negative emotion	Baseline, post-intervention (2 wks)	SSSI-subscale	
Outcome 22		--	--	--	--
Outcome 23		--	--	--	--
Outcome 24		--	--	--	--
Outcome 25		--	--	--	--
Outcome 26		--	--	--	--
Method of analysis					
Statistics	The data were collected and was analyzed using SPSS (version 17). Descriptive statistics ANCOVA was used considering the pretest as the covariates.				

Characteristics of included studies	General community	
Study ID	**Godse 2015**	
Population analysed	Per protocol	Per protocol interpretted. Those who dropped out due to disinterest or other reasons were excluded from the analysis. Those who had incomplete outcome responses were excluded from the analysis.
Missing data	Outcome data is missing for 44/124 participants (35%). The rate of missingness is equal between the two treatment arms. No analysis for missing data is presented.	
INTERNAL VALIDITY		
Overall risk of bias (select from list)	High risk of bias in one or more key domains	
Summary (descriptive)	High risk of bias relating to the high rate of deviations from the intended intervention and high proportion of missing outcome data (35%) which was not accounted for in the anlaysis.	

Characteristics of included studies	General community	
Study ID	**Hewett 2017**	
Study reference	Hewett ZL, Pumpa KL, Smith CA, Fahey PP, Cheema BS. Effect of a 16-wk Bikram yoga program on heart rate variability and associated cardiovascular disease risk factors in stressed and sedentary adults: A randomized controlled trial. BMC Complementary and Alternative Medicine. 2017;17 (1) (no pagination)(226). Hewett ZL, Pumpa KL, Smith CA, Fahey PP, Cheema BS. Effect of a 16-wk Bikram yoga program on perceived stress, self-efficacy and health-related quality of life in stressed and sedentary adults: A randomised controlled trial. Journal of Science and Medicine in Sport. 2018;21(4):352-7. ACTRN12616000867493	
Study design	RCT	Computer generated randomisation. An investigator not involved in the testing or delivery of the intervention prepare the randomisation. Group assignments delivered in sealed envelopes after completion of baseline testing.
Author affiliation	The authors were affiliated with two universities in Australia	
Source of funds	The authors report no funding	
Declared interests of study authors	One author was a co-owner of a Bikram Yoga studio, after the design and conception of the study. All other authors declared no conflict of interest.	
Setting / provider	Community	
Country(s) / region	ACT, Australia	
Enrolment period	AUG 2014 - SEPT 2015	
Length of intervention and follow up (months)	16 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	68	Sedentary adults with elevated stress (DASS-21)
details	*Inclusion criteria:* Adult (>18 years); sedentary (<150min of continuous moderate-intensity exercise per wk for at least 6 months); a score >7 on the stress component of the 21-item depression-anxiety-stress scale (DASS-21); waist circumference as a risk factor greater than 80cm (women) and greater than 94cm (men), able to attend 3-5 Bikram yoga classes per wk for 16 wks; no acute or chronic medical conditions which would make Bikram yoga potentially hazardous or primary outcomes impossible to assess (according to ACSM risk stratification guidelines); ability to communicate in English; willingness and cognitive ability to provide written informed consent to participate in the trial; access to internet and email. *Exclusion criteria:* Currently active; participation in Bikram yoga in the last 6 months or at any point consistently for >2 years; diagnosed chronic diseases (cardiovascular disease, blood pressure >140/90, uncontrolled diabetes or hyperlipidaemia); pregnancy; pacemaker.	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	33	Bikram yoga: 16 wks, 3-5x 90 min sessions per wk. Each class was held in a temperature controlled room (40.6 degrees, 40% humidity). The class opened with a deep breathing exercise, and continued with 40-45 minutes of standing asanas and 40-45 minutes of floor-based asanas.

Characteristics of included studies	General community				
Study ID	**Hewett 2017**				
Comparator #1 (control)	35	Control (waitlist). The control group received a 10-class pass at the end of the study.			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Certified Bikram yoga instructors		
Is the comparator clearly inactive?	Yes	Comparison= control	No intervention		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Heart rate variability	Baseline, midpoint (8 wks), post intervention (16 wks)	Heart rate variability ECG	
Outcome 2	Secondary	Percieved Stress	Baseline, midpoint (8 wks), post intervention (16 wks)	Perceived Stress Scale (10-items)	10-item scale assesses stress experienced over the past 2 wks. Total score ranges from 4-20, with higher scores indicating more severe stress.
Outcome 3	Secondary	HRQoL	Baseline, midpoint (8 wks), post intervention (16 wks)	SF-36 physical functioning	Higher score indicates better quality of life
Outcome 4	Secondary	HRQoL	Baseline, midpoint (8 wks), post intervention (16 wks)	SF-36 social functioning	Higher score is better
Outcome 5	Secondary	HRQoL	Baseline, midpoint (8 wks), post intervention (16 wks)	SF36 emotional wellbeing	Higher score is better

Characteristics of included studies	General community				
Study ID	**Hewett 2017**				
Outcome 6	Secondary	HRQoL	Baseline, midpoint (8 wks), post intervention (16 wks)	SF-36 vitality	Higher score is better
Outcome 7	Secondary	HRQoL	Baseline, midpoint (8 wks), post intervention (16 wks)	SF-36 bodily pain	Higher score is better
Outcome 8	Secondary	HRQoL	Baseline, midpoint (8 wks), post intervention (16 wks)	SF-36 role physical	Higher score is better
Outcome 9	Secondary	HRQoL	Baseline, midpoint (8 wks), post intervention (16 wks)	SF-35 role emotional	Higher score is better
Outcome 10	Secondary	HRQoL	Baseline, midpoint (8 wks), post intervention (16 wks)	SF-36 general health	Higher score is better
Outcome 11	Secondary	Self-efficacy	Baseline, midpoint (8 wks), post intervention (16 wks)	General self-efficacy scale	Higher score is better
Outcome 12	Secondary	Augmentation index	Baseline, midpoint (8 wks), post intervention (16 wks)	SphycmoCor system with tonometer	
Outcome 13	Secondary	Biomarkers	Baseline, midpoint (8 wks), post intervention (16 wks)	HDL, LDL, total cholesterol, fasting blood glucose, c-reative protein	
Outcome 14	Secondary	Anthropometric measurements	Baseline, midpoint (8 wks), post intervention (16 wks)	Body fat percentage, waist circumference	
Outcome 15	Secondary	Fitness	Baseline, midpoint (8 wks), post intervention (16 wks)	VO2 max	
Outcome 16		--	--	--	--

Characteristics of included studies	General community			
Study ID	**Hewett 2017**			
Outcome 17	--	--	--	--
Outcome 18	--	--	--	--
Outcome 19	--	--	--	--
Outcome 20	--	--	--	--
Outcome 21	--	--	--	--
Outcome 22	--	--	--	--
Outcome 23	--	--	--	--
Outcome 24	--	--	--	--
Outcome 25	--	--	--	--
Outcome 26	--	--	--	--
Method of analysis				
Statistics	All analyses were carried out using SPSS (IBM, Registered Trademark, Version 23). Outcomes data is presented as the mean +/- standard deviation with effect size and 95% confidence intervals. Baseline characteristics were compared using t-tests and non-normally distributed data was transformed (Ln) prior to analysis with parametric methods. Chi square tests were used to assess normality of non-continuous, descriptive variables at baseline. Changes over time in all continuous outcome variables and covariates were determined by analysis of covariance (ANCOVA). Categorical variables will be analysed using logistic regression models. Linear and multivariate regression analyses will be used to analyse associations between variables of interest. A p value of <0.05 is considered indicative of statistical significance.			

Characteristics of included studies	General community	
Study ID	**Hewett 2017**	
Population analysed	Intent-to-treat	ITT is specified. Primary analysis was via intention-to-treat with all participants included regardless of dropout or level of adherence. mITT (excluding participants who withdrew or were lost to follow up) was performed.
Missing data	7 participants (10%) were lost to follow up. Losses were balanced between groups. Missing data at wk 17 was imputed using the last observation carry forward method.	
INTERNAL VALIDITY		
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias	
Summary (descriptive)	Some concerns relating to missing outcome data for 10% of participants and the self-reported outcome measure by non-blinded participants	

Characteristics of included studies	General community	
Study ID	**Köhn 2013**	
Study reference	Köhn M, Persson Lundholm U, Bryngelsson IL, Anderzén-Carlsson A, Westerdahl E. Medical yoga for patients with stress-related symptoms and diagnoses in primary health care: a randomized controlled trial. Evidence-based complementary and alternative medicine : eCAM. 2013;2013:215348. Köhn M, Persson Lundholm U, Bryngelsson IL, Anderzén-Carlsson A, Westerdahl E. Medical yoga for patients with stress-related symptoms in primary health care. Physiotherapy (united kingdom). 2015;101:eS1621-. NCT01604707	
Study design	RCT	Computer generated randomisation. Sealed, opaque envelopes for allocation concealment
Author affiliation	The authors were affiliated with a hospital and a tertiary education institution in Sweden	
Source of funds	Financial support was provided by Grants from Research Committee of Orebro County Council and The Swedish Research Council, Reg. no. 2009-1385.	
Declared interests of study authors	Not reported	
Setting / provider	Community	
Country(s) / region	Sweden	
Enrolment period	MAR - JUNE 2011	
Length of intervention and follow up (months)	12 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	39	Stress-related symptoms or diagnoses in primary health care
details	*Inclusion criteria:* sought treatment in primary health care within previous 6 months, stress-related symptoms including fatigue, insomnia, anxiety, depression, hypertension and musculoskeletal discomfort in the neck and shoulders *Exclusion criteria:* inability to understand instructions, interpretation needs to physical or mental inability to carry out the yoga exercises	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	20	Yoga: 12 wks, 1x 60 min session per wk. The yoga class consisted of a number of postures and stretching exercises, breathing techniques, mantras, and meditation.

Characteristics of included studies	General community				
Study ID	**Köhn 2013**				
Comparator #1 (control)	19	Control (usual care)			
Comparator #2 (other)	--	--			
Comparator #3 (other)	--	--			
Co-interventions	Standard medical treatment				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Physiotherapist who was a certified yoga instructor in medical yoga		
Is the comparator clearly inactive?	Yes	Comparison= control	usual care		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Percieved Stress	Baseline, post-intervention (12 wks)	Cohen Perceived Stress Scale (14-items)	14-item scale assesses stress experienced over the past 2 wks. Total score ranges from 4-20, with higher scores indicating more severe stress.
Outcome 2	Secondary	Burnout	Baseline, post-intervention (12 wks)	Shirom-Melamed Burnout Questionnaire (22-items)	4 domains: emotional and physical exhaustion, listlessness, tension, cognitive weariness higher score means a higher level of burnout
Outcome 3	Secondary	Anxiety	Baseline, post-intervention (12 wks)	HADS-Anxiety subscale (7-items)	7 items scored from 0-3. Higher scores indicate higher anxiety.
Outcome 4	Secondary	Depression	Baseline, post-intervention (12 wks)	HADS-Depression subscale (7-items)	7 items scored from 0-3. Higher scores indicate higher depression.
Outcome 5	Secondary	Emotional function	Baseline, post-intervention (12 wks)	Hospital Anxiety and Depression Scale (HADS)-total (14-items)	Higher score is worse

Characteristics of included studies	General community				
Study ID	**Köhn 2013**				
Outcome 6	Secondary	Pain	Baseline, post-intervention (12 wks)	Visual analogue scale	Higher is worse
Outcome 7	Secondary	Sleep quality	Baseline, post-intervention (12 wks)	Insomnia Severity Index	7 items, rated 0-4. Higher scores indicate worse insomnia.
Outcome 8	Secondary	HRQoL	Baseline, post-intervention (12 wks)	Euro Quality of Life VAS	Higher score is better
Outcome 9	Secondary	Cardiorespiratory health	Baseline, post-intervention (12 wks)	Heart rate	
Outcome 10	Secondary	Cardiorespiratory health	Baseline, post-intervention (12 wks)	Blood pressure	
Outcome 11	Secondary	Cardiorespiratory health	Baseline, post-intervention (12 wks)	Peripheral Oxygen Saturation	
Outcome 12		--	--	--	--
Outcome 13		--	--	--	--
Outcome 14		--	--	--	--
Outcome 15		--	--	--	--
Outcome 16		--	--	--	--

Characteristics of included studies	General community			
Study ID	**Köhn 2013**			
Outcome 17	--	--	--	--
Outcome 18	--	--	--	--
Outcome 19	--	--	--	--
Outcome 20	--	--	--	--
Outcome 21	--	--	--	--
Outcome 22	--	--	--	--
Outcome 23	--	--	--	--
Outcome 24	--	--	--	--
Outcome 25	--	--	--	--
Outcome 26	--	--	--	--
Method of analysis				
Statistics	Including 18 patients per group would yield 80% of power (alpha = 0.05) to detect a difference of 7 units between the groups, assuming a standard deviation (SD) of 7.35. The differences between baseline and after treatment scores were calculated for the outcome measures and were compared between the groups. For the comparison of perceived stress, anxiety, depression, pain, insomnia, and overall health status between the two groups, a nonparametric test, the Mann-Whitney U test, was used. For the comparison of heart rate, oxygen saturation, blood pressure, and thoracic excursions between the two groups, an unpaired Student's t-test was used. All results refer to two-sided tests, and p values less than 0.05 were considered significant.			

Characteristics of included studies	General community	
Study ID	**Köhn 2013**	
Population analysed	Intent-to-treat	mITT is interpretted. Participants who dropped out were excluded from the analysis.
Missing data	2 participants in the yoga group discontinued the intervention due to family related issues or acute disease (not specified).	
INTERNAL VALIDITY		
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias	
Summary (descriptive)	Some concerns relating to the self-reported outcome measure by non-blinded participants	

Characteristics of included studies	General community	
Study ID	**Kumar 2016**	
Study reference	Kumar S, Bhanagari AH, Mohile AS, Limaye AH. Effect of Aerobic Exercises, Yoga and Mental Imagery on Stress in College Students -- A Comparative Study. Indian Journal of Physiotherapy & Occupational Therapy. 2016;10(3):69-74.	
Study design	RCT	Envelope method
Author affiliation	The authors were affiliated with an institue of physiotherapy in India	
Source of funds	Self funded	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	College students, community	
Country(s) / region	India	
Enrolment period	Not reported	
Length of intervention and follow up (months)	2 wk intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	95	College students with elevated stress (Lakaev Academic Stress Response Scale)
details	*Inclusion criteria:* 18-25 years old, score >50 on LARSRS *Exclusion criteria:* exam going student, BMI < 16, mental illness, any preexisting medical condition	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	30	Yoga: 2 wks, 4x 45 min session per wk. The yoga intervention included warm-up exercises, 20 mins of yoga and 15 mins of Shavasana

Characteristics of included studies	General community				
Study ID	**Kumar 2016**				
Comparator #1 (control)	--				
Comparator #2 (other)	30	Aerobic exercise: 2 wks, 4x 45 min sessions per wk. 10 min warm up, 30 min interval training, 5 min cool down.			
Comparator #3 (other)	30	Mental imagery: 2 wks, 4x 45 min sessions per wk. 10 min relaxation, 35 min mental imagery.			
Co-interventions	--				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is the comparator clearly inactive?	No	Comparison= other	Aerobic exercise and mental imagery		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Not specified	Mood, negative	Baseline, post intervention (2 wks)	Hassles and Uplifts Scale- hassles subscore	measures negative experiences that occur in everyday life.
Outcome 2	Not specified	Mood, positive	Baseline, post intervention (2 wks)	Hassles and Uplifts Scale- uplifts subscore	measures positive experiences that occur in everyday life.
Outcome 3	Not specified	Stress response	Baseline, post intervention (2 wks)	Lakaev Academic Stress Response Scale	Measures affective, behavioural, psychological and cognitive response to stress
Outcome 4	Not specified	Cardiorespiratory health	Baseline, post intervention (2 wks)	Pulse rate	
Outcome 5	Not specified	Cardiorespiratory health	Baseline, post intervention (2 wks)	Blood pressure	

Characteristics of included studies	General community				
Study ID	**Kumar 2016**				
Outcome 6	Not specified	Cardiorespiratory health	Baseline, post intervention (2 wks)	Respiratory rate	
Outcome 7		--	--	--	--
Outcome 8		--	--	--	--
Outcome 9		--	--	--	--
Outcome 10		--	--	--	--
Outcome 11		--	--	--	--
Outcome 12		--	--	--	--
Outcome 13		--	--	--	--
Outcome 14		--	--	--	--
Outcome 15		--	--	--	--
Outcome 16		--	--	--	--

Characteristics of included studies	General community			
Study ID	**Kumar 2016**			
Outcome 17	--	--	--	--
Outcome 18	--	--	--	--
Outcome 19	--	--	--	--
Outcome 20	--	--	--	--
Outcome 21	--	--	--	--
Outcome 22	--	--	--	--
Outcome 23	--	--	--	--
Outcome 24	--	--	--	--
Outcome 25	--	--	--	--
Outcome 26	--	--	--	--
Method of analysis				
Statistics	The significance level was p<0.05. Mean and standard deviation (SD) of demographic variable (age, BMI) of all 3 groups were obtained. t-test was used to assess the significance level of each outcome between pretest and post test score. The pretest score and post test score of all 3 groups were tested for the significance with ANOVA. Pair wise comparisons were done with Tukeys multiple post hoc procedures for significance between groups.			

Characteristics of included studies	General community
Study ID	**Kumar 2016**
Population analysed	Intent-to-treat mITT is interpretted. Participants lost to follow up are excluded from all time points in the analys
Missing data	5 participants (5%) were lost to follow up or withdrew from the study. It is not reported which group these participants were allocated, or reasons for withdrawal.
INTERNAL VALIDITY	
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias
Summary (descriptive)	Some concerns relating to the self-reported outcome measure by non-blinded participants

Characteristics of included studies	General community	
Study ID	**Michalsen 2012**	
Study reference	Michalsen A, Jeitler M, Brunnhuber S, Lüdtke R, Büssing A, Musial F, et al. Iyengar yoga for distressed women: a 3-armed randomized controlled trial. Evidence-based complementary and alternative medicine : eCAM. 2012;2012:408727. ISRCTN24518979	
Study design	RCT	Non-stratified block randomisation with varying block lengths. Sealed opaque envelopes for allocation concealment.
Author affiliation	The authors were affiliated with several univerisities in Germany and Austria	
Source of funds	The study was supported by the Karl and Veronica Carstens Foundation, Essen.	
Declared interests of study authors	The authors declared no conflict of interest	
Setting / provider	Community	
Country(s) / region	Germany	
Enrolment period	MAR 2006 - JAN 2008	
Length of intervention and follow up (months)	3 month intervention, no follow up reported	
Description of population	*N=*	*Description*
# participants	72	Community-dwelling women with elevated perceived stress (PSS)
details	*Inclusion criteria:* female, 20-60 years old, current distress sum score >18 on the CPSS, experiencing at least 3/8 of insomnia, disturbed appetite, back or neck pain, tension-type headache, decreased daytime alertness, digestive problems, frequent cold hands/feet, not currently practicing yoga or any related form of stress reduction *Exclusion criteria:* current psychiatric diagnosis, any medical contraindications to exercise, current medication for any disease, manifest problems with alcohol or substance abuse, pregnant	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	24	Iyengar yoga group 1: 3 months, 1x 90 min session per wk. The classes emphasised postures that are supposed to aleviate stress, particularly back bends, standing poses, and forward bends and inversions. Each class was finsihed by 15 mins of meditation in Shavasana. No explicit breathing techniques were used.

Characteristics of included studies	General community				
Study ID	**Michalsen 2012**				
Comparator #1 (control)	24	Control (usual activities)			
Comparator #2 (other)	24	Iyengar yoga group 2: 3 months, 2x 90 min session per wk. The classes emphasised postures that are supposed to aleviate stress, particularly back bends, standing poses, and forward bends and inversions. Each class was finsihed by 15 mins of meditation in Shavasana. No explicit breathing techniques were used.			
Comparator #3 (other)	--		--		
Co-interventions	--				
Is practitioner/ instructor certified?	Yes	Include in subgroup A	Taught by a certified Iyengar yoga instructor who had been trained for over 15 years		
Is the comparator clearly inactive?	Yes	Comparison= control	Usual activities		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Percieved Stress	Baseline, post-intervention (3 months)	Cohen Perceived Stress Scale (14-items)	14-item scale assesses stress experienced over the past 2 wks. Total score ranges from 4-20, with higher scores indicating more severe stress.
Outcome 2	Secondary	Depression	Baseline, post-intervention (3 months)	Center for Epidemiological Studies - Depression Inventory	
Outcome 3	Secondary	State-Anxiety	Baseline, post-intervention (3 months)	Speilberger STAI (40-items)	
Outcome 4	Secondary	Trait-Anxiety	Baseline, post-intervention (3 months)	Speilberger STAI (40-items)	
Outcome 5	Secondary	Psychological distress	Baseline, post-intervention (3 months)	Brief Symptoms Inventory-Global severity Index (53 items)	somatization, depression, and anxiety symptoms

Characteristics of included studies	General community				
Study ID	**Michalsen 2012**				
Outcome 6	Secondary	Emotional wellbeing	Baseline, post-intervention (3 months)	Bf-S Zerssen Wellbeing Scale	Higher score means lower wellbeing
Outcome 7	Secondary	Vigor	Baseline, post-intervention (3 months)	POMS-subscale	
Outcome 8	Secondary	Fatigue	Baseline, post-intervention (3 months)	POMS-subscale	
Outcome 9	Secondary	Depression	Baseline, post-intervention (3 months)	POMS-subscale	
Outcome 10	Secondary	Anger	Baseline, post-intervention (3 months)	POMS-subscale	
Outcome 11	Secondary	HRQoL	Baseline, post-intervention (3 months)	SF-36 Physical component summary score	
Outcome 12	Secondary	HRQoL	Baseline, post-intervention (3 months)	SF-36 mental Component Summary Score	
Outcome 13	Secondary	HRQoL	Baseline, post-intervention (3 months)	SF-36 - general health perceptions subscale	score 0-100; higher score means better health
Outcome 14	Secondary	HRQoL	Baseline, post-intervention (3 months)	SF-36 - Physical functioning subscale	score 0-100; higher score means better health
Outcome 15	Secondary	HRQoL	Baseline, post-intervention (3 months)	SF-36 - bodily pain subscale	score 0-100; higher score means better health
Outcome 16	Secondary	HRQoL	Baseline, post-intervention (3 months)	SF-36 - role-physical subscale	score 0-100; higher score means better health

Characteristics of included studies	General community				
Study ID	**Michalsen 2012**				
Outcome 17	Secondary	HRQoL	Baseline, post-intervention (3 months)	SF-36 - mental health subscale	score 0-100; higher score means better health
Outcome 18	Secondary	HRQoL	Baseline, post-intervention (3 months)	SF-36 - role-emotional subscale	score 0-100; higher score means better health
Outcome 19	Secondary	HRQoL	Baseline, post-intervention (3 months)	SF-36 - social functioning subscale	score 0-100; higher score means better health
Outcome 20	Secondary	HRQoL	Baseline, post-intervention (3 months)	SF-36 - Vitality subscale	score 0-100; higher score means better health
Outcome 21	Secondary	Physical Complaints	Baseline, post-intervention (3 months)	Freiburg Somatic Complaints Questionnaire (70-items)	includes: back pain, neck pain, physical wellbeing, tenseness, pain, motor activity, emotional reactivity, and sensory subscales
Outcome 22	Secondary	General physical wellbeing	Baseline, post-intervention (3 months)	VAS (0-10)	Higher score is worse
Outcome 23	Secondary	Headache severity	Baseline, post-intervention (3 months)	VAS (0-10)	Higher score is worse
Outcome 24	Secondary	Neck pain	Baseline, post-intervention (3 months)	VAS (0-10)	Higher score is worse
Outcome 25	Secondary	Back pain	Baseline, post-intervention (3 months)	VAS (0-10)	Higher score is worse
Outcome 26	Secondary	Depression	Baseline, post-intervention (3 months)	Hospital anxiety and depression scale	Higher score is worse
Method of analysis					
Statistics	Outcomes were analysed on an intention-to-treat (ITT) basis by univariate analyses of covariance (ANCOVA) which included group and baseline values as well as outcome expectation as covariates. From these models we estimated baseline-adjusted treatment effects and their 95% confidence intervals (CI). ANCOVA was also used for ordinal data derived from the Likert scales. All reported P values are based on a two-sided test, and a P value <0.05 was considered significant. Missing data of case record forms were multi-imputed, that is, multiple copies of the original data set were generated, hereby replacing missing values by randomly generated values. The primary analysis compared the outcomes between the 3 groups. Due to the compromised adherence in the yoga classes, we conducted secondary analyses in which the yoga groups were pooled and outcomes were analysed according to yoga class adherence. Here, participants were stratified according to the number of visits of yoga classes: 1–6 (n = 7), 7–12 (n = 18), and 13–24 (n = 15). ANCOVA was applied, respectively.					

Characteristics of included studies	General community	
Study ID	**Michalsen 2012**	
Population analysed	Intent-to-treat	ITT is specified
Missing data	Data was missing for 10/72 (14%) of participants. Missing data of case record forms were multi-imputed, that is, multiple copies of the original data set were generated, hereby replacing missing values by randomly generated values.	
INTERNAL VALIDITY		
Overall risk of bias (select from list)	Some concerns for one or more domains, but no high risk of bias	
Summary (descriptive)	Some concerns relating to the self-reported outcome by non-blinded participants and the ack of a statistical analysis plan	

Characteristics of included studies	General community	
Study ID	**Smith 2007**	
Study reference	Smith C, Hancock H, Blake-Mortimer J, Eckert K. A randomised comparative trial of yoga and relaxation to reduce stress and anxiety. Complementary Therapies in Medicine. 2007;15(2):77-83.	
Study design	RCT	Computer generated random number table by a researcher not involved in the study. Randomisation schedule was concealed in opaque envelopes
Author affiliation	The authors were affiliated with two universities in Australia	
Source of funds	This study was funded by the University of South Australia	
Declared interests of study authors	Not reported	
Setting / provider	Community	
Country(s) / region	Australia	
Enrolment period	APR-NOV 2004	
Length of intervention and follow up (months)	10 wk intervention, 16 wk follow up	
Description of population	*N=*	*Description*
# participants	131	Mild or moderate stress determined by the General Health Questionnaire
details	*Inclusion criteria:* 18-65 years old, mold to moderate stress, able to attend and participate in classes *Exclusion criteria:* <2 on the GHQ, physically unable to do yoga or attend class, currently doing yoga, pregnant	
Description of intervention/ comparator	*n=*	*Description (include # treatment sessions, session duration, program duration)*
Intervention	68	Hatha yoga: 10 weeeks, 1x 60 min session per wk. The class involved on average 2 postures aimed to achieve appropriate relaxation for 10 mins, with stretching, balance and breathing awareness achieved through poses that would stretch and strengthen the muscles, stimulate circulation and digestion, and improve posture and balance

Characteristics of included studies	General community				
Study ID	**Smith 2007**				
Comparator #1 (control)	--	--			
Comparator #2 (other)	63	Progressive muscle relaxation: 10 wks, 1x 60 min session per wk. PMR was designed to guide people through successive tensing and relaxation of the body muscle groups from toe to head to achieve overall body relaxation. Each wk focused on a different body part.			
Comparator #3 (other)	--		--		
Co-interventions	--				
Is practitioner/ instructor certified?	Not specified	Include in subgroup C			
Is the comparator clearly inactive?	No	Comparison= other	Progressive muscle relaxation		
Outcomes (meaure, description, tool, timing)	***Primary ?***	***Description***	***timing***	***measured with***	***measure details***
Outcome 1	Primary	Anxiety	Baseline, post-intervention (10 wks), follow up (16 wks)	State-trait anxiety inventory - anxiety (10-items)	Score 10-40; higher score means extreme anxiety
Outcome 2	Secondary	Psychological distress	Baseline, post-intervention (10 wks), follow up (16 wks)	GHQ-12	score 0-36; higher scores indicate extreme stress
Outcome 3	Secondary	General health perceptions	Baseline, post-intervention (10 wks), follow up (16 wks)	SF-36 - general health perceptions subscale	score 0-100; higher score means better health
Outcome 4	Secondary	Physical function	Baseline, post-intervention (10 wks), follow up (16 wks)	SF-36 - Physical functioning subscale	score 0-100; higher score means better health
Outcome 5	Secondary	Pain	Baseline, post-intervention (10 wks), follow up (16 wks)	SF-36 - bodily pain subscale	score 0-100; higher score means better health

Characteristics of included studies	General community				
Study ID	**Smith 2007**				
Outcome 6	Secondary	Role-functioning	Baseline, post-intervention (10 wks), follow up (16 wks)	SF-36 - role-physical subscale	score 0-100; higher score means better health
Outcome 7	Secondary	Mental health	Baseline, post-intervention (10 wks), follow up (16 wks)	SF-36 - mental health subscale	score 0-100; higher score means better health
Outcome 8	Secondary	Role-emotional	Baseline, post-intervention (10 wks), follow up (16 wks)	SF-36 - role-emotional subscale	score 0-100; higher score means better health
Outcome 9	Secondary	Social functioning	Baseline, post-intervention (10 wks), follow up (16 wks)	SF-36 - social functioning subscale	score 0-100; higher score means better health
Outcome 10	Secondary	Vitality	Baseline, post-intervention (10 wks), follow up (16 wks)	SF-36 - Vitality subscale	score 0-100; higher score means better health
Outcome 11	Secondary	Cardiovascular health	Baseline, post-intervention (10 wks), follow up (16 wks)	Blood pressure, systolic	
Outcome 12	Secondary	Cardiovascular health	Baseline, post-intervention (10 wks), follow up (16 wks)	Blood pressure, diastolic	
Outcome 13		--	--	--	--
Outcome 14		--	--	--	--
Outcome 15		--	--	--	--
Outcome 16		--	--	--	--

Characteristics of included studies	General community			
Study ID	**Smith 2007**			
Outcome 17	--	--	--	--
Outcome 18	--	--	--	--
Outcome 19	--	--	--	--
Outcome 20	--	--	--	--
Outcome 21	--	--	--	--
Outcome 22	--	--	--	--
Outcome 23	--	--	--	--
Outcome 24	--	--	--	--
Outcome 25	--	--	--	--
Outcome 26	--	--	--	--
Method of analysis				
Statistics	One baseline (time 1) and two follow-up measurements were made at 10 wks (time 2) and 16 wks (time 3). As the follow up measures were not equally spaced, and to ensure that changes in outcomes were detected over time, the three measures (STPI, GHQ-12 and SF-36) were reduced to two summary measures, short-term and long-term effects. These two measures were calculated as the difference between time 2 and baseline (short-term effects) and time 3 minus time 2 (long-term effects), respectively. Mean differences in short-term and long-term effects of therapy between groups were determined using independent Student t-tests. Ninety-five percent confidence intervals were based on mean differences in scores of the STPI, GHQ and SF-36. Chi-square tests was used for categorical data. Levels of significance were reported at $p < 0.05$ and $p < 0.01$.			

Characteristics of included studies	General community	
Study ID	**Smith 2007**	
Population analysed	Intent-to-treat	mITT is interpretted
Missing data	10-wk data was missing for 9/131 participants (7%). Reasons for drop out are provided including ill health, too busy, and not specified. Drop outs in-text do not align to drop outs reported in the CONSORT diagram.	
INTERNAL VALIDITY		
Overall risk of bias (select from list)	High risk of bias in one or more key domains	
Summary (descriptive)		