	Breast cancer		Breast cancer		Breast cancer	
Study ID	**Alpozgen 2017**		**Eyigor 2010**		**Gajbhiye 2013**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	Randomisation and allocation sequence generated using a computerised random number list.	Y	Patients were randomised using a random numbers table.	Y	Allocations randomised by lottery.
	NI	Details about concealing allocation sequence not reported. It is possible the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	Details about concealing allocation sequence not reported. It is possible the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	Details about concealing allocation sequence not reported. It is possible the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	PN	Baseline characteristics appear comparable between groups (only those included in the analysis)	PN	Baseline characteristics appear comparable between groups (only those included in the analysis)	NI	Baseline characterestics are not reported. Reported baseline outcome scores appear matched between groups.
	Some concerns		**Some concerns**		**Some concerns**	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PN	2/57 did not complete the trial. This was considered consistent with what would occur outside the trial context.	Y	10/52 enrolled participants did not complete the trial. Reasons considered related to trial context (home-based exercise, with loss of interest and medical problems cited as issues)	NI	30 participants enrolled and analysed. There is no indication of dropouts/deviations (no CONSORT)
	NA	not applicable	PY	Patients with medical reasons, or loss of interest possibly linked to outcomes	NI	no information
	NA	not applicable	N	Imbalanced. All 10 dropouts were in the control group.	NI	no information
	PY	Modified ITT. Participants without final assessment data were excluded from the final analysis	PY	Modified ITT. Participants without final assessment data were excluded from the final analysis	PY	Data were analysed using an intention-to-treat model (or modified).

	Breast cancer		Breast cancer		Breast cancer	
Study ID	**Alpozgen 2017**		**Eyigor 2010**		**Gajbhiye 2013**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	NA	not applicable	NA	not applicable	PN	it is possible participants with missing data were not included in the analysis
	Low		**High**		**Some concerns**	
Bias due to missing outcome data	PY	Data from 2/57 (<5%) participants missing from the final analysis. This was considered sufficiently small that outcomes were not affected.	N	10/25 participants in the control group without final assessment data were excluded from the final analysis. All participants in the intervention group (27/27) had final assessment data.	PN	The authors do not specify that there was missing data for any participants. (no CONSORT)
	NA	not applicable	N	No analyses were conducted to test for missingness of the outcome data	NI	no information
	NA	not applicable	PY	missingness of the data considered possibly related to true value outcome (medical reasons)	NI	no information
	NA	not applicable	PY	missingness of the data considered probably related to true value outcome, given that it was unbalanced between groups.	NI	no information
	Low		**High**		**High**	
Bias in measurement of the outcome	N	The trial included appropriate outcome measures for pain, shoulder ROM, upper extremity and grip strength and functional status of the affected limb.	N	The trial included appropriate outcome measurement instruments	N	The trial included appropriate outcome measurement instruments.
	PN	The methods of outcome assessment were comparable across intervention groups.	PN	The methods of outcome assessment were comparable across intervention groups.	PN	The methods of outcome assessment were comparable across intervention groups.
	Y	The study does not specify if assessors were blinded to treatment allocation.	Y	The study does not specify if assessors were blinded.	Y	The study does not specify if assessors were blinded.
	PY	Participant-reported outcomes (pain, disability) are subjective and could be influenced by knowledge of the intervention received.	PY	Included participant-reported outcome such as QoL, depression, fatigue that could be influenced by knowledge of the intervention received.	PY	Included participant-reported outcome such as QoL that could be influenced by knowledge of the intervention received.

	Breast cancer		Breast cancer		Breast cancer	
Study ID	**Alpozgen 2017**		**Eyigor 2010**		**Gajbhiye 2013**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	PN	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.	PN	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.	PN	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.
	Some concerns		**Some concerns**		**Some concerns**	
Bias in selection of the reported result	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.	NI	The researchers' pre-specified intentions are not available, and are not sufficiently described, making it difficult to judge.
	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results	PY	It is possible outcome measures reported have been selected on the basis of results
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	Some concerns		**Some concerns**		**High**	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable
Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.
a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

	Breast cancer		Breast cancer		Breast cancer	
Study ID	**Martin 2013**		**Odynets 2018**		**Odynets 2019**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	Allocation conducted using simple randomisation.	Y	Participants randomised into groups using sequentialy numbered opaque sealed envelopes.	Y	Randomisation was done by an independent person via random numbers generated in Microsoft Excel
	NI	Details about concealing allocation sequence not reported. It is possible the enrolling investigator or the participant had knowledge of the forthcoming allocation.	Y	Participants randomised into groups using sequentially numbered opaque sealed envelopes.	Y	Participants randomised into groups using sequentially numbered opaque sealed envelopes.
	NI	Baseline characterestics are not reported.	N	No significant differences between the groups for baseline characteristics.	N	No significant differences between the groups for baseline characteristics.
	Some concerns		**Low**		**Low**	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	NI	The authors do not report whether deviations arose because of the trial context. (no CONSORT)	PN	All participant receive the allocated intervention, with dropouts (3/71) considered consistent with what would occur outside the trial context.	PN	All participant receive the allocated intervention, with dropouts (9/124) considered consistent with what would occur outside the trial context.
	NI	no information	NA	not applicable	NA	not applicable
	NI	no information	NA	not applicable	NA	not applicable
	Y	Data were analysed using an intention-to-treat model.	PY	Modified intent-to-treat, participants who discontinued intervention were excluded from the analysis	PY	Modified intent-to-treat, participants who discontinued intervention were excluded from the analysis

	Breast cancer		Breast cancer		Breast cancer	
Study ID	**Martin 2013**		**Odynets 2018**		**Odynets 2019**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	PN	it is possible participants with missing data were not included in the analysis	NA	not applicable	NA	not applicable
	Some concerns		**Low**		**Low**	
Bias due to missing outcome data	PN	The authors do not specify that there was missing data for any participants. (no CONSORT)	PY	Data from 3/71 (<5%) participants missing from the final analysis. This was considered sufficiently small that outcomes were not affected.	PN	Data from 9/124 (<10%) participants missing from the final analysis, which may affect the outcomes measured.
	NI	no information	NA	not applicable	N	No analyses were conducted to test for missingness of the outcome data
	NI	no information	NA	not applicable	PY	missingness of the data considered possibly related to true value outcome (medical reasons)
	NI	no information	NA	not applicable	PY	missingness of the data considered probably related to true value, given that it was unbalanced between groups.
	High		**Low**		**Some concerns**	
Bias in measurement of the outcome	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.
	PN	The methods of outcome assessment were comparable across intervention groups.	PN	The methods of outcome assessment were comparable across intervention groups.	PN	The methods of outcome assessment were comparable across intervention groups.
	Y	The study does not specify if assessors were blinded.	Y	The study does not specify if assessors were blinded.	Y	The study does not specify that assessors were blinded.
	PY	Assessor-rated Muscular endurance test battery, unlikely influenced by knowledge of the intervention received	PY	Participant-reported outcome such as QoL that could be influenced by knowledge of the intervention received. Haemodynamic parameters, respiratory measures are low risk.	PY	Participant-reported outcomes (QoL) are subjective and could be influenced by knowledge of the intervention received.

	Breast cancer		Breast cancer		Breast cancer	
Study ID	**Martin 2013**		**Odynets 2018**		**Odynets 2019**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	PN	There is no reason to believe that that assessor-rated outcomes were substantially influenced by knowledge of the intervention received.	PN	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.	PN	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.
	Some concerns		**Some concerns**	Pilates is the comparator group. Bias may be against the intervention	**Some concerns**	Pilates is the comparator group. Bias may be against the intervention
Bias in selection of the reported result	NI	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.
	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results	PY	There are multiple publications from this study presenting different outcomes domains and measures, it is not clear if all the outcome measures have been reported.	PY	There are multiple publications from this study presenting different outcomes domains and measures, it is not clear if all the outcome measures have been reported.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	Some concerns		**High**	Pilates is the comparator group. Bias may be against the intervention	**High**	Pilates is the comparator group. Bias may be against the intervention
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no,
Source: Chapter 8 Cochrane har
a. For the precise wording of sig

	Breast cancer		Prostate Cancer		Prostate Cancer	
Study ID	**Sener 2017**		**Gomes 2018**		**Pedriali 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	PN	Allocation was by simple random sampling method of drawing blue or red card	Y	Patients were randomised by sealed envelopes into three treatment groups	Y	Patients were randomised by sealed envelopes into three treatment groups
	PN	Drawing the card would reveal the assignment. It is likely the enrolling investigator or the participant had knowledge of the forthcoming allocation.	PY	Randomisation used sealed envelopes but no further information was provided (i.e. opaque, sequentially numbered)	PY	Randomisation used sealed envelopes but no further information was provided (i.e. opaque, sequentially numbered)
	N	Baseline characteristics are comparable between groups (age, height, weight and lymphedema development time)	PN	Baseline urinary incontinence-related characteristics were balanced between the groups.	PN	Baseline urinary incontinence-related characteristics were balanced between the groups.
	Some concerns		**Low**		**Low**	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	Y	2/32 participants in Pilates group dropped out. This was considered consistent with what would occur outside the trial context BUT important cointerventions were not consistent with trial protocol	PY	All randomised participants received the intended intervention. 6/110 did not complete assigned intervention some of which were related to the trial context. (AES discomfort, rated continent)	PY	All patients recieved the intended intervention. 5/90 patients did not complete assigned intervention, some of which were related to the trial context. (AES discomfort, rated continent)
	Y	Decongestive therapy (DCT) is gold standard treatment for lymphedema, which may affect the outcome	PN	Any impact on outcomes is expected to be slight.	PN	Any impact on outcomes is expected to be slight.
	N	67% in the Pilates group and 43% in the control group received DCT (not balanced)	Y	Dropouts are reasonably balanced across treatment groups (between 1-3 in each group)	Y	Dropouts are reasonably balanced across treatment groups but no dropout in the control group
	PY	Modified intent-to-treat, participants who discontinued intervention were excluded from the analysis	PY	Modified intent-to-treat, participants who discontinued intervention were excluded from the analysis	PY	Modified intent-to-treat, participants who discontinued intervention were excluded from the analysis

	Breast cancer		Prostate Cancer		Prostate Cancer	
Study ID	**Sener 2017**		**Gomes 2018**		**Pedriali 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	NA	not applicable	NA	not applicable	NA	not applicable
	High		**Some concerns**		**Some concerns**	
Bias due to missing outcome data	PY	2/62 participants excluded from final analysis	PN	Data from 6/110 participants excluded from final analysis (<10% each group).	PN	5/90 participants dropped out and were excluded from final analysis
	NA	not applicable	N	No analyses were conducted to test for missingness of the outcome data	N	No analyses were conducted to test for missingness of the outcome data
	NA	not applicable	PY	missingness of the data considered possibly related to true value outcome (medical reasons)	PY	missingness of the data considered possibly related to true value outcome (medical reasons)
	NA	not applicable	PN	missingness of the data not likely related to its true value	PN	missingness of the data not likely related to its true value
	Low		**Some concerns**		**Some concerns**	
Bias in measurement of the outcome	PN	The trial included appropriate outcome measurement instruments.	PN	The trial included appropriate outcome measurement instruments.	PN	The trial included appropriate outcome measurement instruments.
	PN	The methods of outcome assessment were comparable across intervention groups.	PN	The methods of outcome assessment were comparable across intervention groups.	PN	The methods of outcome assessment were comparable across intervention groups.
	Y	All evaluations done by another physiotherapy, but not spefified if they were blinded to treatment allocation.	Y	Outcome assessors were blinded	N	Outcome assessors were blinded
	PY	Participant-reported outcomes (QoL) are subjective and could be influenced by knowledge of the intervention received.	NA	not applicable	NA	not applicable

	Breast cancer		Prostate Cancer		Prostate Cancer	
Study ID	**Sener 2017**		**Gomes 2018**		**Pedriali 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	PN	There is no reason to believe that that patient-reported outcomes were influenced by knowledge of the intervention received.	NA	not applicable	NA	not applicable
	Some concerns		**Low**		**Low**	
Bias in selection of the reported result	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.	PY	The researchers' pre-specified intentions are available (trial registry) and data analysis was performed accordingly.	PY	The researchers' pre-specified intentions are available (trial registry) and data analysis was performed accordingly.
	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results	PN	There is evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There is no evidence that authors select from multiple analyses.
	Some concerns		**Low**		**Low**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.

Y = yes; PY= partial yes; N = no,
Source: Chapter 8 Cochrane har
a. For the precise wording of sig

			Diabetes, type 2		Diabetes, type 2	
Study ID			**Melo 2020**		**Torabian 2013**	
	Judgement	**Signialling question**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process		1.1 Was the allocation sequence random?	NI	The only information about randomisation is a statement that the study is randomised. There is an absence of specific information about generation of the randomisation sequence.	PY	The authors state "In order to select the subjects randomly, patients' list was retrieved from the diabetes centre and they were divided into two groups through a table of random figures."
		1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	NI	Allocation concealment not described. It is likely that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	Allocation concealment not described. It is likely that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
		1.3 Did baseline differences between intervention groups suggest a problem with the randomisation process?	PN	Baseline demographics are matched between groups, except for the types of prescribed oral antidiabetic agents. This was judged as not relevant as they belonged to the same class of oral antidiabetic agents (sulfonylureas).	PN	Baseline demographics are matched between groups
		Risk-of-bias judgement	**Some concerns**		**Some concerns**	
		2.1. Were participants aware of their assigned intervention during the trial?	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
		2.2. Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
		2.3. If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the trial context?	PN	All participants received the allocated intervention. Two subjects (one from each intervention) excluded from the analysis because of 'health condition'.	NI	The authors do not provide sufficient information (no consort). It is presumed all randomised participants were included in the analysis

			Diabetes, type 2		Diabetes, type 2	
Study ID			**Melo 2020**		**Torabian 2013**	
	Judgement	**Signialling question**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])		2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	PN	deviations due to health condition could affect the outcome	NI	No information.
		2.5. If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	Y	deviations were matched between groups.	NI	No information.
		2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	PY	Authors excluded 2 participant during followup due to 'health condition'.	PY	The authors do not provide sufficient information (no consort). It is presumed all randomised participants were included in the analysis
		2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	PN	Exclusion of participants may overstate the treatment effect, but probably not substantially.	NA	Not applicable.
		Risk-of-bias judgement	**Some concerns**		**Some concerns**	
Bias due to missing outcome data		3.1 Were data for this outcome available for all, or nearly all, participants randomized?	Y	Data was available for nearly all participants randomised (2/24 missing data).	PY	There was no reported attrition over the course of the study and no missing data was reported by the authors.
		3.2 If N/PN to 3.1: Is there evidence that the result was not biased by missing outcome data?	NA	Not applicable.	NA	Not applicable.

			Diabetes, type 2		Diabetes, type 2	
Study ID			**Melo 2020**		**Torabian 2013**	
	Judgement	**Signialling question**	**Judgement**	**Comments**	**Judgement**	**Comments**
~~data~~		3.3 If N/PN/NI to 3.2: Could missingness in the outcome depend on its true value?	NA	Not applicable.	NA	Not applicable.
		3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA	Not applicable.	NA	Not applicable.
		Risk-of-bias judgement	**Low**		**Low**	
Bias in measurement of the outcome		4.1 Was the method of measuring the outcome inappropriate?	N	The trial included appropriate outcome measures that are likely sensitive to pausible intervention effects.	Y	The GHQ-28 is intended for use as a screening instrument and is not designed to measure change over time. Subscales are not independent of each other and subscores should not be used to indicate specific psychological diagnoses.
		4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
		4.3 If N/PN/NI to 4.1 and 4.2: Were outcome assessors aware of the intervention received by study participants?	Y	Outcomes were subjective, participant reported measures. The trialists do not explictly state if outcome assessors (objective measures such as HbA1c) were blinded to intervention status.	Y	Outcomes were subjective, participant reported measures.
		4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	Y	Included participant-reported outcomes	PY	Included participant-reported outcomes
		4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	PN	There is no reason to believe that that patient-reported outcomes were influenced by knowledge of the intervention received.	PN	There is no reason to believe that that patient-reported outcomes were influenced by knowledge of the intervention received.
		Risk-of-bias judgement	**Some concerns**		**High**	

			Diabetes, type 2		Diabetes, type 2	
Study ID			**Melo 2020**		**Torabian 2013**	
	Judgement	**Signialling question**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result		5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	Y	The researchers' pre-specified intentions are available in sufficient detail.	PY	The researchers' pre-specified intentions are available in sufficient detail
		Is the numerical result being assessed likely to have been selected, on the basis of the results, from… 5.2. ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	N	There is evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	N	There is evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.
		Is the numerical result being assessed likely to have been selected, on the basis of the results, from… 5.3 ... multiple eligible analyses of the data?	N	There is evidence that all eligible reported results for the outcome measurement correspond to all intended analyses.	N	There is evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.
		Risk-of-bias judgement	**Low**		**Low**	
Overall risk of bias		#N/A	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, Y = yes; PY= partial Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable
Source: Chapter 8 Cochrane ha Source: Chapter 8 Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.
a. For the precise wording of sig a. For the precise v a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

	Diabetes, type 2	
Study ID	**Yucel 2016**	
	Judgement	**Comments**
Bias arising from the randomisation process	Y	Participants were randomly allocated to the Pilates exercise group or control group, 28 for each (simple allocation using www.random.org).
	NI	Allocation concealment not described. It is likely that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	PY	Limited information, but baseline demographics (age, duration of diabetes) appear to be matched between groups.
	Some concerns	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PY	All participants received the allocated intervention. 7/28 participants did not complete the program, which was considered consistent with what would occur outside the trial context BUT 4 participant in the control group excluded for reasons inconsistent with the trial protocol.

	Diabetes, type 2	
Study ID	**Yucel 2016**	
	Judgement	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	PY	Participant with severe diabetic complications, depression, and other medical contraindications excluded, which may affect the outcome measure
	Y	Exclusion of participant was not matched between treatment groups (4 excluded in the control group only)
	PY	The authors only analysed data for participants who completed the study.
	NA	Not applicable.
	High	
Bias due to missing outcome data	PN	Data was not available for all randomised participants (11/56, ~20%)
	N	Analysis methods to correct for missing outcome data are not described, nor, is there any mention of sensitivity analysis being conducted to show that the results are not affected by the attrition.

	Diabetes, type 2	
Study ID	**Yucel 2016**	
	Judgement	**Comments**
~~data~~	Y	Reasons for dropout/exclusion included headache or hypertension, mobility issues, diabetic complications etc.
	Y	missingness of the data is likely related to its true value.
	High	
Bias in measurement of the outcome	N	The trial included appropriate outcome measures that are likely sensitive to pausible intervention effects.
	N	The methods of outcome assessment were comparable across intervention groups.
	Y	Outcomes were subjective, participant reported measures.
	PY	Included participant-reported outcomes
	PN	There is no reason to believe that that patient-reported outcomes were influenced by knowledge of the intervention received.
	Some concerns	

	Diabetes, type 2	
Study ID	**Yucel 2016**	
	Judgement	**Comments**
Bias in selection of the reported result	Y	The researchers' pre-specified intentions are available in sufficient detail.
	N	There is evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.
	N	There is evidence that all eligible reported results for the outcome measurement correspond to all intended analyses.
	Low	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no,
Source: Chapter 8 Cochrane hai
a. For the precise wording of sig

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Abasiyanik 2018**		**Bulguroglu 2015**		**Duff 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	PN	Randomisation was modified alternate allocation,based on stratifications according to gender and Expanded Disability Status Scale (EDSS).	NI	There is an absence of specific information about generation of the randomization sequence. The only information is a statement that participants were randomly divided into 3 groups as Mat Pilates, Reformer Pilates and control groups.	Y	Randomization was performed using a computer-generated allocation schedule, with a block size of two.
	N	As the participants were randomised using alternate allocation, there is reason to suspect that enrolling investigator or the participant had knowledge of the forthcoming allocation.	PN	There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	Y	Randomisation was performed by a researcher who was not involved in outcome assessment or statistical analysis.
	N	The outcome measurements demonstrated no statistically significant difference at the baseline	PY	Baseline characteristics appear different - Pilates (mat) group appear older with longer disease duration than control - but information is lacking.	N	No statistically significant differences between groups
	Some concerns		**High**		**Low**	
	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.
	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Abasiyanik 2018**		**Bulguroglu 2015**		**Duff 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	N	All participants received the allocated intervention. Reasons for loss to follow-up/discontinuation were judged to be consistent with what could occur outside the trial context.	N	All participants received the allocated intervention. Reasons for loss to follow-up/discontinuation were judged to be consistent with what could occur outside the trial context.	N	All participants received the allocated intervention. Reasons for loss to follow-up/discontinuation were judged to be consistent with what could occur outside the trial context.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Y	Modified. Final analyses excluded participants lost to follow-up/missing outcome data. No imputations made.	Y	Modified. Final analyses excluded participants lost to follow-up/missing outcome data. No imputations made.	Y	Data were analyzed using the last observation carried forward.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Low		**Low**		**Low**	
Bias due to missing outcome	N	Attrition is high (>20%). 5/21 participants in Pilates group and 4/21 in home exercise group were excluded from final analyses.	PN	7/43 (16.2%) participants were excluded from final analyses.	Y	Data was available for all the participants and was analysed from the groups to which they were assigned
	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)	NA	Not applicable.

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Abasiyanik 2018**		**Bulguroglu 2015**		**Duff 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
data	PY	One patient in Pilates group was lost to follow-up due to relapse	PN	There is no evidence to suggest that missing outcome data depended on its true value	NA	Not applicable.
	PN	There is no information to suggest that missingness in the outcome depended on its true value.	NA	Not applicable.	NA	Not applicable.
	Some concerns		**Low**		**Low**	
Bias in measurement of the outcome	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.
	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.
	PY	Outcome assessors (phyisotherapist/psychologist) were probably aware of the intervention received (not reported)	N	The evaluations were done by physiotherapists blinded to treatment allocation before and after the treatment	N	Researchers involved in outcome assessment and analysis were blinded to group assignment, with statistical analysis blinded through coding of the study groups.
	Y	Outcomes included subjective measures that could have been influenced by knowledge of the intervention received.	NA	Not applicable.	NA	Not applicable.
	PN	There is no reason to believe that that patient-reported outcomes were influenced by knowledge of the intervention received.	NA	Not Applicable.	N	Not applicable.

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Abasiyanik 2018**		**Bulguroglu 2015**		**Duff 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	Some concerns	Low risk for objective outcome measures	**Low**		**Low**	
Bias in selection of the reported result	PY	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)	PY	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)	PY	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)
	N	All eligible outcome measurements avialable	N	All eligible outcome measurements avialable	N	All eligible outcome measurements avialable
	N	All eligible anlayses reported.	N	All eligible anlayses reported.	N	All eligible anlayses reported.
	Low		**Low**		**Low**	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**Low**	The study does not have any bias considered to seriously alter the results.

Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable
Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.
a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Eftekhari 2018**		**Fleming 2019**		**Freeman 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	NI	There is an absence of specific information about generation of the randomization sequence. The only information is a statement that participants were randomly divided into 2 Pilates training (PT) and control (C) groups of equal size.	Y	Participants were randomized to supervised Pilates, home based Pilates, or wait-list using www.randomizer.org.	Y	The random sequence was generated using a computerized random number generator. Block randomization, with each center as the block, was used.
	PN	Closed envelopes were used. No other details provided. There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	Y	Randomisation was peformed by an independent researcher who was not involved in outcome assessments.	Y	Before the start of the trial, the study coordinator prepared sequentially numbered, opaque, sealed envelopes containing the treatment allocation.
	PN	No statistically significant differences between groups for age, weight, BMI. No further information provided on disease duration, EDSS or other possible confounders.	PY	Differences in state and trait anxiety detected at baseline between Pilates (supervised) and control group. All other measures matched between groups.	N	No significant differences in terms of baseline values were observed between the Pilates and control group.
	High		**Some concerns**		**Low**	
	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.
	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Eftekhari 2018**		**Fleming 2019**		**Freeman 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	NI	All participants received the allocated intervention. Reasons for loss to follow-up/discontinuation were not provided	N	All participants received the allocated intervention. Reasons for loss to follow-up/discontinuation were judged to be consistent with what could occur outside the trial context.	N	All participants received the allocated intervention. Reasons for loss to follow-up/discontinuation were judged to be consistent with what could occur outside the trial context.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Y	2/15 (13.3%) participants in the Pilates and 3/15 (20%) in the control group dropped out.	NA	Not applicable.	NA	Not applicable.
	Y	Modified. Final analyses excluded participants lost to follow-up/missing outcome data. No imputations made.	Y	Modified. Final analyses excluded participants lost to follow-up/missing outcome data. No imputations made.	Y	Data were analyzed using the last observation carried forward.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Some concerns		**Low**		**Low**	
Bias due to missing outcome	PN	5/30 (16.67%) participants did not complete the study	N	Attrition was high in the supervised Pilates group (2/5 participants). 1/7 in wait-list group excluded	N	Missing data from 4/33 in Pilates group, 5/35 in standardised exercise group and 7/32 in relaxation group (including relapser and those lost t- follow-up)
	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)	Y	Missing outcome data imputed using last observation carried forward. Also sensitivity analyses performed using complete cases only that yielded similar results.

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Eftekhari 2018**		**Fleming 2019**		**Freeman 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
data	NI	Reasons for dropout/missing data not provided.	PY	Reason for exclusion may be disease related. The male participant excluded.	NA	Not applicable.
	NA	Not applicable.	PY	missingness in the outcome likely depends on its true value.	NA	Not applicable.
	High		**High**		**Low**	
Bias in measurement of the outcome	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.
	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.
	N	Pre- and post-test of the variables in all the participants were assessed by one of the authors, who was blind to treatment groups.	NI	No explict statement if outcome assessors were blinded to intervention status.	N	The assessing therapists remained blind to treatment allocation throughout the trial.
	NA	Not applicable.	PY	Participant-reported outcomes could be influenced by knowledge of the intervention received.	NA	Not applicable.
	NA	Not applicable.	PN	There is no reason to believe that that patient-reported outcomes were influenced by knowledge of the intervention received.	NA	Not applicable.

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Eftekhari 2018**		**Fleming 2019**		**Freeman 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	Low		**Some concerns**		**Low**	
Bias in selection of the reported result	PY	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)	PY	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)	PY	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)
	N	All eligible outcome measurements avialable	N	All eligible outcome measurements avialable	N	All eligible outcome measurements avialable
	N	All eligible anlayses reported.	N	All eligible anlayses reported.	N	All eligible anlayses reported.
	Low		**Low**		**Low**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**Low**	The study does not have any bias considered to seriously alter the results.

Y = yes; PY= partial yes; N = no,
Source: Chapter 8 Cochrane har
a. For the precise wording of sig

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Kalron 2016**		**Küçük 2015**		**Marandi 2013**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	PY	A block randomization procedure was used, organized by the study coordinator.	N	Randomization was performed by the card method (red or blue card).	NI	There is an absence of information about generation of the randomisation sequence. The only information is a statement that the selected 'patients were randomly divided into 3 equal groups'.
	Y	Central concealment by numbered tickets placed in sealed opaque envelopes. The investigators opened the sealed envelopes sequentially only after the participant's name and other details were written on the appropriate envelope.	NI	The trialists do not detail blinding participant allocation in the publication. There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	No information provided
	N	No significant differences in terms of baseline values were observed between the Pilates and control group.	PN	The baseline measurements appear matched between the intervention and comparator groups.	NI	There is no useful baseline information available.
	Low		**Some concerns**		**High**	
	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.
	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Kalron 2016**		**Küçük 2015**		**Marandi 2013**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	N	All participants received the allocated intervention. Reasons for loss to follow-up/discontinuation were judged to be consistent with what could occur outside the trial context.	N	All participants received the allocated intervention. Reasons for loss to follow-up/discontinuation were judged to be consistent with what could occur outside the trial context.	NI	It is not clear if all randomised participants received the intervention. Reasons for loss to follow-up/ discontinuation were not provided.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	NA	Not applicable.	NA	Not applicable.	Y	4/19 (21%) participants in each group were not included in the final analysis
	Y	Modified. Final analyses excluded participants lost to follow-up/missing outcome data. No imputations made.	PY	No information provided. It is assumed final analyses simply excluded participants lost to follow-up/missing outcome data.	PN	Final analyses excluded participants who were absent from more than 6 sessions.
	NA	not applicable.	NA	Not applicable.	PY	Per Protocol analysis does not reflect typical practice and is considered to overestimate the treatment effect because those who do not complete treatment cannot benefit from it (i.e., the proportion of responders is overstated)
	Low		**Low**		**High**	
Bias due to missing outcome	Y	Data was available for nearly all the participants. There is minimal attrition in the study.	N	Attrition was high. 8/20 (40%) participants dropped out of the study. It is assumed the missing data not included in the final analysis.	N	4/19 (21%) from each group were excluded from final analyses
	NA	Not applicable.	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Kalron 2016**		**Küçük 2015**		**Marandi 2013**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
data	NA	Not applicable.	PY	Participants dropped out of the study due to health, transportation, or other problems	NI	Reasons for dropout/missing data not provided.
	NA	Not applicable.	PN		PN	There is no information to suggest that missingness in the outcome depended on its true value. Missing data is balanced between the group.
	Low		**Some concerns**	There is no information to suggest that missingness in the outcome depended on its true value.	**Some concerns**	
Bias in measurement of the outcome	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.
	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.
	N	All measurements were completed by an experienced physical therapist specialized in neurological rehabilitation, blinded to participant grouping.	NI	No explict statement if outcome assessors were blinded to intervention status.	NI	No explict statement if outcome assessors were blinded to intervention status.
	NA	Not applicable.	PY	Participant/observer reported outcomes could be influenced by knowledge of the intervention received as they require judgement that is susceptible to measurement bias.	PY	Participant/observer reported outcomes could be influenced by knowledge of the intervention received as they require judgement that is susceptible to measurement bias.
	NA	Not applicable.	PN	There is no reason to believe that that observer-reported outcomes were influenced by knowledge of the intervention received.	NA	Not Applicable.

	Multiple Sclerosis		Multiple Sclerosis		Multiple Sclerosis	
Study ID	**Kalron 2016**		**Küçük 2015**		**Marandi 2013**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	Low		**Some concerns**		**Some concerns**	
Bias in selection of the reported result	PY	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)	PY	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)	NI	The researchers' pre-specified intentions are not available and not clearly described.
	N	All eligible outcome measurements avialable	N	All eligible outcome measurements avialable	NI	The authors do not provide sufficient details to be confident that no additional measures were omitted from publication.
	N	All eligible reported results for the outcome measurement correspond to all intended analyses.	N	All eligible reported results for the outcome measurement correspond to all intended analyses.	N	All eligible reported results for the outcome measurement correspond to all intended analyses.
	Low		**Low**		**Some concerns**	
Overall risk of bias	**Low**	The study does not have any bias considered to seriously alter the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no,
Source: Chapter 8 Cochrane har
a. For the precise wording of sig

	Multiple Sclerosis		Multiple Sclerosis		Myleopathy (HTLV-1 associated)	
Study ID	**Rezvani 2017**		**Sisi 2013**		**Borges 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	NI	There is an absence of information about generation of the randomisation sequence, other than "Participants were randomly placed into one of three groups".	NI	There is an absence of information about generation of the randomisation sequence, other than articipants "...were divided into three groups randomly."	Y	Patients were randomised by a table of random numbers.
	NI	No information provided	NI	No information provided	Y	Patients were allocated into groups by a blinded team member who did not participate in the assessment, treatment, or statistical analysis phases.
	NI	There is no useful baseline information available.	PN	No differences between groups for age, weight, height. No further information provided on disease duration or EDSS.	NI	There is no useful baseline information available.
	High		**High**		**Some concerns**	
	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.
	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.

	Multiple Sclerosis		Multiple Sclerosis		Myleopathy (HTLV-1 associated)	
Study ID	**Rezvani 2017**		**Sisi 2013**		**Borges 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	NI	It is not clear if all randomised participants received the intervention. No loss to follow-up/ discontinuation mentioned. 10 participants in each group at enrolment, but results do not provide the N analysed.	NI	It is not clear if all randomised participants received the intervention. No loss to follow-up/ discontinuation mentioned. 15 participants in each group at enrolment, but results do not provide the N analysed.	PN	All participants received their intended intervention. The were no deviations that were considered to arise because of the trial context.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	NI	No information provided	NI	No information provided	NA	Not applicable.
	NI	It is not known whether the author captured the effect of assignment to intervention given that participant attrition and missing data was not reported.	NI	It is not known whether the author captured the effect of assignment to intervention given that participant attrition and missing data was not reported.	Y	Analyses were conducted on an intention-to-treat basis. This is an appropriate analysis method to estimate the effect of assignment to intervention
	NI	No information provided	NI	No information provided	NA	Not Applicable.
	High		**High**		**Low**	
Bias due to missing outcome	NI	It is not clear if was data available/included for all participants.	NI	It is not clear if was data available/included for all participants.	Y	Data were avaialble for all (or nearly all) participants
	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)	NA	Not Applicable.

	Multiple Sclerosis		Multiple Sclerosis		Myleopathy (HTLV-1 associated)	
Study ID	**Rezvani 2017**		**Sisi 2013**		**Borges 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
data	NI	Reasons for dropout/missing data not provided.	NI	Reasons for dropout/missing data not provided.	NA	Not Applicable.
	PN	There is no information to suggest that missingness in the outcome depended on its true value.	PN	There is no information to suggest that missingness in the outcome depended on its true value.	NA	Not Applicable.
	Some concerns		**Some concerns**		**Low**	
Bias in measurement of the outcome	N	It is likely that the testing measures used are sensitive to plausible intervention effect.	N	It is likely that the testing measures used are sensitive to plausible intervention effect.	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.
	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.
	PY	The researchers were probably aware of participant allocation	PY	The researchers were probably aware of participant allocation	PN	Outcome measures were reported by the participants who were aware of the intervention received.
	PY	Participant/observer reported outcomes could be influenced by knowledge of the intervention received as they require judgement that is susceptible to measurement bias (self report of disability, static balance and dynamic balance).	PY	Participant/observer reported outcomes could be influenced by knowledge of the intervention received as they require judgement that is susceptible to measurement bias (static balance and dynamic balance).	Y	Knowledge of treatment received could have biased the assessor to favour the intervention
	PN	There is no reason to believe that that observer-reported outcomes were influenced by knowledge of the intervention received.	PN	There is no reason to believe that that observer-reported outcomes were influenced by knowledge of the intervention received.	PN	There is no reason to believe that that patient-reported outcomes were influenced by knowledge of the intervention received.

	Multiple Sclerosis		Multiple Sclerosis		Myleopathy (HTLV-1 associated)	
Study ID	**Rezvani 2017**		**Sisi 2013**		**Borges 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	Some concerns		**Some concerns**		**Low**	
Bias in selection of the reported result	NI	The researchers' pre-specified intentions are not available and not clearly described.	NI	The researchers' pre-specified intentions are not available and not clearly described.	PY	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)
	NI	The authors do not provide sufficient details to be confident that no additional measures were omitted from publication.	NI	The authors do not provide sufficient details to be confident that no additional measures were omitted from publication.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	PY	Results are missing for a key outcome listed in the methods.	N	All eligible reported results for the outcome measurement correspond to all intended analyses.	N	All eligible reported results for the outcome measurement correspond to all intended analyses.
	High		**Some concerns**		**Low**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.

Y = yes; PY= partial yes; N = no,
Source: Chapter 8 Cochrane har
a. For the precise wording of sig

	Parkinson's Disease		Parkinson's Disease		Parkinson's Disease	
Study ID	**Daneshmandi 2017**		**Mollined-Cardalda 2018**		**Pandya 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	PN	No information about generation of the randomisation sequence provided. Authors simply state participants "were randomly and consecutively divided into two experimental and control groups."	Y	Randomisation was performed using IBM® SPSS® Statistics Software. The variables taken under consideration were age, gender, disease duration, Hoehn and Yahr scale ratings and UPDRS motor score	N	Participants were allocated into intervention groups by alternation (odd/even), rather than by true randomisation.
	PN	Allocation concealment not described. It is likely that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	PN	Details on blinding participant allocation not provided. It is assumed the enrolling investigator had no knowledge of the forthcoming allocation.	NI	Allocation concealment not described. It is likely that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	N	Baseline characteristics were matched between groups, including age, gender, disease duration and disease severity	N	Baseline characteristics were matched between groups, including age, gender, disease duration and disease severity	N	Baseline characteristics were matched between groups, including age, gender, disease duration and disease severity
	Some concerns		**Low**		**Some concerns**	
	PY	The clinical trial protocol published on the Iranian Registry of Clinical Trials states that both participants and assessors were blinded, and that the study was a "double blind". This is unlikely given the nature of the intervention.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.
	PY	The clinical trial protocol published on the Iranian Registry of Clinical Trials states that both participants and assessors were blinded, and that the study was a "double blind". This is unlikely given the nature of the intervention.	Y	It is likely that people delivering the interventions were aware of participants' assigned intervention during the trial.	Y	It is likely that people delivering the interventions were aware of participants' assigned intervention during the trial.

	Parkinson's Disease		Parkinson's Disease		Parkinson's Disease	
Study ID	**Daneshmandi 2017**		**Mollined-Cardalda 2018**		**Pandya 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	PN	Almost all participants received their intended intervention. One participant from each group dropped out due to pain, fatigue etc. This was judged to be consistent with what could occur outside the trial context.	PN	All participants received their intended intervention. 4/26 (15.4%) did not complete the allocated program, which was considered possibly related to the trial context.	PN	All participants received their intended intervention. No loss to follow-up/ discontinuation mentioned.
	NA	Not Applicable.	PY	Deviations could affect the outcome	NA	Not Applicable.
	NA	Not Applicable.	N	Unbalanced. 1/13 in the Pilates group and 3/13 in the calisthenics group.	NA	Not Applicable.
	PY	Modified ITT, participants with missing information were not included in the final analysis	PN	Modified ITT, participants with missing information were not included in the final analysis	NI	No information provided (results do not provide the N analysed).
	NA	Not Applicable.	NA	Not Applicable.	PN	It is assumed final analyses included all randomised participants.
	Low		**High**	Bias may be against Pilates. Higher droppout in the Calisthenics group possible due to non-effect.	**Some concerns**	
Bias due to missing outcome	Y	Data was available for nearly all randomised participants. (2/30 ~7% missing)	Y	Data was missing for 4/26 participants (15.4%)	NI	It is not clear if outcome data was available for all, or nearly all, randomised participants (no CONSORT).
	NA	Not applicable.	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)

	Parkinson's Disease		Parkinson's Disease		Parkinson's Disease	
Study ID	**Daneshmandi 2017**		**Mollined-Cardalda 2018**		**Pandya 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
data	NA	Not applicable.	NA	It is possible the missing data could influence the true value	PN	There is no evidence to suggest there is missing data.
	NA	Not applicable.	NA	There is no information to suggest the likelihood that missingness in the outcome depended on its true value.	NA	Not Applicable.
	Low		**Some concerns**		**Low**	
Bias in measurement of the outcome	N	The testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	N	The testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	N	The testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.
	N	The same measurement methods and thresholds were used at comparable time points. All participants assessed 2hrs after taking the PD medication (in 'active' phase)	N	The same measurement methods and thresholds were used at comparable time points. All participants assessed 1 to 1.5 hrs after taking the PD medication (in 'active' phase)	PN	The same measurement methods and thresholds were used at comparable time points.
	PY	The trial protocol states that both participants and assessors were blinded, and that the study was a "double blind"; however this is unlikely given the nature of the intervention.	PY	The researchers were probably aware of participant allocation	PY	The researchers were probably aware of participant allocation
	PY	Knowledge of participants treatment group could have biased the assessor to favour the intervention group when scoring participants out the primary outcome variable of the study.	PY	Knowledge of participants treatment group could have biased the assessor to favour the intervention group when scoring participants out the primary outcome variable of the study.	PY	Knowledge of participants treatment group could have biased the assessor to favour the intervention group when scoring participants out the primary outcome variable of the study.
	PN	There is no reason to believe that that observer-reported outcomes were influenced by knowledge of the intervention received.	PN	There is no reason to believe that that observer-reported outcomes were influenced by knowledge of the intervention received.	PN	There is no reason to believe that that observer-reported outcomes were influenced by knowledge of the intervention received.

	Parkinson's Disease		Parkinson's Disease		Parkinson's Disease	
Study ID	**Daneshmandi 2017**		**Mollined-Cardalda 2018**		**Pandya 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	Some concerns		**Some concerns**		**Some concerns**	
Bias in selection of the reported result	PY	Protocol published on the Iranian Registry of Clinical Trials specified a different primary outcome (parameters of gait cycle) that is not reported here (only the two secondary outcome measures). It is probable the gait analysis is published elswhere (not in English)	Y	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)	NI	The researchers' pre-specified intentions are not available and not clearly described.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	N	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	NI	The authors do not provide sufficient details to be confident that additional measures were omitted from publication.
	PY	Results are missing for a key outcome listed in the methods.	N	All eligible reported results for the outcome measurement correspond to all intended analyses.	N	All eligible reported results for the outcome measurement correspond to all intended analyses.
	Some concerns		**Low**		**Some concerns**	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.

Y = yes; PY= partial yes; N = no,
Source: Chapter 8 Cochrane har
a. For the precise wording of sig

	Stroke recovery		Stroke recovery		Stroke recovery	
Study ID	**Lim 2016**		**Lim 2017**		**Roh 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	NI	No information about generation of the randomisation sequence provided. The only information is a statement that the study is randomised into two groups, a Pilates exercise training group (PG) and a control group (CG).	Y	The randomisation process was performed using random allocation software.	NI	No information about generation of the randomisation sequence provided. The only information is a statement that after completing participants selection, the participants were randomised into two matched number groups.
	NI	Allocation concealment not described. It is likely that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	Allocation concealment not described. It is likely that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	Allocation concealment not described. It is likely that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	N	Baseline characteristics were matched between groups, including age, gender, disease duration and disease severity	N	Baseline characteristics were matched between groups, including age, gender, but details on disease duration and disease severity were not provided.	N	Baseline characterestics are not reported. Baseline outcome scores suggest possible issues with randomisation.
	Some concerns		**Some concerns**		**High**	
	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.
	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.

	Stroke recovery		Stroke recovery		Stroke recovery	
Study ID	**Lim 2016**		**Lim 2017**		**Roh 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	PN	1 participant in the control group hospitalised during the trial (10%). This was judged to be consistent with what could occur outside the trial context.	N	No deviations from intended interventions	NI	The Invesitgators did not report whether deviations arose because of the trial context. No loss to follow-up/ discontinuation mentioned.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	N	Modified ITT. Participants with missing information not included in the analysis.	Y	All randomised participants were included in the analysis.	NI	It is not known whether the author captured the effect of assignment to intervention given that participant attrition and missing data was not reported.
	NA	Not applicable.	NA	Not applicable.	PY	It is assumed that any deviations from usual practice had minimal impact on the outcome.
	Some concerns		**Low**		**Some concerns**	
Bias due to missing outcome	Y	Data was available for nearly all randomised participants.	Y	Data was available for all randomised participants.	NI	It is not clear if was data available/included for all participants.
	NA	Not applicable.	NA	Not applicable.	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)

	Stroke recovery		Stroke recovery		Stroke recovery	
Study ID	**Lim 2016**		**Lim 2017**		**Roh 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
data	NA	Not applicable.	NA	Not applicable.	NI	Reasons for dropout/missing data not provided.
	NA	Not applicable.	NA	Not applicable.	PN	There is no information to suggest the likelihood that missingness in the outcome depended on its true value.
	Low		**Low**		**Some concerns**	
Bias in measurement of the outcome	N	The testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used. (TUG, HR Vo2max)	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used. (Gait speed using 3d motion analysis)
	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.
	PY	The trialists do not explictly state if outcome assessors were blinded to intervention status.	NI	The trialists do not explictly state if outcome assessors were blinded to intervention status.	NI	The trialists do not explictly state if outcome assessors were blinded to intervention status.
	PN	It is unlikely that outcome assessors could influence the objective outcomes in this study (force plate)	PN	It is unlikely that outcome assessors could influence the objective outcomes in this study (heart rate, Vo2 max)	PN	It is unlikely that outcome assessors could influence the objective outcomes in this study (gait parameters)
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.

	Stroke recovery		Stroke recovery		Stroke recovery	
Study ID	**Lim 2016**		**Lim 2017**		**Roh 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	Low		**Low**		**Low**	
Bias in selection of the reported result	NI	The researchers' pre-specified intentions are not available and not clearly described.	NI	The researchers' pre-specified intentions are not available and not clearly described.	NI	The researchers' pre-specified intentions are not available and not clearly described.
	NI	The authors do not provide sufficient details to be confident that additional measures were omitted from publication.	NI	The authors do not provide sufficient details to be confident that additional measures were omitted from publication.	NI	The authors do not provide sufficient details to be confident that additional measures were omitted from publication.
	N	All eligible reported results for the outcome measurement correspond to all intended analyses.	N	All eligible reported results for the outcome measurement correspond to all intended analyses.	N	All eligible reported results for the outcome measurement correspond to all intended analyses.
	Some concerns		**Some concerns**		**Some concerns**	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no,
Source: Chapter 8 Cochrane har
a. For the precise wording of sig

	Stroke recovery	
Study ID	**Sathe 2018**	
Bias arising from the randomisation process	NI	No information about generation of the randomisation sequence provided. The only information is a statement that they 'randomly allocated' participants into the Pilates exercise group (PG, n=5) or Control Group (CG, n=4).
	NI	Allocation concealment not described. It is likely that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	PY	Baseline characterestics are not reported. Baseline outcome scores suggest possible issues with randomisation.
	High	
	Y	Blinding of the trial participants is not specified. Given the overt nature of the intervention/s, the participants likely knew of their assigned allocation.
	Y	It is likely that carers and people delivering the interventions were aware of participants' assigned intervention during the trial.

	Stroke recovery	
Study ID	**Sathe 2018**	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	NI	A single participant did not complete the study (10%). Reason for drop out is not specified.
	NA	Not applicable.
	NA	Not applicable.
	NI	It is not known whether the author captured the effect of assignment to intervention given that participant attrition and missing data was not reported.
	PY	It is assumed that any deviations from usual practice had minimal impact on the outcome.
	Some concerns	
Bias due to missing outcome	NI	It is not clear if was data available/included for all participants.
	N	There is no evidence that the results were not biased by missing outcome data (no further analysis performed)

	Stroke recovery	
Study ID	**Sathe 2018**	
data	NI	Reasons for dropout/missing data not provided.
	PN	There is no information to sugges the likelihood that missingness in the outcome depended on its true value.
	Some concerns	
Bias in measurement of the outcome	PY	It is likely that the testing measures used are sensitive to plausible intervention effect. (Balance, Limits of stability)
	N	The same measurement methods and thresholds were used at comparable time points.
	NI	The trialists do not explictly state if outcome assessors were blinded to intervention status.
	PN	It is unlikely that outcome assessors could influence the objective outcomes in this study
	NA	Not applicable.

	Stroke recovery	
Study ID	**Sathe 2018**	
	Low	
Bias in selection of the reported result	NI	The researchers' pre-specified intentions are not available and not clearly described.
	NI	The authors do not provide sufficient details to be confident that additional measures were omitted from publication.
	N	All eligible reported results for the outcome measurement correspond to all intended analyses.
	Some concerns	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no,
Source: Chapter 8 Cochrane har
a. For the precise wording of sig

	Hyperkyphosis		Hyperlordosis		Forward head	
Study ID	**Junges 2012**		**Kuchadkar 2019**		**Lee 2016b**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	NI	There is an absence of specific information about generation of the randomization sequence. The only information is a statement that participants were randomized into two groups: 22 in the intervention group and 19 in the control group.	Y	Participants were randomised using lottery method, whereby they randomly picked up a chit with number, with each number corresponding to the group they were randomised to.	PN	No specific information about generation of the randomizsation sequence, except a statemnt that participants with 'randomly assigned'
	NI	There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	N	There was no significant difference between the two groups in terms of their demographic characteristics.	Y	Some imbalance in baseline measures with the Pilates group (higher BMI) compared to the other two treatment groups likely attributable to chance.	N	There was no significant difference between the two groups in terms of their demographic characteristics.
	Some concerns		**Some concerns**		**Some concerns**	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	NI	The Invesitgators did not report whether deviations arose because of the trial context. 9/50 (18%) randomised participants did not complete the study.	N	There were no deviations or dropouts	N	All enrolled participants received the intended intervention,
	NA	Not applicable.	NA	Not applicable	NA	Not applicable.
	NA	Not applicable.	NA	Not applicable	NA	Not applicable.
	PY	Analysis is intent to treat - participants who completed the study (missing data not included).	PY	All participants include in the analysis	PY	All participants with available data including in the analysis

	Hyperkyphosis		Hyperlordosis		Forward head	
Study ID	**Junges 2012**		**Kuchadkar 2019**		**Lee 2016b**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	NA	Not applicable.	N	There were no dropouts in any of the groups and therefore none of the participants were excluded.	NA	Not applicable.
	Some concerns		**Low**		**Some concerns**	
Bias due to missing outcome data	Y	Data were missing from 9/50 participants who were excluded from the analysis	Y	Data was available for all participants randomised.	N	Data was available for nearly all the participants randomised. There were 2/14 (14.3%) participants in the pilates group who dropped out for unknown reasons. Therefore, a total of 12 participants were analysed in the Pilates group.
	N	No analysis was presented to assess the impact of missing outcome data.	NA	Not applicable	NI	There is no evidence that the results were not biased by missing outcome data
	PY	Without reasons for drop out, it is difficult to assess this domain. Could plausibly be due to illness or disease severity.	NA	Not applicable	PY	it is plausible dropouts were health-related and could affect the outcome (details not provided)
	PY	missingness of the data (which is higher in the control group) considered to affect true value of the outcome.	NA	Not applicable	NA	missingness of the data considered could affect true value of the outcome.
	High		**Low**		**Some concerns**	
Bias in measurement of the outcome	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.
	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	PN	Data were analyzed by a statistician blinded to the subjects' randomization.	NI	The trialists do not explictly state if outcome assessors were blinded to intervention status.	NI	The trialists do not explictly state if outcome assessors were blinded to intervention status.

	Hyperkyphosis		Hyperlordosis		Forward head	
Study ID	**Junges 2012**		**Kuchadkar 2019**		**Lee 2016b**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	PN	It is unlikely that outcome assessors could influence the observer-reported outcomes in this study.	PN	It is unlikely that outcome assessors could influence the observer-reported outcomes. Exercise tolerance was patient-reported and knowledge of the assigned intervention could have influenced its assessment.	PN	It is unlikely that outcome assessors could influence the observer-reported outcomes. There is potential for the patient reported outcomes (pain, neck disaiblity index) to have been influenced by the outcome assessors.
	NA	Not Applicable.	NA	Not Applicable.	NA	Not Applicable.
	Low		**Low**		**Low**	
Bias in selection of the reported result	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	PN	The researchers' pre-specified intentions are not available, and not clearly descirbed
	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	PY	It is possible outcome measures reported have been selected on the basis of results.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	Some concerns		**Some concerns**		**High**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable
Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.
a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

	Hyperkyphosis		Scoliosis		Scoliosis	
Study ID	**Navega 2016**		**Alves de Araújo 2010**		**Kim 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	NI	No specific information provided except a statement that participants were 'divided' into two groups by means of a simple random selection process	Y	Randomization was performed using the ARRED (ALEATORY) function in Microsoft Office Excel 2003, which generates the number 0 or 1 for each sample. Patients with the number 0 were allocated to the CG, and those with the number 1 were assigned to the EG.	NI	No specific information provided excpet a statement that 24 female students with scoliosis, were randomly divided into two groups.
	NI	There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	N	There was no significant difference between the two groups in terms of their baseline characteristics.	NI	There is no useful baseline information available but baseline outcome scores appear balanced	N	There was no significant difference between the two groups in terms of their demographic characteristics.
	Some concerns		Some concerns		Some concerns	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PN	39 participant randomised, with 8 (~20%) opting to dropout during the study. This was considered to be typical of what would occur outside the trial context.	NI	The Invesitgators did not report whether deviations arose because of the trial context. (no CONSORT) but imbalance beteween groups suggest possible deviations Control group =11; Pilates group =20	NI	The Invesitgators did not report whether deviations arose because of the trial context. (no CONSORT)
	NA	Not applicable.	NI	No information to make a judgement	NI	No information to make a judgement
	NA	Not applicable. 5/22 in the control group and 3/17 in the Pilates group	NI	No information to make a judgement	NI	No information to make a judgement
	PY	All participants with available data including in the analysis	NI	No information to make a judgement	NI	No information to make a judgement

	Hyperkyphosis		Scoliosis		Scoliosis	
Study ID	**Navega 2016**		**Alves de Araújo 2010**		**Kim 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	NA	Not applicable.	NI	No information to make a judgement	NI	No information to make a judgement
	Some concerns		**High**		**High**	
Bias due to missing outcome data	N	Data was not available for all the participants randomised. Over the duration of the study, five volunteers decided to opt out of the control group (22.7%) and three from the Pilates group (17.6%).	NI	There is no information to suggest that outcome data was available for all, or nearly all, participants in the study.	NI	There is no information to suggest that outcome data was available for all, or nearly all, participants in the study.
	NI	There is no evidence that the results were not biased by missing outcome data	NI	There is no evidence that the results were not biased by missing outcome data	NI	There is no evidence that the results were not biased by missing outcome data
	PY	it is plausble dropouts were health-related and could affect the outcome (details not provided)	NI	There is no evidence to suggets that missing outcome data depends on its true value	NI	There is no evidence to suggets that missing outcome data depends on its true value
	NI	missingness of the data considered likely to affect true value of the outcome.	NI	There is no information to sugges the likelihood that missingness in the outcome depended on its true value.	NI	There is no information to sugges the likelihood that missingness in the outcome depended on its true value.
	High		**High**		**High**	
Bias in measurement of the outcome	PY	Well calibrated and validated measurement tools were used. The unipodal support test did not return statistically significant results; which may have occurred because the test was not sensitive enough to identify improvements instability.	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.
	N	The same measurement methods and thresholds were used at comparable time points.	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	NI	The trialists do not explictly state if outcome assessors were blinded to intervention status.	N	The outcome assessors performed statistical analysis was performed blind.	NI	The trialists do not explictly state if outcome assessors were blinded to intervention status.

	Hyperkyphosis		Scoliosis		Scoliosis	
Study ID	**Navega 2016**		**Alves de Araújo 2010**		**Kim 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	PN	It is unlikely that outcome assessors could influence the observer-reported outcomes in this study.	PN	It is unlikely that outcome assessors could influence the observer-reported outcomes in this study.	PN	It is unlikely that outcome assessors could influence the observer-reported outcomes.
	NA	Not Applicable.	NA	Not Applicable.	NA	Not Applicable.
	Low		**Low**		**Low**	
Bias in selection of the reported result	PY	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	PN	The researchers' pre-specified intentions are not available, and not clearly descirbed
	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	PY	It is possible outcome measures reported have been selected on the basis of results.
	PN	All eligible reported results for the outcome measurement correspond to all intended analyses.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	Some concerns		**Some concerns**		**High**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Osteoarthritis (knee)		Chikungunya		Ankylosing spondylitis	
Study ID	**Mazloum 2018**		**de Oliveira 2019**		**Altan 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	NI	No information provided. Authors only states that participants were 'randomly assigned' to three groups.	Y	Permuted block randomisation was performed using the program Random allocation 2.0	Y	Participants were assigned randomly into two groups using a random number table by the researcher (different to the researcher performing study evaluation).
	NI	The investigators do not report allocation concealment. It is possible the enrolling investigator or the participant had knowledge of the forthcoming allocation.	Y	Opaque, sealed and sequentially numbered enevelopes were used that were drawn up by an independent researcher	PY	The authors do not report on allocation concealment. It is mentioned that the researcher who generated the random number table was not involved in the evaluation, but it is not clear whether this researcher was involved in enroling participants.
	PN	Only presents age, height and weight, which are comparable between groups. Pre-test values for outcomes appear comparable between Pilates and control group.	PN	Some baseline imbalances for height, analgaesic use and SF-36 mental component score that were considered to be compatible with chance.	N	Baseline characteristics appear comparable between groups.
	Some concerns		Low		Low	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PN	8 (out of 49) randomised participants did not receive the allocated intervention for 'personal reasons'. Not clear if they didn't receive the intervention (deviation from protocol) or failed to complete the program (expected attrition) (<20%)	PN	All participants received the allocated intervention. 9/51 (17.6%) were lost to followup or dropped out for personal reason. This was considered to be consistent with what would occur outside the trial context. (<20%)	PN	The only deviations reported were discontinuations, similar to what would occur in clinical practice (2/55). One patient in the experimental group discontinued due to back pain, which could be considered related to the intervention.

	Osteoarthritis (knee)		Chikungunya		Ankylosing spondylitis	
Study ID	**Mazloum 2018**		**de Oliveira 2019**		**Altan 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	NA	Not applicable	NA	Not applicable	NA	Not applicable.
	NA	Not applicable	NA	Not applicable	NA	Not applicable.
	PY	8/49 participants who did not receive allocated intervention due to personal reasons were not included in the analysis	PY	9/51 participants not included. Modified intent-to-treat, participants with missing data excluded from final analysis	PY	There were two drop outs (one in each group) that were excluded from the analysis (modified ITT).
	PY	The number and proportion of patients who did not complete the intervention and were excluded from the analysis is balanced between groups, and is not expected to have a substantial impact on the result.	NA	Not applicable	NA	Not applicable.
	Some concerns		**Some concerns**		**Low**	
Bias due to missing outcome data	N	Data were missing for the 8/49 (>16%) participants who did not receive allocated intervention due to personal reasons.	N	Data were missing for 9/51 participants (<20%)	Y	Data was available for nearly all the participants randomised (>95%).
	N	No analysis was presented to assess the impact of missing outcome data.	N	No analysis was presented to assess the impact of missing outcome data.	NA	Not applicable.
	PY	Without reasons for drop out, it is difficult to assess this domain. Could plausibly be due to illness or disease severity.	PY	Without reasons for drop out, it is difficult to assess this domain. Could plausibly be due to illness or disease severity.	NA	Not applicable.
	PY	missingness of the data considered to affect true value of the outcome.	PN	missingness of the data considered not likely to be affect true value of the outcome, given it is balanced between groups.	NA	Not applicable.

	Osteoarthritis (knee)		Chikungunya		Ankylosing spondylitis	
Study ID	**Mazloum 2018**		**de Oliveira 2019**		**Altan 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	High		**Some concerns**		**Low**	
Bias in measurement of the outcome	PN	The trial included appropriate outcome measurements that are well-validated, reliable and likely sensitive to plausible intervention effects.	PN	The trial included appropriate outcome measurements that are well-validated, reliable and likely sensitive to plausible intervention effects.	N	The trial included appropriate outcome measurement instruments.
	PN	The same measurement methods and thresholds were used at comparable time points.	PN	The same measurement methods and thresholds were used at comparable time points.	N	The methods of outcome assessment were comparable across intervention groups.
	PY	Outcome assessor was blinded. However, the participant was aware of the intervention	PY	Outcome assessor was blinded. However, the participant was aware of the intervention	PY	Investigators report the outcome assessor was totally unaware of which intervention participants belonged to. But all measurements were patient reported questionaires.
	PY	The clinican measuring the outcome variables was blinded to the treatment allocation. However, participant-reported measure are subject to bias, given that they knew which intervention they had received.	PY	The clinican measuring the outcome variables was blinded to the treatment allocation. However, participant-reported measure are subject to bias, given that they knew which intervention they had received.	PY	Participants were requested not to give information to the examiner about their treatment protocol. It is still plausable that knowledge of the intervention could influence the participant response.
	PY	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.	PY	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.	PY	There is no reason to believe that that patient-reported outcomes were influenced by knowledge of the intervention received.
	Some concerns		**Some concerns**		**Some concerns**	
	NI	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.	NI	The researchers' pre-specified intentions were available (RBR-99tdpn), and are sufficiently described. One secondary outcome (computerised postural evaluation) was not reported. (possibly reported elsewhere)	PN	The researchers' pre-specified intentions are not available but the outcome measurements are clearly defined (and suggest some level of pre-approval)

	Osteoarthritis (knee)		Chikungunya		Ankylosing spondylitis	
Study ID	**Mazloum 2018**		**de Oliveira 2019**		**Altan 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements. Only total/composite scores reported.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	Three of the four Bath Ankylosing Spondylitis Indices were used to report functional capacity, disease activity and spinal mobility. The fourth index, the Bath Ankylosing Spondylitis Global Score, which assesses well-being was not reported, and it is considered possible that this selection was intentional.
	PN	There is no evidence that authors select from multiple analyses.	PN	There is no evidence that authors select from multiple analyses	N	All eligible reported results for the outcome measurement correspond to all intended analyses.
	Some concerns		**Some concerns**		**Some concerns**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.

Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable
Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.
a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

	Osteoporosis		Osteoporosis		Osteoporosis	
Study ID	**Angin 2015**		**Kucukcakir 2013**		**Oksuz 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	NI	The authors state that participants were "divided into two separate groups randomly" but do not provide any details of the mechanism by which participants were randomly allocated.	NI	The authors state that participants were "randomly allocated into two groups" but do not provide any details of the mechanism by which participants were randomy allocated.	PY	The authors stated that "patients were randomly assigned to groups using random number table by the researcher."
	NI	The authors do not report on allocation concealment	NI	The authors do not report on allocation concealment	NI	The authors do not report on allocation concealment
	PY	Significant differences across multiple domains of the QUALEFFO-41 tool. All differences favour control being worse at baseline.	PN	It is not certain whether reported baseline values were analysed using all participans randomised into study or only participants who had completed the study. The reported baseline characteristics appear to be equal across the groups.	PN	It is not certain whether reported baseline values of originally enrolled participants were equal across groups as only the baseline characteristics of participants that completed the study were reported. The reported baseline characteristics appear to be equal across the groups.
	High		**Some concerns**		**Some concerns**	
	PY	Participants in the Pilates exercise group were likely aware of their exercise program as an adjunct to usual care.	PY	Participants in the Pilates exercise group were likely aware of their exercise program as an adjunct to usual care.	PY	Participants in the Pilates exercise group were likely aware of their exercise program as an adjunct to usual care.
	PY	Individuals performing the interventions were likely aware of the participants' treatment allocation.	PY	Individuals performing the interventions were likely aware of the participants' treatment allocation.	PY	Individuals performing the interventions were likely aware of the participants' treatment allocation.
	PN	3 participants from the non-active comparator group dropped out of the study, however this is unlikely to have occurred due to the trial context.	PY	5 participants from both the Pilates interevention and exercise comparator groups dropped out of the study (23% of study population). Three participants in the control group (8.6%) dropped out because they were unwilling to participate in their allocated group, which is considered related to the trial context.	PY	7 originally enrolled participants dropped out of the study (15% of study population), 4 in the Pilates group and 3 in the control group. No reasons for discontinuation were provided so it is difficult to assess whether this was related to the trial context.

	Osteoporosis		Osteoporosis		Osteoporosis	
Study ID	**Angin 2015**		**Kucukcakir 2013**		**Oksuz 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	NA	Not applicable.	PY	The drop outs in the control group meant those who remained in the study were likely more motivated to complete.	PY	No reasons for discontinuation were provided so it is difficult to assess whether this would affect the outcome. The discontinuations were reported only in an abstract and not in the full trial publication.
	NA	Not applicable.	N	Deviation was not balanced between groups and could meaningfully impact results.	Y	A similar number and proportion of participants discontinued in both groups.
	N	Participant drop outs were excluded from all analyses, hence modified intent-to-treat is interpretted.	PY	Participant drop outs were excluded from all analyses, hence modified intent-to-treat is interpreted.	PY	Participant drop outs were excluded from all analyses, hence modified intent-to-treat is interpreted.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Some concerns		**High**		**High**	
Bias due to missing outcome data	PN	Three participants from the control group (13.6%) did not complete the study.	N	5 participants from both the Pilates interevention and exercise comparator groups dropped out of the study (23% of study population).	N	7 originally enrolled participants dropped out of the study (15% of study population), 4 in the Pilates group and 3 in the control group.
	N	No analysis was presented to assess the impact of missing outcome data.	N	No analysis was presented to assess the impact of this missing data.	PN	No analysis was presented to assess the impact of this missing data.
	PN	Given the length of the trial and the inactive control group, this level of missing data is not considered unusual or likely to be related to the outcome.	PN	Reasons for drop out were provided and did not appear related ot the outcome.	NI	No reasons for drop out were reported.
	NA	Not applicable.	NA	missingness of the data considered not likely to be affect true value of the outcome, given it is balanced between groups.	NI	Discontinuations were balanced between the groups and are not considered likely to be related to the true value of the outcome

	Osteoporosis		Osteoporosis		Osteoporosis	
Study ID	**Angin 2015**		**Kucukcakir 2013**		**Oksuz 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	Low		**Some concerns**		**Some concerns**	
Bias in measurement of the outcome	N	The trial included appropriate outcome measurement instruments.	N	It is likely that the self-reported outcome measures used are sensitive to plausible intervention effect.	N	It is likely that the self-reported outcome measures used are sensitive to plausible intervention effect.
	PN	The same measurement methods and thresholds were used at comparable time points.	PN	The same measurement methods and thresholds were likely used at comparable time points.	PN	The same measurement methods and thresholds were likely used at comparable time points.
	PN	Yes, the assessors likely knew of participant group allocation.	Y	Yes, the assessors (i.e. the participants) likely knew of participant group allocation. For assessors-based outcomes (sit to stand etc), these were were blinded to paticipant treatment group when taking outcome measurements.	Y	Yes, the assessors (i.e. the participants) likely knew of participant group allocation.
	PN	Given the nature of a DEXA full body scan for bone mineral density, it is unlikely that knowledge of participant treatment allocation could have biased results. For self-reported measures, participants were aware of treatment allocation that could bias the results	PY	Given that these measures were self-reports and judgement measures taken by the trialists, participans could have biased their answers (i.e. performance bias) given that they knew which intervention they had received.	PY	Given that these measures were self-reportedby the participant, they could have biased their answers (i.e. performance bias) given that they knew which intervention they had received.
	NA	There is no reason to believe that that patient-reported outcomes were influenced by knowledge of the intervention received.	PY	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.	PY	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.
	Some concerns	Low risk for BMD	**Some concerns**	low risk of sit to stand, 6MWT, number of falls	**Some concerns**	
	NI	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.	NI	The authors did not report a pre-specified analysis plan, nor do they report any blinding procedures which may have occurred or not occurred.	Y	The authors published a pre-specified analysis plan prior to the start of the study.

	Osteoporosis		Osteoporosis		Osteoporosis	
Study ID	**Angin 2015**		**Kucukcakir 2013**		**Oksuz 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	N	Measuring mineral density using DEXA scanning provides a singular value, therefore this measuement type is not susceptible to multiple elegible measurement bias.	NI	There is insufficient detail provided by the authors to determine whether measurement of self-report outcomes could have been selected on the basis of multiple eligible outcome measurements within the outcome domains.	PN	Whilst all measurements were pre-specified, it is worth noting that the authors did not correct for bias arising from multiple measures (i.e. inflation of type I error rate). This might have been needed given that there were over 40 separate measurements taken and analysed from each participant.
	N	There is insufficient detail provided by the authors to determine whether measurement of self-report outcomes could have been selected on the basis of multiple eligible analyses of the data.	NI	There is insufficient detail provided by the authors to determine whether measurement of self-report outcomes could have been selected on the basis of multiple eligible analyses of the data.	PN	The authors reported analyses as per the published pre-specified clinical protocol.
	Some concerns		Some concerns		Some concerns	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Fibromyalgia		Fibromyalgia		Fibromyalgia	
Study ID	**Altan 2009**		**de Medeiros 2020**		**Ekici 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	A random number table was used in the sequence generation process.	Y	The randomisation was performed through the website www.randomisation.com.	Y	The randomisation was performed using envelopes with the assigned treatment and instructions enclosed.
	PN	A researcher who did not perform the evaluation throughout the study randomly assigned the participants into the two groups but there was no information on allocation concealment	Y	An independent researcher performed the randomisation process. Allocation was concealed using opaque and seqentially numbered sealed envelopes.	PY	Envelopes used for 1:1 assignment were sealed.
	PN	Baseline characteristics were balanced between groups.	N	Baseline characteristics were balanced between groups.	N	Baseline characteristics were NOT balanced between groups for several outcomes, including pain.
	Some concerns		**Low**		**High**	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	N	All randomised participants received the intervention except one participant in the home exercises group who was excluded for starting on SSRIs during the study. This is not related to the trial context.	Y	All randomised participants received the intervention. 5/42 were lost to followup, 1 or 2 which could be considered related to the trial context	PY	Differences in the number of participants who discontinued the intervention was due to greater difficulty in compliance with the Pilates treatment (6/21) than that with the connective tissue massage treatment (1/22).
	NA	Not applicable.	PY	Deviation due to worsening symtpoms in the Pilates group could impact the outcome	PY	Changes from assigned intervention that are inconsistent with the trial protocol and could affect the outcome.
	NA	Not applicable.	Y	3 in the Pilates group and 2 in the control group.	N	Deviations from intended intervention were not balanced between the treatment groups.
	PY	Modified intent-to-treat, 1/50 participants excluded from final analysis.	Y	All randomised participants were included in the final analysis. Intent-to-treat analysis performed. With last observation carried forward.	Y	Modified intent-to-treat analysis, 7/43 participants did not receive allocated intervention because some were unwilling to continue, had health problems or were unknown.

Study ID	Altan 2009		de Medeiros 2020		Ekici 2017	
	Judgement	Comments	Judgement	Comments	Judgement	Comments
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Low		Some concerns		High	
Bias due to missing outcome data	Y	1/50 participants did not receive allocated intervention and was missing from the final analysis. This was considered sufficiently small that outcomes were not affected.	N	5/42 (11.9%) participants were lost to follow up because of travel, worsening symptoms or reason not justified.	N	7/43 (16.2%) participants did not receive allocated intervention because some were unwilling to continue, had health problems or were unknown.
	NA	Not applicable.	PN	No analysis was undertaken to adjust for missing data.	N	More participants in the Pilates arm (n=6) discontinued the intervention compared to the control arm (n=1). No analysis was undertaken to adjust for this.
	NA	Not applicable.	PY	Reasons for missing data include worsening symptoms (pilates groups) and not justified (both treatment groups).	PY	Reason for missing data could be illness.
	NA	Not applicable.	PY	missingness of the data considered not likely to affect true value of the outcome as it appears balanced between groups.	Y	There are differences between intervention groups in the proportions of missing outcome data.
	Low		Some concerns		High	
Bias in measurement of the outcome	PN	The trial included appropriate outcome measurement instruments. (Primary=pain, FIQ)	PN	The trial included appropriate outcome measurement instruments.	PN	The trial included appropriate outcome measurement instruments.
	PN	The methods of outcome assessment were comparable across intervention groups.	PN	The methods of outcome assessment were comparable across intervention groups.	PN	The methods of outcome assessment were comparable across intervention groups.
	PY	Outcome assessor was blinded. However, the participant was aware of the intervention.	PY	Outcome assessor was blinded. However, the participant was aware of the intervention.	PY	Outcome assessor was blinded. However, the participant was aware of the intervention.
	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given that these measures were self-reports, participants could have biased their answers.	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given that these measures were self-reports, participants could have biased their answers.	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given that these measures were self-reports, participants could have biased their answers.

Study ID	Altan 2009		de Medeiros 2020		Ekici 2017	
	Judgement	Comments	Judgement	Comments	Judgement	Comments
	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.
	Some concerns		Some concerns		Some concerns	
Bias in selection of the reported result	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	Y	The researchers pre-specified intentions are available (protocol published) and data analysis was performed accordingly.	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.
	PN	There are no reasons to suggest outcome measures reported were selected on the basis of results.	PN	There is evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	PN	There is no evidence that authors selected from multiple analyses	PN	There is no evidence that authors select from multiple analyses	PN	There is no evidence that authors select from multiple analyses
	Low	Exploratory outcomes=some concerns, primary outcomes=low	Low		Some concerns	
Overall risk of bias	Some concerns	The study has plausible bias that raises some doubt about the results.	Some concerns	The study has plausible bias that raises some doubt about the results.	High	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable

Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.

a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

	Low back pain		Low back pain		Low back pain	
Study ID	**Anand 2014**		**AvilaRiberio 2015**		**Bhadauria 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	Not clear if randomised using a computer generated random sampling method or shuffled envelopes to allocate the participants to either the control or experimental group.	PN	PseudoRCT as only states that participants were 'divided by lot' into two treatment groups.	Y	Particpants were randomly allocated into the treatment groups by envelop method.
	Y	Allocation sequence was concealed, participants in the study were randomly allocated by sealed envelope method. The sealed envelopes were prepared by the research assistant, who was not in the part of the study.	PN	There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	PY	Allocation concealment method was not explicitly stated however participants were randomly allocated by envelop method.
	NI	Baseline characteristics were not reported.	N	No baseline demographic or disease characteristics provided (except for sex). There were no differences on dependant outcome measures observed at baseline.	PN	There were statistically significant differences between groups in relation to the duration of low back pain symptoms (6 mo in lumbar group vs 1.5 yrs in Pilates group). Also notably less females in the Pilates group (10:90) vs 50:50 and 40:60 in other groups, suggesting problems with randomisation.
	Low		**High**		**High**	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.

	Low back pain		Low back pain		Low back pain	
Study ID	**Anand 2014**		**AvilaRiberio 2015**		**Bhadauria 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	NI	The authors do not report whether deviations arose because of the trial context. (no CONSORT)	N	All randomised participants received the intervention.	PN	All randomised participants received the intervention. 3/15 in the lumbar stabilisation group, 3/15 in the Pilates group, and 2/14 in the dynamic strengthening group dropped out. This is considered typical to what would occur outside of the trial context.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	NI	No information to make a judgement.	PY	All randomised participants were included in the final analysis. It was not explicitly stated however, it is assumed an intent-to-treat analysis was used.	PY	It was not explicitly stated however, it apears as though particpants who dropped out were excluded from the final analysis, therefore it is assumed a modified intent-to-treat analysis was used.
	NI	No information to make a judgement.	NA	Not applicable.	NA	Not applicable.
	High		**Low**		**Low**	

	Low back pain		Low back pain		Low back pain	
Study ID	**Anand 2014**		**AvilaRiberio 2015**		**Bhadauria 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to missing outcome data	NI	There is no information to suggest that outcome data was available for all, or nearly all, participants in the study.	Y	All randomised participants were included in the final analysis.	N	Data was not available for all or nearly all particants. A total of 8/44 (18.2%) of participants dropped out for reasons: missed visit, fall, health problem, personal problem and family problem).
	NI	There is no evidence to suggest that the results were not biased by missing outcome data.	NA	Not applicable.	NI	There is no evidence to suggest that the results were not biased by missing outcome data.
	NI	There is no evidence to suggest that the missing outcome data depends on its true value.	NA	Not applicable.	PY	Two droppouts in the Pilates group were health problem related.
	NI	There is no information to suggest the likelihood that missingness in the outcome depended on its true value.	NA	Not applicable.	NI	Missingness of the data conisdered likely to affect the true value of the outcome.
	High		**Low**		**High**	
	N	The trial included appropriate outcome measurement instruments (pain, VAS and back specific functional status, ODI).	N	The trial included appropriate outcome measurement instruments (pain, VAS and back specific functional status, ODI).	N	The trial included appropriate outcome measurement instruments.

	Low back pain		Low back pain		Low back pain	
Study ID	**Anand 2014**		**AvilaRiberio 2015**		**Bhadauria 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in measurement of the outcome	PN	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	PY	The outcomes assessor was blinded to the intervention. However, participants were aware of the intervention.	PY	The authors do not explicitly state if outcome assessors were blinded to the intervention. However, participants were aware of the intervention.	PY	The outcomes assessor was blinded to the intervention. However, participants were aware of the intervention.
	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given these measures were self-reports, participants could have biased their answers.	PY	Given these measures were self-reports, participants could have biased their answers.	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given these measures were self-reports, participants could have biased their answers.
	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.
	Some concerns		**Some concerns**		**Some concerns**	
	N	The researchers' pre-specified intentions are <u>not</u> available and are not sufficiently described.	PN	The researchers' pre-specified intentions are <u>not</u> available, but are sufficiently described and data analysis performed accordingly.	PN	The researchers' pre-specified intentions are <u>not</u> available, but are sufficiently described and data analysis performed accordingly.

	Low back pain		Low back pain		Low back pain	
Study ID	**Anand 2014**		**AvilaRiberio 2015**		**Bhadauria 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	PY	It is possible outcome measures reported were selected on the basis of results.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	High		**Some concerns**		**Some concerns**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable
Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.
a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

	Low back pain		Low back pain		Low back pain	
Study ID	**Brooks 2012**		**Cruz-Diaz 2015**		**Cruz Diaz 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	Participants were randomly assigned in blocks of 8 with equal number of participants assigned to each group, by a researcher with no involement in the assessment protocols or training programs.	Y	Patients were randomly allocated using a computer-generated table of random numbers, to either a physiotherapy or Pilates group (PPTG) or to a physiotherapy-only group (PTG)	Y	The randomisation process was based in the use of a computer-generated table of random numbers.
	Y	It is stated that the allocation sequence was concealed from researchers involved in enrolling and assessing participants; who were informed of participant group allocation via e-mail. These assisstants met with participants after baseline testing to confirm scheduling of exercise classes.	NI	The authors do not report on allocation concealment.	Y	Allocations were sealed in opaque and consecutively numbered envelopes kept in a locked location. These were to be opened in sequence by an independent administrator not involved in eligibility assessment, outcome assessment, or treatment.
	N	No statistically significant differences on dependent outcome measures were observed at baseline.	N	No statistically significant differences on dependent outcome measures were observed at baseline.	PN	No statistically significant differences on dependent outcome measures were observed at baseline, except for age between the two groups.
	Low		**Some concerns**		**Low**	
	PY	Participants were blinded to the use of different modalities in the trial. Participants were informed that they were volunteering for a study to investigate how exercise programs work for people with LBP. They did not test the efficacy of blinding. There is reason to suspect the participants were aware of their assigned intervention.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.

	Low back pain		Low back pain		Low back pain	
Study ID	**Brooks 2012**		**Cruz-Diaz 2015**		**Cruz Diaz 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The investigators were unable to blind exercise supervisors' to the type of treatment because they were specialists in their particular exercise modality.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PY	All randomised participants received the intervention. A total of 1/32 (3%) in the Pilates group and 5/32 (15.6%) in the general exercise group discontinued because of dissatisfaction of the intervention groups.	PN	All randomised participants received the intervention. A total of 4/51 (7.8%) in the Pilates + physiotherapy group and 2/52 (3.8%) in the physiotherapy group discontinued the intervention.	PN	All randomised participants received the intervention. A total of 4/57 (7%) in the Pilates + physical therapy group and 5/55 (9.1%) in the physical therapy group discontinued the intervention.
	PY	Changes from assigned intervention that are inconsistent with the trial protocol could affect the outcome.	NA	Not applicable.	NA	Not applicable.
	N	These deviations were not balanced between groups.	NA	Not applicable.	NA	Not applicable.
	Y	All randomised participants were included in the final analysis. "intention-to-treat" performed using last value carried forward or multiple impuation analysis.	PY	Modified intent to treat. 6/103 not included in the analysis.	PY	Modified intent to treat. 9/112 not included in the analysis.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Some concerns		**Low**		**Some concerns**	

	Low back pain		Low back pain		Low back pain	
Study ID	**Brooks 2012**		**Cruz-Diaz 2015**		**Cruz Diaz 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to missing outcome data	N	Data were missing from 9/32 (>20%) participants in the general exercise group and 3/32 (9.4%) in the Pilates group.	Y	Outcome data was available for all or nearly all participants randomised. 47/51 (92.2%) in the Pilates and Physiotherapy group and 50/52 (96.2%) in the Physiotherapy group were analysed. This was considered sufficiently high that outcomes were not affected.	N	Outcome data was not available for all the participants ranomised. 101 of the 112 (approx. 90.2%) participants were analysed in the study. No reasons were provided.
	PY	Missing values (n = 2 at 8 wk, n = 12 at 6 mo) were replaced using 2 methods: 'last-observation-carried forward' and multiple imputation based only on intervention group. Authors do not provide analysis with missing data to make a judgement. PP and ITT analysis yield similar results.	NA	Not applicable.	PN	No analysis undertaken to adjust for missing data.
	PY	Reasons for missing data include family illness, injury at work, dissatified with intervention (1 participant each in the Pilates group) and transport (1 participant), family illness (1 participant) and dissatified with intervention (5 participants) (General exercise group).	NA	Not applicable.	NI	No reasons provided for drop outs.
	PY	There are differences between groups in the proportion of missing outcome data.	NA	Not applicable.	NI	Lost to follow up were balanced between groups and are not considered likely to be related to the true value of the outcome.
	Some concerns		**Low**		**Some concerns**	
	N	The trial included appropriate outcome measurement instruments.	PN	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments (primary outcome:pain masured by numeric rating scale and secondary outcome: functional impairment measured by ODI).

	Low back pain		Low back pain		Low back pain	
Study ID	**Brooks 2012**		**Cruz-Diaz 2015**		**Cruz Diaz 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in measurement of the outcome	N	The methods of outcome assessment were comparable across intervention groups.	PN	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	PY	The outcomes assessor was blinded to the intervention. However, participants were aware of the intervention.	PY	A single independent investigator, who was blinded to group assignment, performed all assessments. However, participants were aware of the intervention.	PY	An independent investigator, blinded to patient allocation, was responsible for assessing the participants. However, participants were aware of the intervention.
	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given these measures were self-reports, participants could have biased their answers.	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given these measures were self-reports, participants could have biased their answers.	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given these measures were self-reports, participants could have biased their answers.
	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PY	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.
	Some concerns		**Some concerns**		**Some concerns**	
	Y	The researchers' pre-specified intentions are available in sufficient detail.	Y	The researchers' pre-specified intentions are available in sufficient detail (registered trial).	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.

	Low back pain		Low back pain		Low back pain	
Study ID	**Brooks 2012**		**Cruz-Diaz 2015**		**Cruz Diaz 2016**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	N	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	N	There is evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	N	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	N	There is evidence that all eligible reported results for the outcome measurement correspond to all intended analyses.	PN	There is no evidence that authors selected from multiple analyses.
	Low		**Low**		**Some concerns**	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Low back pain		Low back pain		Low back pain	
Study ID	**Cruz-Diaz 2017**		**Cruz-Diaz 2018**		**Da Fonesca 2009**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	Particpants were randomly allocated using a computer-generated table of random numbers.	Y	Participants were randomised using sealed envelopes created by an independent researcher not involved in the trial in a 1:1 ratio.	NI	No information about generation of the randomisation sequence. The only information about randomisation is a statement that 'the study was a single-blind randomised controlled trial'.
	Y	Allocations were sealed in opaque and consecutively numbered envelopes kept in a locked location. These were to be opened in sequence by an independent administrator not involved in eligibility assessment, outcome assessment, or treatment.	Y	Allocations were sealed in an opaque envelope.	NI	The investigators do not detail blinding participant allocation in the publication. There is a reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	N	No statistically significant differences on dependent outcome measures were observed at baseline.	N	No statistically significant differences on dependent outcome measures were observed at baseline.	N	No significant differences were found between the control group and the low-back group in baseline data.
	Low		**Low**		**Some concerns**	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.

	Low back pain		Low back pain		Low back pain	
Study ID	**Cruz-Diaz 2017**		**Cruz-Diaz 2018**		**Da Fonesca 2009**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PY	All randomised participants received the intervention. A total of 4/34 (11.8%) in the control group and none in the Pilates and equipment based Pilates groups were lost to follow-up	PN	All randomised participants received the intervention. However, there were differences between groups in the proportion of patients lost to follow-up. A total of 2/32 (6.3%) in the control group and none in the Pilates group were lost to follow-up.	NI	The authors state all participants completed the trial however they did not report whether deviations arose because of the trial context (no CONSORT).
	PN	Dropouts in the control group considered consistent with what would occur outside the trial context.	NA	Not applicable.	NI	No information to make a judgement.
	N	Deviations from intended intervention were not balanced between groups.	NA	Not applicable.	NI	No information to make a judgement.
	PY	Modified intent to treat. 4/102 not included in the analysis.	PY	Modified intent to treat. 2/64 not included in the analysis.	NI	No information to make a judgement.
	NA	Not applicable.	NA	Not applicable.	NI	No information to make a judgement.
	Some concerns		**Low**		**High**	

	Low back pain		Low back pain		Low back pain	
Study ID	**Cruz-Diaz 2017**		**Cruz-Diaz 2018**		**Da Fonesca 2009**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to missing outcome data	PN	Outcome data was available for all or nearly all participants randomised. Data were available for 98/102 (96%) participants.	PY	Outcome data was available for all or nearly all participants randomised. A total of 62 out of the 64 (96.9%) participants concluded the study and were analysed. This was considered sufficiently high that outcomes were not affected.	NI	It is mentioned that all participants completed the trial. However, there is no mention if outcome data was analysed for all participants randomised.
	NA	Not applicable.	NA	Not applicable.	NI	There is no evidence that the results were not biased by missing outcome data.
	NA	Not applicable.	NA	Not applicable.	NI	There is no evidence to suggest that missing outcome data depends on its true value.
	PY	Lost to follow up was not balanced between groups but not considered likely to be related to the true value of the outcome.	NA	Not applicable.	NI	There is no information to suggest the likelihood that missingness in the outcome depended on its true value.
	Some concerns		**Low**		**High**	
	N	The trial included appropriate outcome measurement instruments (primary outcome:pain measured by VAS).	N	The trial included appropriate outcome measurement instruments (pain measured by VAS and disability measured using RMDQ).	N	The trial included appropriate outcome measurement instruments (Pain measured by VAS).

	Low back pain		Low back pain		Low back pain	
Study ID	**Cruz-Diaz 2017**		**Cruz-Diaz 2018**		**Da Fonesca 2009**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in measurement of the outcome	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	PY	All subjects were assessed by a blinded evaluator. However, participants were aware of the intervention.	PY	All subjects were assessed by a blinded evaluator. However, participants were aware of the intervention.	PY	All subjects were assessed by a blinded evaluator. However, participants were aware of the intervention.
	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given these measures were self-reports, participants could have biased their answers.	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given these measures were self-reports, participants could have biased their answers.	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given these measures were self-reports, participants could have biased their answers.
	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PY	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.
	Some concerns		**Some concerns**		**Some concerns**	
	N	The researchers' pre-specified intentions are available in sufficient detail (registered trial) but do not include the outcome reported. Other outcomes were pre-specified.	N	The researchers' pre-specified intentions are available in sufficient detail (registered trial) but do not include the outcome reported. Other outcomes were pre-specified.	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.

	Low back pain		Low back pain		Low back pain	
Study ID	**Cruz-Diaz 2017**		**Cruz-Diaz 2018**		**Da Fonesca 2009**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	PY	There is no evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	PY	There is no evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	PY	There is no evidence that all eligible reported results for the outcome measurement correspond to all intended analyses.	PY	There is no evidence that all eligible reported results for the outcome measurement correspond to all intended analyses.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	High		**High**		**Some concerns**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Low back pain		Low back pain		Low back pain	
Study ID	**Devasahayam 2016**		**Donzelli 2006**		**Dsa 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	NI	No information about generation of the randomisation sequence. The only statement is that participants were "randomly assigned" to one of two types of exercises using a sealed envelope.	NI	The only statement is that the " study was a randomized controlled trial". Patients were divided into two groups by the appointments clerk, depending on the times of day they chose their treatment session.	Y	Subjects were randomized into two groups according to a randomisation table obtained from www.randomisation.com.
	Y	Participants were randomly assigned to one of two types of exercises using a sealed envelope.	NI	The investigators do not detail blinding participant allocation in the publication. There is a reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	The investigators do not detail blinding participant allocation in the publication. There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	PN	No statistically significant differences were observed in baseline demographic data. However, there were differences between the treatment groups with regards to age, WOMAC and PSFS.	PY	There is no useful baseline information available. There was a difference between groups with regards to pre-tretament OLBPDS.	N	No significant differences were found between control group and Pilates group in baseline data of which sex and age was only reported.
	Low		**High**		**Some concerns**	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	PY	The nature of the interventions meant that participants were aware of their allocated interventions. Although the trialist state that the participants did not know whether they were in the experiemental or comparison group. The supervising physiotherapists did not disclose the type of treatment to the aprticipants.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.

	Low back pain		Low back pain		Low back pain	
Study ID	**Devasahayam 2016**		**Donzelli 2006**		**Dsa 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PY	One participant in the Pilates group (7.1%) and two particpants in the Control group (20%) withdrew after intervention allocation but before starting the intervention.	NI	The Investigators did not report whether deviations arose because of the trial context.	PY	All randomised participants received the intervention. However, there were differences between groups in the proportion of patients lost to follow-up. A total of 4/21 (19%) in the control group and 1/17 (5.9%) in the Pilates group were lost to follow-up. This could be related to the trial context.
	PY	Deviations from the intervention that are inconsistent with the protocol could have an effect the outcome.	NI	No information to make a judgement.	PY	Deviations from the intervention that are inconsistent with the protocol could have an effect the outcome.
	Y	One in the Pilates group and two in the Control group.	NI	No information to make a judgement.	Y	One in the Pilates group and four in the Control group.
	PY	Modified intent to treat. 9/24 not included in the analysis	PY	The authors do not explicitly state the analysis method used but it is assumed an intent to treat analysis performed.	PY	Modified intent to treat. 9/24 not included in the analysis
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Some concerns		**High**		**Some concerns**	

	Low back pain		Low back pain		Low back pain	
Study ID	**Devasahayam 2016**		**Donzelli 2006**		**Dsa 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to missing outcome data	N	Outcome data was not available for all or nearly all participants randomised. There were 5/14 (35.7%) of participants in the Pilates group and 4/10 (40%) in the control group who were lost to follow-up and were not included in the final analysis, which may affect the outcomes measured.	Y	Outcome data was analysed for all participants at the comparable timepoints by the trial investigators. This is shown in Table 1 in the study.	N	Outcome data was not available for all or nearly all participants randomised. A total of 33/38 (86.8%) patients included the study and were analyzed.
	PN	No analysis undertaken to adjust for missing data.	NA	Not applicable.	PN	No analysis undertaken to adjust for missing data.
	NI	No reasons provided for drop outs.	NA	Not applicable.	NI	No reasons provided for drop outs.
	NI	There is no evidence to suggest the likelihood that missingness in the outcome depended on its true value.	NA	Not applicable.	NI	There is no evidence to suggest the likelihood that missingness in the outcome depended on its true value.
	High		**Low**		**High**	
	N	The trial included appropriate outcome measurement instruments (Primary outcome: Pain measured by NRS).	N	The trial included appropriate outcome measurement instruments (pain masured by visual analog scale and disability measured by OLBPDS).	N	The trial included appropriate outcome measurement instruments (pain masured by visual analog scale and disability measured by RMDQ).

	Low back pain		Low back pain		Low back pain	
Study ID	**Devasahayam 2016**		**Donzelli 2006**		**Dsa 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in measurement of the outcome	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	PY	All subjects were assessed by a blinded evaluator. However, participants were aware of the intervention.	PY	All subjects were assessed by a blinded evaluator. However, participants were aware of the intervention.	PY	There is no information to suggest that the outcome assessors were not blinded to the intervention receieved by study participants. However, participants were aware of the intervention.
	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given these measures were self-reports, participants could have biased their answers.	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given these measures were self-reports, participants could have biased their answers.	PY	Given these measures were self-reports, participants could have biased their answers.
	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.
	Some concerns		**Some concerns**		**Some concerns**	
	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.

	Low back pain		Low back pain		Low back pain	
Study ID	**Devasahayam 2016**		**Donzelli 2006**		**Dsa 2014**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There is no evidence that authors selected from multiple analyses.
	Some concerns		**Some concerns**		**Some concerns**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Low back pain		Low back pain		Low back pain	
Study ID	**Gladwell 2006**		**Gonzalez-Galvez 2019**		**Hasanpour-Dehkordi 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	PY	No information about generation of the randomisation sequence. The only information is a statement that individuals 'were randomly allocated to control (n = 24) or Pilates group (n = 25)'.	PY	A simple randomisation method (Microsoft Excel 2016) was used to allocate participants to the PG or CG.	PN	Participants were numbered and a list was developed. The first case was selected using random number table and then one out of four patients was randomly enrolled. This process continued till a desired number of participants were enrolled. Then participants were randomly assigned to experimental and control groups.
	NI	The investigators do not detail blinding participant allocation in the publication. There is a reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.	NI	There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation. The authors state that research staff distributed participants into groups.	NI	There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	N	No significant differences were found between control group and Pilates group in baseline data, except for age.	PY	There is reasons to suspect issues with the randomisation process. Baseline characteristics are reported as a combined number.	PY	There is no useful baseline information available. There were differences in pre-test results (pain index and general health) between intervention and control groups.
	Some concerns		**High**		**High**	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.

	Low back pain		Low back pain		Low back pain	
Study ID	**Gladwell 2006**		**Gonzalez-Galvez 2019**		**Hasanpour-Dehkordi 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	Y	All randomised participants received the intervention. However, there were differences between groups in the proportion of participants lost to follow-up. A total of 10/24 (41.7%) in the control group and 5/25 (20%) in the Pilates group did not complete the trial were lost to follow-up. This could be related to the trial context.	PN	All randomised participants received the intervention. A total of 1/27 (3.7%) each in the control group and in the Pilates group were lost to follow-up. This could be related to the trial context.	NI	The Investigators did not report whether deviations arose because of the trial context.
	PY	Deviations from the intervention that are inconsistent with the protocol could have an effect the outcome.	NA	Not applicable.	NA	Not applicable.
	Y	Five in the Pilates group and ten in the Control group.	NA	Not applicable.	NA	Not applicable.
	PY	Modified intent to treat. 15/49 not included in the analysis	PY	Modified intent to treat. 52/54 not included in the analysis	NI	The trialists did not report the analysis method used to estimate the effect of assignment.
	NA	Not applicable.	NA	Not applicable.	NI	It is not explicitly stated by the trialists as to whether the number of participants who may have been analysed in the wrong intervention group, or excluded from the analysis, was sufficient that there could have been a substantial impact on the result.
	High		**Low**		**High**	

	Low back pain		Low back pain		Low back pain	
Study ID	**Gladwell 2006**		**Gonzalez-Galvez 2019**		**Hasanpour-Dehkordi 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to missing outcome data	N	Outcome data was not available for all the participants randomised. 34/49 (69%) original sample completed the trial, which may affect the outcomes measured.	Y	A total of 52 of the 54 (96.3%) randomised participants were included in the analysis. Outcome data was available for nearly all participants randomised.	NI	The trial report provides no information about the extent of missing outcome data. There is reason to suspect that there is a high risk of bias due to missing outcome data.
	PN	No analysis undertaken to adjust for missing data.	NA	Not applicable.	NI	The trial report provides no information about the extent of missing outcome data. There is reason to suspect that there is a high risk of bias due to missing outcome data.
	PY	Reasons for missing outcome data include other commitments for the Pilates group and no reasons given for the Control group.	NA	Not applicable.	NI	The trial report provides no information about the extent of missing outcome data. There is reason to suspect that there is a high risk of bias due to missing outcome data.
	PY	There are differences between groups in the prorportion of missing outcome data.	NA	Not applicable.	NI	The trial report provides no information about the extent of missing outcome data. There is reason to suspect that there is a high risk of bias due to missing outcome data.
	High		**Low**		**High**	
	N	The trial included appropriate outcome measurement instruments (pain masured by RMVAS and back specfic functional status measured by OSWDQ).	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments (pain assessed using McGill Pain Questionaire and general health using the GHQ-28).

	Low back pain		Low back pain		Low back pain	
Study ID	**Gladwell 2006**		**Gonzalez-Galvez 2019**		**Hasanpour-Dehkordi 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in measurement of the outcome	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	PY	There is no information to suggest that the outcome assessors were not blinded to the intervention receieved by study participants. However, participants were aware of the intervention.	N	Only research staff performing the assessment and statistical analysis were blinded to the group assignment.	PY	The examiner who assessed the outcomes was blinded to group assignment. However, the patient-reported outcome measures were completed by the patients themseleves. There is reason to suspect that the participants were not blinded to treatment group.
	PY	Given these measures were self-reports, participants could have biased their answers.	NA	Not applicable.	PY	Given these measures were self-reports, participants could have biased their answers.
	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	NA	Not applicable.	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.
	Some concerns		**Low**		**Some concerns**	
	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	Y	The researchers' pre-specified intentions are available in sufficient detail.	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.

	Low back pain		Low back pain		Low back pain	
Study ID	**Gladwell 2006**		**Gonzalez-Galvez 2019**		**Hasanpour-Dehkordi 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	N	There is evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	N	There is evidence that all eligible reported results for the outcome measurement correspond to all intended analyses.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	Some concerns		**Low**		**Some concerns**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Low back pain		Low back pain		Low back pain	
Study ID	**Kofotolis 2016**		**Lopes 2017**		**Mazloum 2018b**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	Participants were randomly allocated into one of two groups using a series of random numbers.	Y	Participants were randomised by using block randomisation (1:1) into the Pilates or control group.	PN	No information about generation of the randomisation sequence. The only information is a statement that patients were randomly allocated into one of three groups.
	Y	Sealed envelopes were used to ensure allocation concealment following baseline evaluation.	Y	Numbered sheets inside sealed, opaque envelopes picked up by the participants before baseline data collection ensure allocation concealment.	NI	There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	N	No statistically significant differences in age, height, body mass and BMI were observed at baseline.	N	No statistically significant differences in age, body composition, disability, duration or pain and daily physical activity between groups was measured at baseline.	N	There were no significant between-group differences in the outcome measures at baseline.
	Low		**Low**		**Some concerns**	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.

	Low back pain		Low back pain		Low back pain	
Study ID	**Kofotolis 2016**		**Lopes 2017**		**Mazloum 2018b**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	NI	The only reported deviations are non-completion by 21 participants (17.5%). Reasons are not provided so it is difficult to ascertain if they were related to the trial context.	N	All enrolled participants received the intended intervention.	NI	All enrolled participants received the intended intervention. 4 participants missing at end of treatment and a further 9 participants lost to followup due to 'personal problems' so it is difficult to discern if these arose because of the trial context.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	PY	The trialists did not report the analysis method used; however, a modified intent to treat method is assumed as participants who discontinued intervention are not included in the final analysis.	PY	The trialists did not report the analysis method used to estimate the effect of assignment. However, as there were no drop outs all participants are assumed to be included in the analysis.	PN	Patients who did not complete the trial were excluded from final analysis.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Low		**Low**		**Low**	

	Low back pain		Low back pain		Low back pain	
Study ID	**Kofotolis 2016**		**Lopes 2017**		**Mazloum 2018b**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to missing outcome data	N	Data were missing for the 19/120 (15.8%) participants who discontinued from their allocated intervention	Y	All randomised pariticipants were included in the final analysis.	PN	13/60 (21.6%) participants were lost to follow up, four from each of the Pilates and control group and five from the extension exercise group.
	N	No analysis was presented to assess the impact of missing outcome data.	NA	Not applicable.	PN	No analysis was undertaken to adjust for missing data.
	PY	Without reasons for drop out, it is difficult to assess this domain. Could plausibly be due to illness or disease severity.	NA	Not applicable.	PY	Reasons for missing data are not explicitly provided, but it is stated as 'personal problems'.
	PY	Missingness of the data considered to affect true value of the outcome.	NA	Not applicable.	PY	Missingness of the end of treatment data considered likely to affect true value of the outcome but not substantially as it is ablanced between groups
	High		**Low**		**Some concerns**	
	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.

	Low back pain		Low back pain		Low back pain	
Study ID	**Kofotolis 2016**		**Lopes 2017**		**Mazloum 2018b**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in measurement of the outcome	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	Y	Outcome assessors were not blinded to participant interventions. In addition, majority of primary outcomes were participant-reported in which intervention was known.	N	The outcome assessors were blinded to group allocation and all primary outcomes are objective.	N	All groups were assessed by a blinded assessor. However, the participant was aware of the intervention and two of the primary outcomes were participant-reported.
	PY	Participant-reported outcomes could be influenced by knowledge of the intervention. Since, the outcome assesor is also the participant they may or may not favour the intervention received based on their treatment experience.	NA	Not applicable.	PY	Participant-reported outcomes could be influenced by knowledge of the intervention. Since, the outcome assesor is also the participant they may or may not favour the intervention received based on their treatment experience.
	PN	There is some evidence to suggest that the outcome assessors may have been influenced to bias the outcome data, but insufficient information makes its difficult to accurately assess this domain.	NA	Not applicable.	PN	There is some evidence to suggest that the outcome assessors may have been influenced to bias the outcome data, but insufficient information makes its difficult to accurately assess this domain.
	Some concerns		**Low**		**Some concerns**	
	PY	The researchers' pre-specified intentions are not explicitly available but the outcome measurements are clearly defined (and suggest some level of pre-approval)	PY	The researchers' pre-specified intentions are not explicitly available but the outcome measurements are clearly defined (and suggest some level of pre-approval)	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.

	Low back pain		Low back pain		Low back pain	
Study ID	**Kofotolis 2016**		**Lopes 2017**		**Mazloum 2018b**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	N	There is clear evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	N	There is clear evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	N	There is clear evidence that all eligible reported results for the outcome measurement correspond to all intended analyses.	N	There is clear evidence that all eligible reported results for the outcome measurement correspond to all intended analyses.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	Low		**Low**		**Some concerns**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**Low**	The study does not have any bias considered to seriously alter the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Low back pain		Low back pain		Low back pain	
Study ID	**Miyamoto 2011**		**Miyamoto 2016**		**Mostagi 2015**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	Simple randomisation was conducted using Microsoft Excel by a researcher who was not involved in participant recruitment.	Y	Participants were randomised using computer-generated random numbers (Microsoft Excel).	Y	Subjects were randomised using a computer generated table of random numbers
	Y	Allocation was concealed by using consecutively numbered, sealed, opaque envelopes, generated by an author not involved in participant receuirtment and treatment.	Y	Treatment allocation was concealed through sealed opaque envelopes that were sequentially numbered by an independent researcher	Y	Sealed opaque envelopes were used to ensure allocation concealment.
	PY	The baseline data from both groups were similar for almost all characteristics. Participants allocated to the Pilates group had a greater duration of symptoms (6+ year) and have more experience with physical therapy treatment compared to participants in the booklet group (4.5+ years).	N	There were no significant difference between the four groups in terms of the demographic characteristics at baseline	N	Both groups were similar in all the assessed characteristics at baseline
	Some concerns		**Low**		**Low**	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.

	Low back pain		Low back pain		Low back pain	
Study ID	**Miyamoto 2011**		**Miyamoto 2016**		**Mostagi 2015**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	N	All enrolled participants received the intended intervention.	PN	The trailists do not explicitly state any deviations that arose due to the trial context; however it was reported that there were no adverse events.	PY	The only reported deviations was discontinuation of intervention by two participants (9%). Reasons were not provided and both participants were from the general exercise group.
	NA	Not applicable.	NA	Not applicable.	PY	As the participants who discontinued comprise the exercise group only, there is potential bias favouring Pilates
	NA	Not applicable.	NA	Not applicable.	PN	No, deviations only arose from the general exercise group.
	Y	The analyses followed the intention-to-treat principles. This is an appropriate analysis method to estimate the effect of assignment to intervention.	Y	Analyses were conducted on an intention-to-treat basis. This is an appropriate analysis method to estimate the effect of assignment to intervention.	PY	Modified intention to treat analysis used. Participants lost to follow up not included in analysis.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Low		**Low**		**High**	

	Low back pain		Low back pain		Low back pain	
Study ID	**Miyamoto 2011**		**Miyamoto 2016**		**Mostagi 2015**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to missing outcome data	Y	All randomised pariticipants were included in the final analysis.	PN	Outcome data not available for all participants randomised. A lower attrition rate is reported for the control group (82.4%) compared to the 3 Pilates arms (90.5%, 89.2%, 87.8%). No reasons for loss of follow-up were provided.	N	5/22 (22.7%) participants were not included in the analysis due to discontinuation of treatement or lost to follow up.
	NA	Not applicable.	PY	As per the intention-to-treat principle, missing data was not excluded from the analysis. The high rates of drop outs are unlikely to significnat alter the outcome.	NI	More participants in the intervention arm (n=4) discontinued the intervention compared to the Pilates arm (n=1). No analysis was undertaken to adjust for this.
	NA	Not applicable.	NA	Not applicable.	PY	Reason for missing data are not reported and could be due to worsening symptoms.
	NA	Not applicable.	NA	Not applicable.	Y	There are differences between intervention groups in the proportions of missing outcome data.
	Low		**Low**		**High**	
	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.

	Low back pain		Low back pain		Low back pain	
Study ID	**Miyamoto 2011**		**Miyamoto 2016**		**Mostagi 2015**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in measurement of the outcome	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	PY	Measurements of primary and secondary outcomes were obtained by the same blinded assessor who collected baseline data. However, the participant was aware of the intervention and all of the outcomes were questionnaires.	PY	All groups were assessed by a blinded assessor. However, the participant was aware of the intervention and all of the outcomes were questionnaires.	PY	Both groups were assessed by a blinded assessor. However, the participant was aware of the intervention and majority of primary outcomes were self-reported (VAS score, Quenbec Back Pain Questionnaire)
	PY	The assessor measuring the outcome variables was blinded to treatment allocation. However, given that these measures were self-reported by the participant, they could have biased their answers (i.e. performance bias) given that they knew which intervention they had received.	PY	The assessor measuring the outcome variables was blinded to treatment allocation. However, given that these measures were self-reported by the participant, they could have biased their answers (i.e. performance bias) given that they knew which intervention they had received.	PY	The assessor measuring the outcome variables was blinded to treatment allocation. However, given that these measures were self-reported by the participant, they could have biased their answers (i.e. performance bias) given that they knew which intervention they had received.
	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that the patient-reported outcomes were substantially influenced by knowledge of the intervention.
	Some concerns		**Some concerns**		**Some concerns**	
	Y	The researchers' pre-specified intentions are available in sufficient detail.	Y	The researchers' pre-specified intentions are available in sufficient detail.	Y	The researchers' pre-specified intentions are available in sufficient detail.

	Low back pain		Low back pain		Low back pain	
Study ID	**Miyamoto 2011**		**Miyamoto 2016**		**Mostagi 2015**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	N	There is clear evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	N	There is clear evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	N	There is clear evidence (through examination of the statistical analysis plan) that all eligible reported results for the outcome domain correspond to all intended outcome measurements.
	N	There is clear evidence that all eligible reported results for the outcome measurement correspond to all intended analyses.	N	There is clear evidence that all eligible reported results for the outcome measurement correspond to all intended analyses.	N	There is clear evidence (through examination of the statistical analysis plan) that all eligible reported results for the outcome measurement correspond to all intended analyses.
	Low		**Low**		**Low**	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Low back pain		Low back pain		Low back pain	
Study ID	**Natour 2011**		**Patti 2016**		**Quinn 2011**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	Patients were randomized using an electronically generated randomisation table.	Y	Participants were randomised by a computer generated allocation sequence. The group allocation was conducted by an independent research assistant.	NI	No information about the randomisation process, only that 'randomisation and concelaed allocation was carried out'.
	Y	Sealed, opaque envelopes were used to ensure the confidentiality of the assignment. The envelopes were stored in a locked cupboard and only opened after the initial evaluation by an individual who did not participate in the study.	PY	The trialists do not explicitly state allocation concealment. However, as it was conducted by an research assistance not involved in the trial, there is no reason to suspect investigators or participants had knowledge of the forthcoming intervention.	Y	Sequentially numbered, opaque sealed envelopes were used to ensure allocation concealment.
	N	No statistically significant differences were found between groups regarding any of the clinical or demographic variables at baseline showing the homogeneity of the sample.	N	There were no significant between-group differences in age, sex, weight or height at baseline.	N	No significant between-group differences in demographic characteristics or the outcome measures at baseline.
	Low		**Low**		**Low**	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.

	Low back pain		Low back pain		Low back pain	
Study ID	**Natour 2011**		**Patti 2016**		**Quinn 2011**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	N	The only reported deviations was non completion by three participants. Reasons were provided and did not relate to the trial context.	N	All enrolled participants received the intended intervention.	Y	Five participants from the Pilates group and four from the control group droppped out of the study (31%). Reasons were provided and one participant in the Pilates group withdrew due to a preferrance of massage over the intervention, which is considered related to the trial context.
	NA	Not applicable.	NA	Not applicable.	PN	Since only one participant dropped out due to this reason (11%), it is unlikely to have a significant impact on results.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Y	Data for all patients were evaluated with intention-to-treat analysis with last data carried forward for patients who refused to return.	PY	The trialists did not report the analysis method used to estimate the effect of assignment. However, as there were no drop outs all participants are assumed to be included in the analysis.	Y	Groups were analysed on an intention to treat basis with all subjects included.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Low		**Low**		**Low**	

	Low back pain		Low back pain		Low back pain	
Study ID	**Natour 2011**		**Patti 2016**		**Quinn 2011**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to missing outcome data	PY	Three participants discontinued intervention (5%). Data was available for all other randomisation participants.	Y	All randomised pariticipants were included in the final analysis.	N	9/29 (31%) participants did not complete the intervention due to ill health of participant for family member, schedule changes and preferences. Reasons for the control group were not provided.
	NA	Not applicable.	NA	Not applicable	Y	Last known values were carried forward to replace missing values for any subjects who failed to attend for final assessment.
	NA	Not applicable.	NA	Not applicable	NA	Not applicable.
	NA	Not applicable.	N	Not applicable	NA	Not applicable.
	Low		**Low**		**Low**	
	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.

	Low back pain		Low back pain		Low back pain	
Study ID	**Natour 2011**		**Patti 2016**		**Quinn 2011**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in measurement of the outcome	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	PY	Both groups were assessed by a blinded assessor. However, the participant was aware of the intervention and majority of primary outcomes were self-reported (VAS score)	PY	Both groups were assessed by a blinded assessor. However, the participant was aware of the intervention and the primary outcome was registered through an interview process.	PY	Both groups were assessed by a blinded assessor. However, the participant was aware of the intervention and majority of primary outcomes were self-reported
	PY	The assessor measuring the outcome variables was blinded to treatment allocation. However, given that these measures were self-reported by the participant, they could have biased their answers (i.e. performance bias) given that they knew which intervention they had received.	PY	The assessor measuring the outcome variables was blinded to treatment allocation. However, given that these measures were self-reported by the participant, they could have biased their answers (i.e. performance bias) given that they knew which intervention they had received.	PY	The assessor measuring the outcome variables was blinded to treatment allocation. However, given that these measures were self-reported by the participant, they could have biased their answers (i.e. performance bias) given that they knew which intervention they had received.
	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that the patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that the patient-reported outcomes were substantially influenced by knowledge of the intervention.
	Some concerns		**Some concerns**		**Some concerns**	
	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.

	Low back pain		Low back pain		Low back pain	
Study ID	**Natour 2011**		**Patti 2016**		**Quinn 2011**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	N	There is clear evidence (through examination of the statistical analysis plan) that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	N	There is clear evidence (through examination of the statistical analysis plan) that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	N	There is clear evidence (through examination of the statistical analysis plan) that all eligible reported results for the outcome measurement correspond to all intended analyses.	N	There is clear evidence (through examination of the statistical analysis plan) that all eligible reported results for the outcome measurement correspond to all intended analyses.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	Some concerns		**Some concerns**		**Some concerns**	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Low back pain		Low back pain		Low back pain	
Study ID	**Rajpal 2008**		**Rydeard 2006**		**Silva 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	NI	No information provided. Authors only states that participants were 'randomly assigned' to two groups.	Y	Participants were randomised by randomly pulled a card from a box of concealed premarked cards to obtain assignment into one of two groups.	PY	The subjects were randomly divided into Pilates and control group by means of a simple raffle, where their names (concealed in envelopes) were taken one by one.
	NI	The investigators do not report allocation concealment. It is possible the enrolling investigator or the participant had knowledge of the forthcoming allocation.	PY	The investigators do not detail blinding participant allocation in the publication; however, there is no reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation as the Pilates method was not commonly known.	NI	No information is provided on allocation concealment except for the statement that participants' names were in a dark envelope during the raffle process. .
	NI	The investigators do not detail the between-group differences; however, it is stated that demographic data was collected from each subject included age, gender, occupation	N	No significant differences were found between control group and Pilates group in baseline data.	N	There were no significant between-group differences in demographic characteristics or the outcome measures at baseline.
	Some concerns		**Low**		**Some concerns**	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.

	Low back pain		Low back pain		Low back pain	
Study ID	**Rajpal 2008**		**Rydeard 2006**		**Silva 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	N	All enrolled participants received the intended intervention.	N	All enrolled participants received the intended intervention.	NI	3/22 participants dropped out of the trial with out reason (13.6%) so it is difficult to ascertain if they were related to the trial context. A further 3/22 participants did not attend all sessions.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	PY	The trialists did not report the analysis method used to estimate the effect of assignment. However, as there were no drop outs all participants are assumed to be included in the analysis.	Y	Groups were analysed on an intention to treat basis with the last observation carried forward for subjects lost to follow up.	PN	3/22 participants with missing data and 3/22 participant who did not attend all sessions were excluded from the analyses (27.3%).
	NA	Not applicable.	NA	Not applicable.	PN	per protocol analysis could influence the results
	Low		**Some concerns**		**High**	

	Low back pain		Low back pain		Low back pain	
Study ID	**Rajpal 2008**		**Rydeard 2006**		**Silva 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to missing outcome data	Y	Outcome data was available for all participants randomised and was analysed.	PN	Outcome data was available for all participants randomised. In the second part of the study where the Pilates groups was anlaysed 3, 6, and 12-months post intervention, nine subjects were lost to follow up (42.8%).	PN	Three participants in each of the Pilates and control groups were not included in the analysis (27.3%).
	NA	Not applicable.	Y	Despite the high rate of dropouts in the follow up period, this does not impact the first part of the study which compared Pilates to a control group and would not bias results.	PN	No analysis was presented to assess the impact of this missing data.
	NA	Not applicable.	NA	Not applicable.	NI	No reasons for drop out were reported except for three participants who were excluded due to absences.
	NA	Not applicable.	NA	Not applicable.	NI	Discontinuations were balanced between the groups and are not considered likely to be related to the true value of the outcome
	Low		**Low**		**Some concerns**	
	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.

	Low back pain		Low back pain		Low back pain	
Study ID	**Rajpal 2008**		**Rydeard 2006**		**Silva 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in measurement of the outcome	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	NI	The investigators do not explictly state if outcome assessors were blinded to intervention status. However, one of the outcomes was participant-reported (numeric pain scale).	PY	Outcome measures were evaluated by a blinded assessor. However, some primary outcomes were patient-reported and participants were not blinded to treatment group.	NI	The trialists do not explictly state if outcome assessors were blinded to intervention status. However, all outcomes were participant-reported where particpants were aware of the intervention they were receiveing.
	PN	Participant-reported outcomes could be influenced by knowledge of the intervention. However, majority of outcomes were objective and unlikley to bias the measurement.	PY	Self-reported outcomes could be influenced by knowledge of the intervention. Since the outcome assesor is also the participant they may or may not favour the intervention received based on their treatment experience.	PY	Participant-reported outcomes could be influenced by knowledge of the intervention. Since, an outcome assesor is also the participant they may or may not favour the intervention received based on their treatment experience.
	NA	Not applicable.	PY	The authors stated that subjects meeting the tight inclusion criteria may be more likely to respond to a Pilates treatment approach. It is likely that the outcome was influenced by knowledge of the intervention received.	PN	There is evidence to suggest that patient-reported outcomes were substantially influenced by knowledge of the intervention received.
	Low		**Some concerns**		**Some concerns**	
	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	Y	The researchers' pre-specified intentions are available in sufficient detail.	NI	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.

	Low back pain		Low back pain		Low back pain	
Study ID	**Rajpal 2008**		**Rydeard 2006**		**Silva 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	N	There is clear evidence (through examination of the statistical analysis plan) that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	N	There is clear evidence (through examination of the statistical analysis plan) that all eligible reported results for the outcome measurement correspond to all intended analyses.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	Some concerns		**Low**		**Some concerns**	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Low back pain		Low back pain		Low back pain	
Study ID	**Valenza 2017**		**Wajswelner 2011**		**Zaeda 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	Participants were randomised using a random number generator in blocks of eight with no stratification by an independent statistician who was not aware of study aims.	Y	Participants were randomised using an *a priori* computer generated sequence which was conducted by an independent investigator.	PN	No information about generation of the randomisation sequence except that participants were "randomly allocated" to the Pilates or control group using a process of concealed random allocation.
	Y	The authors report allocation concealment , by using a blinded assessor not involved in the randomisation process to determine eligibility prior to randomisation.	Y	Allocation sequence was sealed by using opaque and consecutively numbered envelopes. The envelopes were held centrally.	NI	No information about generation of allocation concealment is absent. There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	N	There were no significant between-group differences in demographic characteristics or outcome measures at baseline.	N	There were no significant difference between the two groups in terms of the demographic characteristics at baseline	N	There were no significant between-group differences in the outcome measures at baseline.
	Low		**Low**		**High**	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.

	Low back pain		Low back pain		Low back pain	
Study ID	**Valenza 2017**		**Wajswelner 2011**		**Zaeda 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	N	All enrolled participants received the intended intervention.	Y	At end of treatment there were 3/44 participants from the Pilates intervention and 1/43 from the exercise comparator group were lost to reassessment (<5%) At 6 month followup 14 participants from the Pilates interevention and 13 from the exercise comparator group dropped out of the study (31% of study population) with reasons.	N	All enrolled participants received the intended intervention.
	NA	Not applicable.	PN	Reasons considered reasonable	NA	Not applicable.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	PY	The trialists did not report the analysis method used to estimate the effect of assignment. However, as there were no drop outs all participants are assumed to be included in the analysis.	Y	Performance analysis by intention-to-treat specified and performed.	NI	The trialists did not report the analysis method used to estimate the effect of assignment.
	NA	Not applicable.	NA	Not applicable.	PN	It is not explicitly clear that all participants who completed the study were analysed. However, there were no dropouts in any of the groups so it is implied that no participants were excluded.
	Low		**Low**		**Some concerns**	

	Low back pain		Low back pain		Low back pain	
Study ID	**Valenza 2017**		**Wajswelner 2011**		**Zaeda 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to missing outcome data	Y	Data was available for all participants randomised.	PN	At end of treatment (6 weeks) data were available for all (or nearly all) participants.	PN	All patients are said to have completed the study, but there is no evidence to suggest that outcome data was analysed for all.
	NA	Not applicable.	NA	Not applicable.	PY	The trial report provides no information about the extent of missing outcome data, however due to the statement of no dropouts, there is no reason to suspect that there is a high risk of bias due to missing outcome data.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Low		**Low**		**Low**	
	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.

	Low back pain		Low back pain		Low back pain	
Study ID	**Valenza 2017**		**Wajswelner 2011**		**Zaeda 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in measurement of the outcome	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.	N	The methods of outcome assessment were comparable across intervention groups.
	PY	Outcome measures were evaluated by a blinded assessor. However, majority of primary outcomes were patient-reported. There is reason to suspect that the participants were not blinded to treatment group.	PY	Outcome assessor was blinded. However, the participant was aware of the intervention and majority of outcomes were self-reported.	NI	The trialists do not explictly state if outcome assessors were blinded to intervention status.
	PY	Participant-reported outcomes could be influenced by knowledge of the intervention (I.e. VAS pain score). Since, the outcome assesor is also the participant, they may or may not favour the intervention received based on their treatment experience.	PY	The assessor measuring the outcome variables was blinded to the treatment allocation. However, given that these measures were self-reports, participants could have biased their answers (i.e. performance bias) given that they knew which intervention they had received.	PN	It is unlikely that outcome assessors could influence the observer-reported outcomes. Roland Morris Disability Questionnaire was patient-reported and knowledge of the assigned intervention could have influenced its assessment.
	PN	There is evidence to suggest that patient-reported outcomes were substantially influenced by knowledge of the intervention received.	PN	Participants were not blinded to intervention; however, they were not informed as to the research hypothesis, and knowledge of the type of exercise being studied did not seem to bias reported treatment outcome expectations. Thus, it is unlikely that any preconceived notion of the benefit of one type of exercise over another had a bearing on the results	NA	Not Applicable.
	Some concerns		**Some concerns**		**Low**	
	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	Y	The researchers' pre-specified intentions are available in sufficient detail.	PN	The researchers' pre-specified intentions are not available and are not adequately described.

	Low back pain		Low back pain		Low back pain	
Study ID	**Valenza 2017**		**Wajswelner 2011**		**Zaeda 2012**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	N	There is clear evidence (through examination of the statistical analysis plan) that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	N	There is clear evidence (through examination of the statistical analysis plan) that all eligible reported results for the outcome measurement correspond to all intended analyses.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	Some concerns		**Low**		**Some concerns**	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Neck pain (chronic)		Neck pain (chronic)		Neck pain (chronic)	
Study ID	**Cazotti 2015**		**Dunleavy 2016**		**Ulug 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	An electronic randomisation table was used to randomise the participants into two groups (Pilates or control).	PN	Participants were assigned to one of three groups based on geographic and time convenience (control, Pilates, Yoga). When a class was full, participants were assigned to the control group	PY	Participants were randomized using the sealed envelope method and divided into 3 groups of 20. 60 envelopes were used and equally numbered with group names 1 (Pilates), 2 (yoga), and 3 (isometric). The patients were asked to choose 1 of these sealed envelopes.
	Y	Treatment allocations were kept in sealed, opaque envelopes.	NI	The investigators do not report allocation concealment. There is reason to suspect that the enrolling investigator and the participant had knowledge of the forthcoming allocation.	Y	Sealed envelopes were used, which were opened immediately prior to intervention after the participant consented to be a part of the study.
	PN	There was no significant difference between the two groups in terms of age, sex, level of exercise and education. There was a significant difference in mean BMI between groups; however, this is likely due to chance.	PN	The authors reported no significant difference in baseline characteristics between intervention groups. However, the data was not included in the report, raising some concerns.	N	There was no significant difference between the three groups in terms of sex and BMI.There was a significant difference in age, but this was likely due to chance
	Low		**Some concerns**		**Low**	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PY	All randomised participants received the intended intervention. 3/64 did not complete assigned intervention some of which were related to the trial context (health problem).	PN	The only deviations reported were discontinuations, similar to what would occur in clinical practice (32/88). One patient in the experimental group discontinued due to cervical pain, which could be considered related to the intervention.	NI	Four participants, two from each of the Yoga and Isometric groups dropped out the study. Reasons are not provided but are considered unrelated to the trial context
	N	Any impact on outcomes is expected to be slight (1/64~1.6%)	NA	Not applicable.	NA	Not applicable.

	Neck pain (chronic)		Neck pain (chronic)		Neck pain (chronic)	
Study ID	**Cazotti 2015**		**Dunleavy 2016**		**Ulug 2018**	
Intervention [PY])	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
	Y	Data available for all randomised participants. For those who did not agree to particpate in assessments, the last data were repeated in the subsequent assessments.	PN	Participant drop outs were excluded from all analyses. In addition, six participants were excluded due to noncompliance.	PY	Modified. Final analyses excluded participants with missing outcome data. No imputations made.
	NA	Not applicable.	PN	Probably no, participants who do not comply cannot benefit from the intervention.	NA	Not applicable.
	Some concerns		**High**		**Some concerns**	
Bias due to missing outcome data	Y	Data available for nearly all randomised participants (<5% missing).	N	33 originally enrolled participaants dropped out of the study or were excluded from final analysis (36.4% of study population), 14 in the Pilates group, 6 in the Yoga group and 12 in the control group.	N	4 originally enrolled participants dropped out of the study (6.7% of study population), 2 in the Yoga group and 2 in the Isometric group.
	NA	Not applicable.	PN	No analysis was presented to assess the impact of this missing data.	PN	No analysis was presented to assess the impact of this missing data.
	NA	Not applicable.	PN	Reasons for drop out were provided, majority did not appear related ot the outcome.	PY	Without reasons for drop out, it is difficult to assess this domain. Could plausibly be due to illness or disease severity.
	NA	Not applicable.	NA	Missingness of the data considered not likely to be affect true value of the outcome, given it is balanced between Pilates and control group.	PY	Missingness of the data considered to affect true value of the outcome. Droppouts not balanced between groups.
	Low		**Some concerns**		**High**	
	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.
	PN	The methods of outcome assessment were comparable across intervention groups.	PN	The methods of outcome assessment were comparable across intervention groups.	PN	The methods of outcome assessment were comparable across intervention groups.

	Neck pain (chronic)		Neck pain (chronic)		Neck pain (chronic)	
Study ID	**Cazotti 2015**		**Dunleavy 2016**		**Ulug 2018**	
Bias in measurement of the outcome	PY	Both groups were assessed by a blinded assessor. However, the participant was aware of the intervention.	Y	Examiners were not blinded to the participant's intervention group due to location.	Y	All of the assessment procedures were performed by the same physiotherapist who was blinded to the US measurements. However, the participant was aware of the intervention.
	PY	The primary outcome measures were self-reported and could be influenced by knowledge fo the intervention recieved. Assessor measuring the outcome variables was blinded to treatment allocation.	PY	The primary outcome measures were self-reported and could be influenced by knowledge fo the intervention recieved. Assessor measuring the outcome variables was blinded to treatment allocation.	PY	The primary outcome measures were self-reported and could be influenced by knowledge fo the intervention recieved. Assessor measuring the outcome variables was blinded to treatment allocation.
	PY	There is no reason to believe that the patient-reported outcomes were substantially influenced by knowledge of the intervention.	PY	There is no reason to believe that the patient-reported outcomes were substantially influenced by knowledge of the intervention.	PN	There is no reason to believe that the patient-reported outcomes were substantially influenced by knowledge of the intervention.
	Some concerns		**Some concerns**		**Some concerns**	
Bias in selection of the reported result	NI	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	PN	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.	NI	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.
	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	N	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PY	Results are missing for average pain at baseline and all objective outcome measures listed in the methods are missing.	N	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	Some concerns		**High**		**Some concerns**	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable
Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.

	Neck pain (chronic)	Neck pain (chronic)	Neck pain (chronic)
Study ID	**Cazotti 2015**	**Dunleavy 2016**	**Ulug 2018**

a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

	Shoulder pain	
Study ID	**Atilgan 2017**	
	Judgement	**Comments**
Bias arising from the randomisation process	Y	The patients were randomised into two groups using an online random allocation software program (Graphpad Software, 2013) before the study was initiated.
	NI	No details provided. There is reason to suspect that the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	PY	There was a significant difference in the duration of pain between the two groups (mean 12 months vs 7 months, $p < 0.05$) before the treatment was initiated.
	Some concerns	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PN	Given that these measures were self-reported by the participant, they could have biased their answers (i.e. performance bias) given that they knew which intervention they had received.
	NA	Not applicable.

	Shoulder pain	
Study ID	**Atilgan 2017**	
Intervention [PY])	NA	Not applicable.
	PY	Modified. Final analyses excluded participants with missing outcome data. No imputations made.
	NA	Not applicable.
	Low	
Bias due to missing outcome data	Y	Data were missing from 2/17 (>10%) in Pilates group and 1/16 (<6%) from exercise group
	N	No analysis was presented to assess the impact of this missing data.
	PN	Reasons for drop out were provided and did not appear related ot the outcome.
	NA	Not applicable.
	Low	
	N	The trial included appropriate outcome measurement instruments.
	N	The methods of outcome assessment were comparable across intervention groups.

	Shoulder pain	
Study ID	**Atilgan 2017**	
Bias in measurement of the outcome	NI	The investigators do not explictly state if outcome assessors were blinded to intervention status.
	PY	The primary outcome measures were self-reported and could be influenced by knowledge fo the intervention recieved. Assessor measuring the outcome variables was blinded to treatment allocation.
	PN	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.
	Some concerns	
Bias in selection of the reported result	NI	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis performed accordingly.
	PN	There are no reasons to suggest outcome measures reported have been selected on the basis of results.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	Some concerns	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb

	Shoulder pain
Study ID	**Atilgan 2017**
a. For the precise wording of signa	

	Menopausal symptom or complaint		Menopausal symptom or complaint		Menopausal symptom or complaint	
Study ID	**Ahmadinezhad 2017**		**Campos de Oliveira 2018**		**Lee 2016a**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	PY	Participants were randomly assigned into one control and two intervention groups using a balanced block randomisation method. It is not clear how this was achieved.	Y	Random numbers were generated by software (randomization.com), which distributed the participants to either Pilates group (PG), Vibration group (VG) or Control group (CG).	PN	No specific information about generation of the randomisation sequence except a statement that subjects were randomly categorised
	PN	The investigators do not report allocation concealment. It is possible the enrolling investigator or the participant had knowledge of the forthcoming allocation.	Y	The researcher who performed the randomisation sealed the opaque envelopes containing group allocation details and gave them to the principal investigator who was blind to group allocation.	NI	The investigators do not report allocation concealment. It is probable the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	N	There was no significant difference between the two groups in terms of their demographic characteristics.	N	There was no significant difference between the two groups in terms of their demographic characteristics.	N	There was no significant difference between the two groups in terms of their demographic characteristics.
	Some concerns		**Low**		**Some concerns**	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	N	All enrolled participants received allocated intervention	N	All enrolled participants received allocated intervention	NI	The Investigators did not report whether deviations arose because of the trial context. (No CONSORT)
	NA	Not applicable.	NA	Not applicable.	NI	No information to make a judgement
	NA	Not applicable.	NA	Not applicable.	NI	No information to make a judgement. Concerns due to imbalance of enrolled participants between groups: Pilates exercise group (n=45) and a control group (n=29).

	Menopausal symptom or complaint		Menopausal symptom or complaint		Menopausal symptom or complaint	
Study ID	**Ahmadinezhad 2017**		**Campos de Oliveira 2018**		**Lee 2016a**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
[illegible]	PN	Not clear if all enrolled and randomised participants included in the analysis. Author do not mention anything about the exclusion of participants who missed more than two sessions and ther is no indication of the N analysed for each group	Y	All randomised participants included in the analysis (missing post-intervention data on two participants were imputed by the group mean). Subsequently, a per protocol analysis was performed, excluding the two CG participants who dropped out of the study. As the results were similar, only the ITT analysis is presented in the results of this study.	NI	No information to make a judgement
	NI	No information provided.	NA	Not applicable.	NI	No information to make a judgement
	Some concerns		**Low**		**High**	
Bias due to missing outcome data	Y	Although not explicitly stated, it is assumed outcome data was available for all participants	Y	Outcome data was available for nearly all participants.	NI	There is no information to suggest that outcome data was available for all, or nearly all, participants in the study. N for analysis not provided.
	NA	Not applicable.	NA	Not applicable.	N	There is no evidence that the results were not biased by missing outcome data
	NA	Not applicable.	NA	Not applicable.	NI	No information to make a judgement
	NA	Not applicable.	NA	Not applicable.	NI	No information to make a judgement
	Low		**Low**		**High**	
	N	The trial included appropriate outcome measurements that are well-validated, reliable and likely sensitive to plausible intervention effects.	N	The trial included appropriate outcome measurements that are well-validated, reliable and likely sensitive to plausible intervention effects.	N	The trial included appropriate outcome measurements that are well-validated, reliable and likely sensitive to plausible intervention effects.
	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.

	Menopausal symptom or complaint		Menopausal symptom or complaint		Menopausal symptom or complaint	
Study ID	**Ahmadinezhad 2017**		**Campos de Oliveira 2018**		**Lee 2016a**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in measurement of the outcome	PY	The research assistant/assesser was blind to group allocation but participants were aware of the intervention received.	PY	Measurements were recorded by an independent assessor blinded to both allocation and intervention but participants were aware of the intervention received.	PY	The investigators did not report blinding of the outcome assessor.
	PY	Participant-reported outcomes (PSQI) could be influenced by knowledge of the intervention.	PN	Quality of life outcome could be influenced by knowledge of the intervention. It is unlikely that outcome assessors could influence the observer-reported outcomes in this study (muscle strength, bone mineral density).	Y	Participant-reported outcomes (QoL) and observer recorded measures could be influenced by knowledge of the intervention.
	NI	There is reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received. Baseline scores for sleep quality lower in the Pilates group	PN	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.	PN	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.
	Some concerns		**Some concerns**	Quality of life outcome (primary), Low risk BMD (secondary)	**Some concerns**	
Bias in selection of the reported result	PN	The researchers' pre-specified intentions are available (trial registry) but the authors fail to mention or discuss one of the primary outcomes in the report (anxiety), or that participants were selected based on anxiety scores.	PN	The researchers' pre-specified intentions are available (trial registry). The authors fail to mention or discuss several of the Secondary outcomes in the report (falls efficacy, balance, mobility)	NI	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.
	PY	All eligible reported results for the outcome domain (sleep) correspond to all intended outcome measurements.	Y	All reported results for the outcome domain appear to correspond to all intended outcome measurements T-score at end of treatment not reported.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	PY	Several posthoc analyses for sleep quality and individual domain scores.	PY	Includes several posthoc and multiple analyses for the outcome measurement	PN	There is no evidence that authors select from multiple analyses
	High		**High**		**Some concerns**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable

	Menopausal symptom or complaint		Menopausal symptom or complaint		Menopausal symptom or complaint	
Study ID	**Ahmadinezhad 2017**		**Campos de Oliveira 2018**		**Lee 2016a**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**

Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.

a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

	Postpartum	
Study ID	**Mirmohammadali 2012**	
	Judgement	**Comments**
Bias arising from the randomisation process	PY	Participants were selected using randomised blocking. Four health centres were randomly selected out of the seven, and individuals who attended those four centres were assigned to the intervention group. Individuals who attended the remaining three centres were assigned to the control group.
	NI	The investigators do not report allocation concealment. It is possible the enrolling investigator or the participant had knowledge of the forthcoming allocation.
	N	Both groups being homogeneous, in accordance with the baseline characteristics.
	Some concerns	
Bias arising from the timing of identification and recruitment of individual participants	N	1b. Referral to the centres for prenatal care occurred prior to randomisation.
	Low	
	Y	The nature of the intervention meant that participants were aware of their allocated interventions. Participation in study was voluntary.
	Y	The nature of the intervention meant that instructors were aware of the allocated interventions.
	PY	The Invesitgators did not report whether deviations arose because of the trial context (no CONSORT) but none suspected.

	Postpartum	
Study ID	**Mirmohammadali 2012**	
	Judgement	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	NI	No information to make a judgement
	NI	No information to make a judgement
	PN	The Investigators mention they "selected" participants for inclusion in the analysis. Those who did not perform excercises for 3 consecutive session or had more than 5 interrupted sessions not included.
	PY	Exclusion of participants is considered to overestimate the treatment effect because those who do not complete treatment cannot benefit from it (i.e., the proportion of responders is overstated)
	High	
Bias due to missing outcome data	NI	No information about the extent of missing outcome data.
	NA	Not applicable
	NI	The trial report provides no information about the extent of missing outcome data.
	NI	There is reason to suspect that there is a high risk of bias due to missing outcome data.
	High	

	Postpartum	
Study ID	**Mirmohammadali 2012**	
	Judgement	**Comments**
Bias in measurement of the outcome	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.
	N	The same measurement methods and thresholds were used at comparable time points.
	NI	Outcome measures (sleep, fatigue) were reported by the participants who were aware of the intervention received.
	PY	Participant-reported outcomes could be influenced by knowledge of the intervention.
	PY	There is high suspicion the outcome assessors were influenced by knowledge of the intervention received, to bias the outcome in favour of the intervention.
	High	
Bias in selection of the reported result	NI	The researchers' pre-specified intentions are not available (retrospectively added to registry) but are sufficiently described and data analysis was performed accordingly.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements. Only total/composite scores reported.

	Postpartum	
Study ID	**Mirmohammadali 2012**	
	Judgement	**Comments**
	PN	There is no evidence that authors select from multiple analyses.
	Some concerns	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable
Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.

a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

	Rehabilitation of the knee (after injury)		Rehabilitation of the knee (after arthroplasty)	
Study ID	**Celik 2017**		**Karaman 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	Participants were randomised using a computer-generated randomised table of numbers that was created before the beginning of the study.	PY	"Simple randomisation" was used but details of the randomisation sequence generation not provided.
	NI	The authors do not report on allocation concealment	NI	The authors do not report on allocation concealment.
	N	No signifcant differences were observed between the groups for any of the demographic or clinical variables.	PN	Baseline characteristics appear comparable between groups
	Some concerns		**Some concerns**	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	PY	The nature of the intervention meant participants were aware of their allocated interventions.	PY	The nature of the intervention meant participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PY	All participants received the allocated intervention but 8 participants in the Pilates group (25%) and in the control group (10%) did not complete follow up.	PN	12/46 (26%) of participants discontinued the trial. Some of these could plausibly be due to the trial context.
	PY	Reasons for droppout not provided for 7 participants in the Pilates group and 1 participant in the control group. If discontinuations were due to pain or lack of mobility it is possible they would have affected the outcome.	PY	Reasons given include exacerbation in pain, receiving surgery, or declining further participation.
	N	More discontinuations occurred in the Pilates group than the control (7 vs 1).	Y	Proportion of discontinuations was balanced between groups.
	Y	Analyses only performed on data from participants who completed the study	PY	Analyses only performed on data from participants who completed the study
	NA	Not applicable	NA	Not applicable
	High		**Some concerns**	

	Rehabilitation of the knee (after injury)		Rehabilitation of the knee (after arthroplasty)	
Study ID	**Celik 2017**		**Karaman 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**
Bias due to missing outcome data	N	Data were missing from 8/32 (25%) in the Pilates group and 3/32 (<10%) in the Control group	N	Outcome data was missing for (26%) of participants.
	N	No analysis was presented to assess the impact of missing outcome data.	N	No analysis was presented to assess the impact of missing outcome data.
	PY	Loss to follow up or withdrawal from the study could be related to participants' health status. (not known)	Y	Reasons for loss to follow up include pain exacerbation (n=2 in the control group) and surgery (n=2 in the Pilates group) that could plausibly be related to the outcome.
	PY	It is possible that missingness in the outcome was influenced by its true value.	Y	It is possible that missingness in the outcome was influenced by its true value.
	High		**High**	
Bias in measurement of the outcome	N	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	N	Testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.
	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.
	PY	The outcome assessor is the patient, who is aware of their intervention status	PY	The outcome assessor is aware of their intervention status (participant or observer)
	PY	Participant-reported outcomes could be influenced by knowledge of the intervention.	PY	Participant and observer reported outcomes could be influenced by knowledge of the intervention.
	N	There is high suspicion the outcome assessors were influenced by knowledge of the intervention received, to bias the outcome in favour of the intervention.	N	There is no evidence to suggest that the outcome assessors may have been influenced to bias the outcome data. Both groups received an exercise intervention
	Some concerns		**Some concerns**	

	Rehabilitation of the knee (after injury)		Rehabilitation of the knee (after arthroplasty)	
Study ID	**Celik 2017**		**Karaman 2017**	
	Judgement	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	PY	The researchers' pre-specified intentions are not available (Protocol registered), but are sufficiently described and data analysis was performed accordingly.	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.
	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
	PN	There is no evidence that authors select from multiple analyses	PN	There is no evidence that authors select from multiple analyses
	Low		**Low**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable
Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.
a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

			Employment condition, at risk of stress/anxiety		Sedentary, at risk of metabolic disorder	
Study ID			**Abavisani 2019**		**Garcia-Soidan 2014**	
	Judgement	**Signialling question**	**Judgement**	**Comments**	**Judgement**	
Bias arising from the randomisation process		1.1 Was the allocation sequence random?	PY	Block randomisation method used to allocate subjects into intervention and control groups.	PY	Participants were "selected according to inclusion and exclusion criteria, were distributed according to sex and age, and were randomly assigned to the control group or Pilates group".
		1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	NI	The authors do not report on allocation concealment	NI	The authors do not report on allocation concealment.
		1.3 Did baseline differences between intervention groups suggest a problem with the randomisation process?	PN	Baseline characteristics appear comparable between groups	N	There were no statistically significant differences in the baseline comparisons between groups.
		Risk-of-bias judgement	**Some concerns**		**Some concerns**	
		2.1. Were participants aware of their assigned intervention during the trial?	Y	The nature of the intervention meant participants were aware of their allocated interventions.	Y	The nature of the intervention meant participants were aware of their allocated interventions.
		2.2. Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
		2.3. If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the trial context?	N	All participants received the allocated intervention. There were no dropouts.	PY	All participants received the allocated intervention. 2/48 (4.1%) participants in the Control group and 5/51 (9.8%) in the Pilates group dropped out (reasons were not provided).

			Employment condition, at risk of stress/anxiety		Sedentary, at risk of metabolic disorder	
Study ID			**Abavisani 2019**		**Garcia-Soidan 2014**	
	Judgement	**Signialling question**	**Judgement**	**Comments**	**Judgement**	
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])		2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA	Not applicable	NI	No information to make a judgement. Appears consistent with what could occur outside of the trial context.
		2.5. If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA	Not applicable	NA	Not applicable
		2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	PY	Analyses performed on data from all participants	PY	No. Participants who missing data as well as 7 participants in each group were eliminated for not wearing the accelerometer for the 7 days.
		2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomised?	NA	Not applicable	PN	Exclusion of randomised participants could influence the results, but not considered substantial (balanced between groups).
		Risk-of-bias judgement	**Low**		**Some concerns**	
Bias due to missing outcome data		3.1 Were data for this outcome available for all, or nearly all, participants randomised?	Y	Outcome data was available for all participants	Y	7/99 (7%) participants dropped out (2 in the control and 5 in the Pilates) and 14/99 (14%) were eliminated for not wearing accelerometer for the required duration
		3.2 If N/PN to 3.1: Is there evidence that the result was not biased by missing outcome data?	NA	Not applicable	N	No analysis was presented to assess the impact of missing outcome data.
		3.3 If N/PN/NI to 3.2: Could missingness in the outcome depend on its true value?	NA	Not applicable	NA	Loss to follow up or withdrawal from the study could be related to participants' health status. (not known)

			Employment condition, at risk of stress/anxiety		Sedentary, at risk of metabolic disorder	
Study ID			**Abavisani 2019**		**Garcia-Soidan 2014**	
	Judgement	**Signialling question**	**Judgement**	**Comments**	**Judgement**	
		3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA	Not applicable	NA	missingness of the data considered not likely to affect true value of the outcome as it appears balanced between groups.
		Risk-of-bias judgement	**Low**		**Some concerns**	
Bias in measurement of the outcome		4.1 Was the method of measuring the outcome inappropriate?	N	Testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	PN	Testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.
		4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N	The same measurement methods and thresholds were used at comparable time points.	N	The same measurement methods and thresholds were used at comparable time points.
		4.3 If N/PN/NI to 4.1 and 4.2: Were outcome assessors aware of the intervention received by study participants?	PY	The outcome assessors were aware of their intervention status (participant or observer)	PY	There is reason to suspect that the assessor was aware of the intervention received by participants as the authors do not specifically mention blinding of assessors.
		4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	PY	Participant reported outcomes could be influenced by knowledge of the intervention. (Anxiety)	PY	There is potential for assessment of the outcome to be influenced by knowledge of intervention received as the study used both objective and subjective measures.
		4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	PY	There is no reason to believe that that patient-reported outcomes were substantially influenced by knowledge of the intervention received.	PY	There is likelihood of self-reporting bias. There is high suspicion the outcome assessors were influenced by knowledge of the intervention received, to bias the outcome in favour of the intervention.
		Risk-of-bias judgement	**Some concerns**		**Some concerns**	
		5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalised before unblinded outcome data were available for analysis?	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.

			Employment condition, at risk of stress/anxiety		Sedentary, at risk of metabolic disorder	
Study ID			**Abavisani 2019**		**Garcia-Soidan 2014**	
	Judgement	**Signialling question**	**Judgement**	**Comments**	**Judgement**	
Bias in selection of the reported result		Is the numerical result being assessed likely to have been selected, on the basis of the results, from… 5.2. ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domain correspond to all intended outcome measurements.
		Is the numerical result being assessed likely to have been selected, on the basis of the results, from… 5.3 ... multiple eligible analyses of the data?	PN	There is no evidence that authors select from multiple analyses. However, trial registry indicates a second outcome was measured and is not reported.	PN	There is no evidence that authors select from multiple analyses
		Risk-of-bias judgement	**Some concerns**		**Some concerns**	
Overall risk of bias		#N/A	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.

Y = yes; PY= partial yes; N = no, PN = partial no; NI = no information; NA = not applicable
Source: Chapter 8 Cochrane handbook for systematic reviews of interventions.
a. For the precise wording of signalling questions and guidance for answering each one, see the full risk-of-bias tool at www.riskofbias.info.

	Sedentary, at risk of metabolic disorder		Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)	
Study ID	**Sahinci Gokgul 2017**		**Aibar-Almazan 2019**		**Curi 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	PN	"Participants were randomly divided into two groups" was reported by no further details of randomisation were provided.	Y	A computer-generated random numbers table was used to randomise participants.	Y	Parcipants were randomised using a 'draw' into the groups.
	NI	The authors do not report on allocation concealment	Y	Allocations were performed in sealed, opaque, and consecutively numbered envelopes kept in a locked location, which were then opened by a independent administrator.	NI	It is possible that the enrolling investigator had knowledge of the forthcoming allocation
	PY	The authors do not provide baseline characteristics. Pre-test data for the two groups suggests differences in anthropometric/body composition between the groups.	N	There were no statistically significant differences in the baseline comparisons between groups regarding descriptive and clinical variables.	PN	There were no significant differences between the groups at baseline for all the outcome measures
	High		**Low**		**Some concerns**	
	Y	The nature of the intervention meant participants were aware of their allocated interventions.	Y	The nature of the intervention meant participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PN	9% of participants did not partake in the trial. The authors report that "two women have remained off study for various reasons". Reasons judged unlikely due to the trial context. It is not reported how many participants in each group.	N	All participants received the allocated intervention. There were no noticeable deviations from the intended interventions.	PN	All participants received the allocated intervention. 2 participants in Pilates group and 1 in control group dropped out due to personal issues. This appears consistent with what could occur outside of the trial context.

	Sedentary, at risk of metabolic disorder		Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)	
Study ID	**Sahinci Gokgul 2017**		**Aibar-Almazan 2019**		**Curi 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	NA	Not applicable	NA	Not applicable	NA	Not applicable
	NA	Not applicable	NA	Not applicable	NA	Not applicable
	PY	Modified intent-to-treat. Analyses only performed on data from participants who completed the study	Y	Modified intent-to-treat, Participants (3/110) who did not show up to post-intervention appointment were not analysed.	PY	Data were analysed by using a modified intention-to-treat model. Participants with missing outcome data were not included in analysis.
	NA	Not applicable	NA	Not applicable	NA	Not applicable
	Some concerns		**Low**		**Low**	
Bias due to missing outcome data	NI	The authors do not report on missing data.	Y	3/55 (5.5%) in control goup were lost to follow-up.	PY	Data were available for nearly all participants (2/33 and 1/31 missing)
	N	No analysis was presented to assess the impact of missing outcome data.	NA	Not applicable	NA	Not applicable
	PY	Loss to follow up or withdrawal from the study could be related to participants' health status. (not known)	NA	Not applicable	NA	Not applicable

	Sedentary, at risk of metabolic disorder		Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)	
Study ID	**Sahinci Gokgul 2017**		**Aibar-Almazan 2019**		**Curi 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	PY	It is possible that missingness in the outcome was influenced by its true value.	NA	Not applicable	NA	Not applicable
	High		**Low**		**Low**	
Bias in measurement of the outcome	PN	It is likely that the testing measures used are sensitive to plausible intervention effect. Well calibrated and validated measurement tools were used.	PN	The trial included appropriate outcome measurement instruments for sleep, fatigue, anxiety/depression, balance confidence, fear of falling	PN	The trial included appropriate outcome measurement instruments. (Sleep, fatigue, depression)
	N	The same measurement methods and thresholds were used at comparable time points.	PN	The same measurement methods and thresholds are used at comparable time points (pre- and post-intervention).	PN	The same measurement methods and thresholds are used at comparable time points (pre- and post-intervention).
	PY	The outcome assessor is the patient, who is aware of their intervention status	Y	Most outcomes are participant reported, who were aware of the intervention received.	PY	Most outcomes are participant reported, who were aware of the intervention received.
	PY	Observer-reported outcomes could be influenced by knowledge of the intervention.	PY	There is potential for assessment of the outcome to be influenced by knowledge of intervention received as the study used both objective and subjective measures.	PY	There is potential for assessment of the outcome to be influenced by knowledge of intervention received as the study used both objective and subjective measures.
	PY	There is high suspicion the outcome assessors were influenced by knowledge of the intervention received, to bias the outcome in favour of the intervention.	PY	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.	PY	There is no reason to believe that patient-reported outcomes were substantially influenced by knowledge of the intervention.
	Some concerns		**Some concerns**		**Some concerns**	
	PY	The researchers' pre-specified intentions are not available, but are adequately described and data analysis was performed accordingly.	Y	The researchers' pre-specified intentions are available (NCT03201107) and data analysis of reported outcomes was performed accordingly.	PY	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.

	Sedentary, at risk of metabolic disorder		Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)	
Study ID	**Sahinci Gokgul 2017**		**Aibar-Almazan 2019**		**Curi 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	PN	All eligible reported results for the outcome domain appear to correspond to all intended outcome measurements.	PN	All eligible reported results for the outcome domains correspond to all intended outcome measurements. But the trial registry lists numerous outcome measures for various outcome domains that are not reported. It is possible there is selective reporting of outcomes	PN	All eligible reported results for the outcome domains correspond to all intended outcome measurements.
	PN	There is no evidence that authors select from multiple analyses	PN	There is no evidence that authors select from multiple analyses.	PY	There is no evidence that authors select from multiple analyses.
	Some concerns		**Some concerns**		**Some concerns**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)	
Study ID	**de Andrade Mesquita 2015**		**Irez 2011**		**Liposcki 2019**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	PY	Participants were randomised by an independent researcher into the groups. No further detail was provided.	NI	No information about generation of the randomisation sequence. The only statement is that participants were drawn from a sample of two randomly separated groups..	PY	Randomisation was performed by random drawing, where each elderly woman was identified by a number. A volunteer, blind to the participants, made the draw, with the first number drawn for GP, the second number drawn for GC and so on respectively.
	NI	It is possible that the enrolling investigator had knowledge of the forthcoming allocation	NI	The investigators do not detail blinding participant allocation in the publication.	NI	The investigators do not detail blinding participant allocation in the publication.
	N	There were no statistically significant difference between groups in mean age and BMI.	PN	Participants in the Pilates group were notably younger (72.8 vs 78.0 years) but other baseline characteristics was comparable	PN	Only age provided, no difference between the groups for baseline SF-36 scores
	Some concerns		**Some concerns**		**Some concerns**	
	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.
	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	PN	All participants received the allocated intervention. 3 participants from control group dropped out. One subject from each group (Pilates and PNF) who missed two consecutive sessions were excluded from the analysis.	N	All participants received the allocated intervention and included at baseline.	PY	3 participants in the Pilates group and 1 in the control group not included in the anlaysis. Reasons not provided. (no CONSORT)

	Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)	
Study ID	**de Andrade Mesquita 2015**		**Irez 2011**		**Liposcki 2019**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	NI	No information to make a judgement.	NA	Not applicable	NI	No information to make a judgement.
	Y	Balanced. 3/21 (14%) in the control group and 1 each in the intervention groups (~5%)	NA	Not applicable	N	Not balanced. 3/12 (25%) participants in the Pilates group and 1/12 (8%) in the control group excluded
	PN	Per protocol. 2 participants excluded for missing treatment sessions	PN	Participants who did not attend 80% of the training sessions were excluded from the analysis. The trialists use a mixed design repeated measure multivariate analysis of variance to examine between group differences.	N	Per protocol. Participants who did not attend more than 90% sessions were excluded from the analysis (total 4 out of 24).
	PN	Exclusion of those who do not attend all sessions could overestimate the treatment effect (i.e., the proportion of responders is overstated) but not considered to be substantial	PN	Exclusion of those who do not attend all sessions could overestimate the treatment effect (i.e., the proportion of responders is overstated)	NA	Not applicable
	Some concerns		**Some concerns**		**High**	
Bias due to missing outcome data	PN	3/21 missing in control group (14%) and 1/21 (5%) missing in each of the intervention groups	PY	Participation rate was 92% in Pilates group, it is assumed outcome data is available for all or nearly all participants randomised.	N	Data were missing from 4/24 (>15%) participants
	NA	There is no evidence that the results were not biased by missing outcome data.	NI	There is no evidence that the results were not biased by missing outcome data.	N	No further analysis was presented to answer this question.
	NA	missingness of the data ccould affect true value of the outcome	NI	The trial report provides no information about the extent of missing outcome data (no consort).	NI	Early withdrawal of participants in Pilates group could be related to health status

	Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)	
Study ID	**de Andrade Mesquita 2015**		**Irez 2011**		**Liposcki 2019**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	NA	missingness of the data considered not likely to affect true value of the outcome.	NI	The trial report provides no information about the extent of missing outcome data.	NI	missingness of the data considered likely to affect true value of the outcome
	Some concerns		**Some concerns**		**High**	
Bias in measurement of the outcome	PN	The trial included appropriate outcome measurement instruments. (stabiliometry, balance tests)	N	It is likely that the testing measures used are sensitive to plausible intervention effect. (sit and reach, muscle strength, reaction time)	N	The trial included appropriate outcome measurement instrument (QoL-SF36)
	N	The same measurement methods and thresholds are used at comparable time points (pre- and post-intervention).	N	All measurements were taken in the residential house, a week before start of the intervention period and at the end of the intervention period.	PN	The same measurement methods and thresholds are used at comparable time points (pre- and post-intervention).
	N	Data collection and data entry were conducted by research assistants who were blinded to the treatment conditions. (observer measures)	N	Subjects were contacted by two research team members who were blinded to their group assignments.	N	Participants were aware of the itnervention received (self-reported)
	NA	not applicable	N	It is unlikely that outcome assessors could influence the observer-measured outcomes	PY	There is potential for assessment of the outcome to be influenced by knowledge of intervention received
	NA	not applicable	NA	Not applicable.	NA	Participants self-reported their outcome and could plausibly have biased their report due to perceived benefit of the intervention.
	Low		**Low**		**Some concerns**	
	Y	The researchers' pre-specified intentions are available (NCT02278731) and data analysis of reported outcomes was performed accordingly.	Y	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.	Y	The researchers' pre-specified intentions are not available .

	Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)		Age-related decline, sedentary women (>60 yrs)	
Study ID	**de Andrade Mesquita 2015**		**Irez 2011**		**Liposcki 2019**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	PN	All eligible reported results for the outcome domains correspond to all intended outcome measurements.	N	Reported results for the outcome domains correspond to all intended outcome measurements.	PN	Reported results for the outcome domains correspond to all intended outcome measurements.
	PN	There is no evidence that authors select from multiple analyses.	N	There is no evidence that authors select from multiple analyses.	**N**	There is no evidence that authors select from multiple analyses.
	Low		**Some concerns**		**Some concerns**	
Overall risk of bias	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal

	Healthy adults (>60 yrs), at risk of falls		Healthy adults (>60 yrs), at risk of falls		Healthy adults (>60 yrs), at risk of falls	
Study ID	**Barker 2016**		**Josephs 2016**		**Roller 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias arising from the randomisation process	Y	Participants were randomised using sealed opaque envelopes indicating treatment allocation.	Y	Participants were allocated to groups using a randomisation table.	Y	Allocation was assigned using a random number generator.
	Y	Participants were randomised using sealed opaque envelopes indicating treatment allocation. Group allocation was revealed after completion of the baseline assessment.	PN	This information is not specified however there is reason to suspect that the enrolling investigator had knowledge of the forthcoming allocation.	N	The allocation into groups was carried out by one the invesitgators and was likely not concealed.
	N	There were no differences between groups in demographic characteristics except for body mass index, which was higher in the intervention group (P = 0.026).	PY	There were differences in % male and amount of physicial activity between the groups.	N	Baseline characteristics were comparable.
	Low		**Some concerns**		**Some concerns**	
	Y	Participants were not blinded to their intervention group.	Y	The nature of the interventions meant that participants were aware of their allocated interventions.	Y	Participants were not blinded to the intervention.
	Y	The nature of the interventions gives reason to suspect that the carers and instructors were aware of their allocated interventions.	Y	The nature of the interventions meant that the carers and instructors were aware of their allocated interventions.	Y	The nature of the interventions meant that instructors were aware of the allocated interventions.
	Y	There were 2 discontinuations in the intervention group (Pilates + home exercise) and 9 discontinuations or withdrawals in the control group (home exercise). It is considered likely that these arose due to the trial context.	PY	7 participants withdrew from the study.	PN	3 participants in the Pilates group withdrew due to illness or personal reasons, before commencing the intervention. This is considered in line with expectations of clinical practice. There were no discontinuations in the control group.

	Healthy adults (>60 yrs), at risk of falls		Healthy adults (>60 yrs), at risk of falls		Healthy adults (>60 yrs), at risk of falls	
Study ID	**Barker 2016**		**Josephs 2016**		**Roller 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias due to deviations from intended interventions (effect of assignment to intervention [ITT])	PN	Reasons for discontinuation were not provided, unable to assess whether these were likely to have affected the outcome.	PY	These drop outs were excluded from the analysis.	NA	Not applicable.
	N	More discontinuations occurred in the control group than the Pilates group.	PN	More participants dropped out in the control group (27%) compared to the Pilates group (19%).	NA	Not applicable.
	PY	Data were analysed by using a ITT (LOCF) model, 20/22 in Pilates group and 29/31 in control group analysed.	PY	Modified intent to treat. All participants who finished the study were analysed.	Y	Modified ITT including all participants who completed the study
	NA	Not applicable	NA	Not applicable.	PN	No subjects were excluded from the analysis.
	High		**High**		**Low**	
Bias due to missing outcome data	N	Data was missing for 11/53 (21%) participants. Adjusted using LOCF	N	7/31 participants withdrew from the study.	N	4/31 (13%) participants with missing data not included in final analysis
	N	There is no evidence that the results were not biased by missing outcome data. Authors do not discuss mITT/ITT results.	PN	No further analysis was presented to answer this question.	N	No further analysis was presented to answer this question.
	N	Early withdrawal of participants in Pilates or control group could be related to health status.	PY	Reasons for drop out were provided for some but not all participants. At least 1 participant in the control group discontinued due to perceived lack of efficacy.	NI	Early withdrawal of participants in Pilates group could be related to health status

	Healthy adults (>60 yrs), at risk of falls		Healthy adults (>60 yrs), at risk of falls		Healthy adults (>60 yrs), at risk of falls	
Study ID	**Barker 2016**		**Josephs 2016**		**Roller 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
	PN	missingness of the data considered not likely to affect true value of the outcome	PN	missingness of the data considered not likely to affect true value of the outcome	PN	missingness of the data considered not likely to affect true value of the outcome
	Some concerns		**Some concerns**		**Some concerns**	
Bias in measurement of the outcome	N	The trial included appropriate outcome measurement instruments.	PN	The trial included appropriate outcome measurement instruments.	N	The trial included appropriate outcome measurement instruments.
	N	The same measurement methods and thresholds are used at comparable time points (pre- and post-intervention).	PN	The same measurement methods and thresholds are used at comparable time points (pre- and post-intervention).	N	The same measurement methods and thresholds are used at comparable time points (pre- and post-intervention).
	PY	Outcome assessor was blinded (study is described as single-blinded, and participants and instructors were not blinded). Some of the outcomes are participant-reported so would not have been blinded.	PN	Outcome assessor was blinded. Participants self-reported some outcomes and were aware of their intervention per point 2.1	PY	There were two assessors who conducted different measurements, one was blinded while one was not.
	PY	There is potential for assessment of the outcome to be influenced by knowledge of intervention received	PY	Participants self-reported their outcome and could plausibly have biased their report due to perceived benefit of the intervention.	PN	Outcome measures are objective.
	PY	There is likelihood of influencing of the outcome assessment due to performance bias.	PY	Participants self-reported their outcome and could plausibly have biased their report due to perceived benefit of the intervention.	NA	Not applicable.
	Some concerns		**Some concerns**		**Low**	
	NI	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.	NI	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.	NI	The researchers' pre-specified intentions are not available, but are sufficiently described and data analysis was performed accordingly.

	Healthy adults (>60 yrs), at risk of falls		Healthy adults (>60 yrs), at risk of falls		Healthy adults (>60 yrs), at risk of falls	
Study ID	**Barker 2016**		**Josephs 2016**		**Roller 2018**	
	Judgement	**Comments**	**Judgement**	**Comments**	**Judgement**	**Comments**
Bias in selection of the reported result	PN	There is evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There is evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.	PN	There is evidence that all eligible reported results for the outcome domain correspond to all intended outcome measurements.
	PN	There is no evidence that authors select from multiple analyses.	PN	There is no evidence that authors select from multiple analyses.	PN	There is no evidence that authors select from multiple analyses.
	Some concerns		**Some concerns**		**Some concerns**	
Overall risk of bias	**High**	The study has plausible bias that seriously weakens confidence in the results.	**High**	The study has plausible bias that seriously weakens confidence in the results.	**Some concerns**	The study has plausible bias that raises some doubt about the results.

Y = yes; PY= partial yes; N = no, PN
Source: Chapter 8 Cochrane handb
a. For the precise wording of signal