



# SHIATSU FOR PREVENTING AND TREATING HEALTH CONDITIONS

## APPENDICES A TO C

prepared by

**HT**ANALYSTS

for

National Health and Medical  
Research Council

NHMRC | Natural Therapies Working  
Committee

Canberra ACT 2601

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# REPORT INFORMATION

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## Dates

This technical report and accompanying evidence evaluation report received approval from the National Health and Medical Research Council (NHMRC) Natural Therapies Working Committee (NTWC) on 20 May 2024.

The protocol for the evidence evaluation was approved by the NHMRC NTWC on 11 March 2021 and is published on PROSPERO (CRD42021243311).

## History

NHMRC were engaged by the Department of Health and Aged Care (formerly Department of Health; Department) to update the evidence underpinning the *2015 Review of the Australian Government Rebate on Natural Therapies for Private Health Insurance* (2015 Review) (1). The natural therapies to be reviewed are Alexander technique, aromatherapy, Bowen therapy, Buteyko, Feldenkrais, homeopathy, iridology, kinesiology, naturopathy, Pilates, reflexology, Rolfing, shiatsu, tai chi, western herbal medicine and yoga. These therapies are among those excluded from the private health insurance rebate as of 1 April 2019.

To support NHMRC in their evidence review, **HTANALYSTS** (formerly Health Technology Analysts) were engaged to conduct a systematic review of the evidence of clinical effectiveness of shiatsu. Eligible studies received from the Department's public call for evidence, the Natural Therapies Review Expert Advisory Panel (NTREAP) and NTWC were also to be included in the evidence evaluation.

This technical report has been developed by **HTANALYSTS** in conjunction with NHMRC, NTWC and NTREAP. It provides the appendices and supplementary data related to an evidence valuation of the effect of shiatsu for preventing and treating health conditions. The main body of evidence is presented in the Evidence Evaluation Report. All associated materials have been developed in a robust and transparent manner in accordance with relevant best practice standards (2-5).

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## LIST OF ABBREVIATIONS

BRISA	Regional Base of Health Technology Assessment Reports of the Americas
CINAHL	Cumulative Index to Nursing and Allied Health Literature
COMET	Core Outcome Measures in Effectiveness Trials
GRADE	Grading of Recommendations Assessment, Development and Evaluation
ICD-11	International Statistical Classification of Diseases and Related Health Problems 11th Revision WHO Version (2021)
ITT	Intent-to-treat
MCID	Minimal clinically important difference
MD	Mean difference
MDC	Minimal detectable change
NHMRC	National Health and Medical Research Council
NRSI	Nonrandomised study of an intervention
NTREAP	Natural Therapies Review Expert Advisory Panel
NTWC	Natural Therapies Working Committee
OR	Odds ratios
PAHO	Pan American Health Organization
PICO	Population, Intervention, Comparator, Outcome
PP	Per protocol
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
RCT	Randomised controlled trial
RoB	Risk of bias
RR	Risk ratios
SMD	Standardised mean differences
SR	Systematic review
SD	Standard deviation
TIDIER	Template for Intervention Description and Replication

## Appendix A Searching, selection criteria and screening

This appendix documents the search strategy used to inform the systematic review on the effect of shiatsu for preventing and treating any health condition, as well as the supplementary overview of acupressure as a component of shiatsu.

### A1 Search methods

#### A1.1 Electronic searches

The literature search strategy for shiatsu was developed in Ovid (for Embase, MEDLINE and Emcare) based on the key element of research question (i.e. the intervention). The search was not limited by population or outcome, but rather by study type; with methodological filters for identifying SRs, RCTs and NRSIs and exclusions for other publication types based on filters that were developed and published previously (6).

In developing the search strategy, we appraised and adapted the relevant search strategies provided in the 2015 review; with recent SRs identified in the scoping report and studies suggested by NTWC also reviewed to identify other potentially relevant search concepts. Terms or concepts proven not suitable were removed and other terms added.

No date, language or geographic limitations were applied when conducting the search of English-language databases. Non-English databases were not searched.

The strategy for shiatsu was adapted to suit the required syntax for the following electronic bibliographic databases:

- Embase (via Ovid)
- MEDLINE (via Ovid)
- Cochrane Central Register of Controlled Trials (via Cochrane Library)
- Emcare (via Ovid) – coverage of all nursing specialty areas
- PsycINFO® (via Ovid) – coverage of behavioural science and mental health
- AMED (via Ovid) – coverage of Allied and Complementary Medicine
- PEDro – coverage of physiotherapy
- CINAHL (via EBSCOHost) – Cumulative Index to Nursing and Allied Health Literature
- SPORTDiscus (via EBSCOHost) – coverage of exercise physiology, medicine, biomechanics, coaching, counselling, psychology and sports medicine
- PubMed (limited to in-process citations and citations not indexed in MEDLINE) – to retrieve citations not yet indexed in OVID
- Pan American Health Organization (PAHO) Virtual Health Library (VHL) – including Lilacs (Health information from Latin America and the Caribbean countries), PAHO IRIS (institutional repository for information sharing), and BRISA (Regional Base of Health Technology Assessment Reports of the Americas)

For acupressure, the Cochrane Database of systematic reviews was searched instead of Cochrane Central and the Agency for Healthcare Research and Quality's Systematic Review Data Repository was searched in addition. Details of the search strategy and results for each database are provided in [Appendix A2](#) and [Appendix A3](#).

#### A1.2 Other resources

Reference lists of included studies were checked to identify any additional studies not identified through searches of the primary databases. The public was also invited by the Department to submit references for published research evidence (not examined in the 2015 Review). Grey literature was not eligible for inclusion.

### A1.3 Publication date

The literature was searched on 21 April 2021. There were no limitations on publication date. This was to minimise bias, and to maintain the integrity of the systematic review process.

Studies that were published (or submitted to the Department) after the literature search date were to be listed within the '*Studies Awaiting Classification*' table of the evaluation report and a brief statement about the study and its potential impact on the overall conclusions of the evidence review was to be included under relevant sections of the review (e.g. '*Overall completeness and applicability of evidence*').

No studies were identified or submitted after the literature search date.

### A1.4 Studies published in languages other than English

The literature search, as well as the Department's call for evidence, was not limited by language of publication. Studies in languages other than English could be identified via the English-language databases listed in Appendix A1.1, however databases in languages other than English were not searched.

For pragmatic reasons, potentially eligible studies published in languages other than English were documented via a process outlined in Appendix A5.3 and were listed within the '*Studies Awaiting Classification*' table of the technical report (see Appendix C3.1.2 [shiatsu] and Appendix C3.2.2 [acupressure]).

## A2 Search strategy

The search strategy was developed in-house for the Ovid interface and was adapted to suit EBSCOHost, the Cochrane Library and PubMed (limited to in-process citations and citations not indexed in MEDLINE). The PubMed search comprised free-text terms only and replicated the free-text sets in the Embase search (converted from the Ovid syntax). The search was restricted to records that are not indexed for MEDLINE (i.e. in-process citations and citations from journals (or parts of journals) that are not currently MEDLINE-indexed).

### Concept: Study design limits (SR, RCT, NRSI, not animals)

1. exp meta analysis/ or meta analysis.mp. or exp systematic review/ or systematic review.mp. or pooled analysis.mp. or ((exp review/ or review.mp.) and (systemat\* or pool\*).mp.)
2. exp comparative study/ or comparative study.mp. or exp clinical trial/ or clinical trial.mp. or randomized controlled trial.mp. or randomi?ed controlled trial.mp. or exp randomized controlled trial/ or exp randomization/ or randomization.mp. or randomi?ation.mp. or exp single blind procedure/ or single blind procedure.mp. or exp double blind procedure/ or double blind procedure.mp. or exp triple blind procedure/ or triple blind procedure.mp. or exp crossover procedure/ or crossover procedure.mp. or exp placebo/ or placebo\*.mp. or random\*.mp. or rct.mp. or single blind.mp. or single blinded.mp. or double blind.mp. or double blinded.mp. or treble blind.mp. or triple blind.mp. or triple blinded.mp. or exp prospective study/ or prospective study.mp.
3. exp clinical study/ or exp case control study/ or exp family study/ or exp longitudinal study/ or exp retrospective study/ or exp cohort analysis/ or (cohort adj1 stud\*).mp. or (case control adj1 stud\*).mp. or (exp prospective study/ not randomi?ed controlled trials.mp.) or (follow up adj1 stud\*).mp. or (observational adj1 stud\*).mp. or (epidemiologic\* adj1 stud\*).mp. or (cross sectional adj1 stud\*).mp.
4. case report/
5. (editorial or letter or comment or historical article).pt.
6. (animals/ or nonhuman/) not humans/
7. 4 or 5 or 6

### Concept: Acupressure

8. exp acupressure/
9. Digitopression.ti,ab.
10. Digitopuncture.ti,ab.
11. Acupresion.ti,ab.
12. Acupressure.ti,ab.
13. Acupression.ti,ab.
14. Acupressao.ti,ab.
15. acupress\*.ti,ab.
16. or/8-15

### Concept: shiatsu or amna

17. exp shiatsu/
18. (Japanese adj2 massage).ti,ab.
19. Chih Ya.ti,ab.

- 20. Zhi Ya.ti,ab.
- 21. Shiat?u.ti,ab.
- 22. Shiatsu.ti,ab.
- 23. shiatzu.ti,ab.
- 24. anma.ti,ab.
- 25. amna.ti,ab.
- 26. amma.ti,ab.
- 27. gua gon.ti,ab.
- 28. gua sha.ti,ab.
- 29. or/17-28

### Concept: acupoint

- 30. (acupoint and massage).ti,ab.
- 31. (acupoint adj3 pressure).ti,ab.
- 32. acupoint therap\*.ti,ab.
- 33. (meridian\* and (stretching or massage)).ti,ab.
- 34. (meridian\* adj3 pressure).ti,ab.
- 35. (meridian\* adj3 manipulat\*).ti,ab.
- 36. or/30-35

### Concept: SR of acupressure or acupoint

- 37. 1 AND (16 or 36)
- 38. 37 NOT 7

### Concept: RCT of shiatsu or acupoint

- 39. 2 AND (29 or 36)
- 40. 39 NOT 7

### Concept: NRSI of shiatsu or acupoint

- 41. 3 AND (29 or 36)
- 42. 41 NOT 7

## Ovid syntax

Exp explodes controlled vocabulary term (i.e. includes all narrower terms in the hierarchy)

\* denotes a term that has been searched as a major subject heading

/ denotes controlled vocabulary terms (EMTREE)

\$ truncation character (unlimited truncation)

\$n truncation limited to specified number (n) of characters (e.g. time\$1 identifies time, timed, timer, times but not timetable)

\* truncation character (unlimited truncation)

? substitutes any letter (e.g. oxidi?ed identifies oxidised and oxidized)

adjn search terms within a specified number (n) of words from each other in any order

.ti. limit to title field

.ti,ab. limit to title and abstract fields

.kw,ti,ab. limit to keyword, title and abstract field

.pt limit to publication type

## CINHAL syntax

\* truncation character (unlimited truncation)

# wildcard character will replace 1 or 0 characters (e.g. f#etus will retrieve fetus and foetus)

? wildcard character will replace one character (e.g. wom?n will retrieve women and woman)

MH - Search the exact CINAHL® subject heading; searches both major and minor headings

MH"heading"+ Search an exploded subheading

TI search title fields

AB search abstract fields

Nn – Proximity “near” operator will find a result if the terms are within a certain number (n) words of each other, regardless of the order in which they appear. (e.g. eating N5 disorders for results that contain eating disorders, as well as mental disorders and eating pathology.)

PT limit to publication type

## PubMed syntax

\* truncation character (unlimited truncation)

[TI] limit to title field

[TIAB] limit to title and abstract fields

[EDAT] date citation added to PubMed

[SB] PubMed subset

AND pubmednotmedline[sb] was added to the last line of search string

## A3 Literature search results

This appendix documents the results of the literature search and screening for a systematic review on the effect of shiatsu for preventing and treating any health condition, as well as results of the literature search and screening for the supplement on acupuncture. The literature search strategy was developed and conducted as described in Appendix A2.

### A3.1 Systematic review of shiatsu

#### A3.1.1 Ovid

The search for RCTs and NRSIs via Ovid was conducted on 21 April 2021.

Databases searched were as follows:

- AMED (Allied and Complementary Medicine) 1985 to April 2021
- Embase Classic+Embase 1947 to 2021 April 19
- Ovid Emcare 1995 to 2021 Week 14
- APA PsycINFO® 1806 to April Week 2 2021
- Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Daily and Versions(R) 1946 to April 19, 2021

**Table A-1 Search results: Shiatsu via Ovid**

#	Searches	AMED	Embase	Emcare	PsycINFO	MEDLINE
1	exp comparative study/ or comparative study.mp. or exp clinical trial/ or clinical trial.mp. or randomized controlled trial.mp. or randomi?ed controlled trial.mp. or exp randomized controlled trial/ or exp randomization/ or randomization.mp. or randomi?ation.mp. or exp single blind procedure/ or single blind procedure.mp. or exp double blind procedure/ or double blind procedure.mp. or exp triple blind procedure/ or triple blind procedure.mp. or exp crossover procedure/ or crossover procedure.mp. or exp placebo/ or placebo*.mp. or random*.mp. or rct.mp. or single blind.mp. or single blinded.mp. or double blind.mp. or double blinded.mp. or treble blind.mp. or triple blind.mp. or triple blinded.mp. or exp prospective study/ or prospective study.mp.	31824	4883544	1119354	280267	3912753
2	exp clinical study/ or exp case control study/ or exp family study/ or exp longitudinal study/ or exp retrospective study/ or exp cohort analysis/ or (cohort adjl stud*).mp. or (case control adjl stud*).mp. or (exp prospective study/ not randomi?ed controlled trials.mp.) or (follow up adjl stud*).mp. or (observational adjl stud*).mp. or (epidemiologic* adjl stud*).mp. or (cross sectional adjl stud*).mp.	11093	11247596	2583221	118821	3599065
3	case report/	8215	2733920	471320	23042	2169214
4	(editorial or letter or comment or historical article).pt.	15266	1898982	631255	0	2293815
5	(animals/ or nonhuman/) not humans/	10302	6747666	655109	7299	4780671
6	3 or 4 or 5	33586	11033534	1688502	30337	8910468
7	exp shiatsu/	258	113	115	0	797
8	(Japanese adj2 massage).ti,ab.	8	16	9	3	12
9	Chih Ya.ti,ab.	0	0	0	0	0
10	Zhi Ya.ti,ab.	0	1	1	0	1
11	Shiat?u.ti,ab.	201	143	77	19	97

#	Searches	AMED	Embase	Emcare	PsycINFO	MEDLINE
12	Shiatsu.ti,ab.	201	142	77	19	97
13	shiatzu.ti,ab.	0	2	0	0	0
14	anma.ti,ab.	3	26	12	1	23
15	amna.ti,ab.	0	38	6	7	14
16	amma.ti,ab.	2	64	11	19	59
17	Gua gon.ti,ab.	0	0	0	0	0
18	Gua sha.ti,ab.	17	53	32	1	42
19	or/7-18	353	393	189	49	994
20	(acupoint and massage).ti,ab.	18	111	47	4	62
21	(acupoint adj3 pressure).ti,ab.	14	29	11	0	22
22	acupoint therap*.ti,ab.	9	34	12	0	22
23	(meridian* and (stretching or massage)).ti,ab.	17	112	51	5	61
24	(meridian* adj3 pressure).ti,ab.	3	5	0	0	3
25	(meridian* adj3 manipulat*).ti,ab.	2	11	3	0	7
26	or/20-25	57	279	116	9	162
27	(1 and (19 or 26)) not 6	33	241	130	10	624
28	(2 and (19 or 26)) not 6	0	256	122	3	492
29	27 or 28	33	300	170	13	649

### A3.1.2 EBSCOHost

The search for RCTs and NRSIs via EBSCOHost was conducted on 21 April 2021.

Databases searched were as follows:

- CINAHL Complete (inception to 21 April 2021)
- SPORTDiscus with Full Text (inception to 21 April 2021)

**Table A-2 Search results: Shiatsu via EBSCOHost**

#	Searches	CINAHL	SPORTDiscus
1	MH "comparative study+" OR TX comparative study OR MH "clinical trial+" OR TX clinical trial OR TX randomized controlled trial OR TX randomi?ed controlled trial OR MH "randomized controlled trial+" OR MH "randomization+" OR TX randomization OR TX randomi?ation OR MH "single blind procedure+" OR TX single blind procedure OR MH "double blind procedure+" OR TX double blind procedure OR MH "triple blind procedure+" OR TX triple blind procedure OR MH "crossover procedure+" OR TX crossover procedure OR MH "placebo+" OR TX placebo* OR TX random* OR TX rct OR TX single blind OR TX single blinded OR TX double blind OR TX double blinded OR TX treble blind OR TX triple blind OR TX triple blinded OR MH "prospective study+" OR TX prospective study	2,488,300	251015
2	MH "clinical study+" OR TX clinical study OR MH "case control study+" OR TX family study OR MH "longitudinal study+" OR MH "retrospective study+" OR MH "cohort analysis+" OR TX cohort study OR TX cohort studies OR TX case control study OR TX case control studies OR (MH "prospective study+" NOT TX randomized controlled trials) OR TX follow up study OR TX follow up studies OR TX observational study OR TX observational studies OR TX epidemiological study OR TX epidemiological studies OR TX cross sectional study OR TX cross sectional studies	881,110	130945
3	MH "case report+"	0	0
4	PT (editorial OR letter OR comment OR historical article)	682,245	36319
5	MH "(animals+ or nonhuman+)" NOT MH "humans+"	0	0
6	S3 OR S4 OR S5	682,245	36319
7	(MM "Shiatsu")	107	0
8	TI (Japanese W2 massage) OR AB (Japanese W2 massage)	24	7

#	Searches	CINAHL	SPORTDiscus
9	TI Chih Ya OR AB Chih Ya	1	0
10	TI Zhi Ya OR AB Zhi Ya	1	0
11	TI Shiat*u OR AB Shiat*u	155	96
12	TI Shiatsu OR AB shiatsu	155	94
13	TI shiatzu OR AB shiatzu	0	2
14	TI anma OR AB anma	17	12
15	TI amna OR AB amna	2	0
16	TI amma OR AB amma	31	5
17	TI gua gon OR AB gua gon	0	0
18	TI gua sha or AB gua sha	46	10
19	OR/ S7 - S18	288	119
20	TI (acupoint W1 massage) OR AB (acupoint W1 massage)	79	5
21	TI (acupoint W3 pressure) OR AB (acupoint W3 pressure)	13	0
22	TI acupoint therap* OR AB acupoint therap*	147	6
23	TI (meridian* W1 (stretching OR massage)) OR AB (meridian* W1 (stretching OR massage))	23	2
24	TI (meridian* W3 pressure) OR AB (meridian* W3 pressure)	0	0
25	TI (meridian* W3 manipulat*) OR AB (meridian* W3 manipulat*)	2	0
26	OR/ S20 - S25	247	10
27	S1 AND (S19 OR S26)	280	11
28	S2 AND (S19 OR S26)	64	4
29	S27 OR S28	287	11
30	S29 NOT S6	281	11

### A3.1.3 Cochrane

The search for controlled clinical trials via the Cochrane Central Register of Controlled Trials was conducted on 21 April 2021.

**Table A-3 Search results: Shiatsu via Cochrane Central Register of Controlled Trials**

#	Searches	Results
1	MeSH descriptor: [acupressure] explode all trees	367
2	(Japanese adj2 massage):ti,ab	0
3	(Chih Ya):ti,ab,kw	0
4	(Zhi Ya):ti,ab,kw	0
5	(Shiat?u):ti,ab,kw	30
6	(Shiatsu):ti,ab,kw	30
7	(shiatzu):ti,ab,kw	1
8	(anma):ti,ab	10
9	(amna):ti,ab	7
10	(amma):ti,ab	7
11	(gua gon):ti,ab	0
12	(gua sha):ti,ab	24
13	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12	439
14	(acupoint and massage):ti,ab,kw	143
15	(acupoint adj3 pressure):ti,ab,kw	0
16	(acupoint therap*):ti,ab,kw	1369
17	(meridian* and (stretching or massage) ):ti,ab,kw	60

18	(meridian* adj3 pressure):ti,ab,kw	0
19	(meridian* adj3 manipul*):ti,ab,kw	0
20	#14 OR #15 OR #16 OR #17 OR #18 OR #19	1478
21	#13 OR #20	1857

### A3.1.4 PubMed

The search for in-process citations and citations from journals (or parts of journals) that are not currently MEDLINE-indexed), via PubMed was conducted on 21 April 2021.

**Table A-4 Search results: Shiatsu via PubMed**

#	Searches	Results
1	"comparative study"[Title/Abstract] OR "comparative trial"[Title/Abstract] OR "clinical trial"[Title/Abstract] OR "clinical study"[Title/Abstract] OR "controlled trial"[Title/Abstract] OR "controlled study"[Title/Abstract] OR "random*" [Title/Abstract] OR "placebo*" [Title/Abstract] OR "single blind"[Title/Abstract] OR "double blind"[Title/Abstract] OR "double blinded"[Title/Abstract] OR "single blinded"[Title/Abstract] OR "triple blind"[Title/Abstract] OR "prospective study"[Title/Abstract]	1647203
2	"clinical study"[Title/Abstract] OR "case control study"[Title/Abstract] OR "case control stud*" [Title/Abstract] OR "family study"[Title/Abstract] OR "longitudinal studies"[Title/Abstract] OR "retrospective studies"[Title/Abstract] OR "cohort studies"[Title/Abstract] OR "cohort stud*" [Title/Abstract] OR "prospective stud*" [Title/Abstract] OR "prospective studies"[Title/Abstract] NOT "randomized controlled trial"[Title/Abstract] OR "follow up stud*" [Title/Abstract] OR "observational stud*" [Title/Abstract] OR "epidemiological study"[Title/Abstract] OR "epidemiological stud*" [Title/Abstract] OR "cross sectional stud*" [Title/Abstract]	811116
3	case report[Mesh:NoExp]	234
4	"editorial"[Publication Type] OR "editorial"[All Fields] OR "letter"[Publication Type] OR "correspondence as topic"[MeSH Terms] OR "letter"[All Fields] OR "comment"[Publication Type] OR "comment"[All Fields] OR "historical article"[Publication Type] OR "historical article"[All Fields]	2456300
5	"animals"[MeSH Terms:noexp] NOT "humans"[MeSH Terms:noexp]	4781083
6	#3 OR #4 or #5	7154378
7	shiatsu[Title/Abstract] OR Chih Ya[Title/Abstract] OR Zhi Ya[Title/Abstract] OR Shiat*[Title/Abstract] OR Shiatzu[Title/Abstract] OR Anma[Title/Abstract] OR Amna[Title/Abstract] OR Amma[Title/Abstract] OR Gua gon[Title/Abstract] OR Gua sha[Title/Abstract]	223
8	"Japanese"[Title/Abstract] AND "massage"[Title/Abstract]	76
9	#7 OR #8	286
10	"acupoint" [Title/Abstract] AND "massage"[Title/Abstract]	66
11	"acupoint" [Title/Abstract] AND "pressure"[Title/Abstract]	288
12	"acupoint therapies"[Title/Abstract] OR "acupoint therapy" [Title/Abstract]	21
13	(meridian[Title/Abstract] AND ("stretching"[Title/Abstract] OR massage[Title/Abstract]))	42
14	"meridian"[Title/Abstract] AND "pressure"[Title/Abstract]	178
15	"meridian"[Title/Abstract] AND ("manipulation"[Title/Abstract] OR "manipulate"[Title/Abstract])	84
16	#10 OR #11 OR #12 OR #13 OR #14 OR #15	624
17	(#1 AND (#9 OR #16)) NOT #6	290
18	(#2 AND (#9 OR #16)) NOT #6	26
19	(17 AND pubmednotmedline[sb])	0
20	(18 AND pubmednotmedline[sb])	0
21	#19 OR #20	0

### A3.1.5 PAHO Virtual Health Library

The search for RCTs and NRSIs via the PAHO Virtual Health Library was conducted on 21 April 2021. Citations indexed from MedLine were not included. Databases searched were as follows:

- LILACS
- IBECs
- Index Psychology – Scientific journals
- CUMED
- Multimedia Resources
- MOSAICO – Integrative health
- BDENF – Nursing
- LIS – Health Information Locator
- Sec. Munic. Saúde SP
- SOF – Formative Second Opinion
- CVSP – Brazil
- PAHO
- WHO IRIS
- DeCS – Descriptors in Health Sciences
- Desastres – Disasters-
- Coleciona SUS
- Index Psychology – Theses
- ARGMSAL
- BBO – Dentistry
- Hanseníase Leprosy
- PHS Repository

**Table A-5 Search results: Shiatsu via PAHO Virtual Health Library**

#	Limiters/Expanders	Searches	Limiters/ Expanders	Results <sup>a</sup>
1		Shiatsu	Title, abstract, subject	
2	OR	Japanese massage		
3	OR	Chih Ya		
4	OR	Zhi Ya		
5	OR	Shiat?u		
6	OR	Shiatsu		
7	OR	shiatzu		
8	OR	anma		
9	OR	amna		
10	OR	amma		
11	OR	gua gon		
12	OR	gua sha		
13	OR	(acupoint and massage)		
14	OR	(acupoint adj3 pressure)		
15	OR	(acupoint therap*)		
16	OR	(meridian* and (stretching or massage) )		
17	OR	(meridian* adj3 pressure)		
18	OR	(meridian* adj3 manipul*)		
19	OR	(meridian* adj3 manipul*)		
20		#14 OR #15 OR #16 OR #17 OR #18 OR #19		
21		#13 OR #20		
22	AND NOT	DB: ("MEDLINE")	Unique identifier	178

<sup>a</sup> Note: Only final search results are available

## A3.2 Supplementary overview of acupressure

### A3.2.1 Ovid

The search for systematic reviews (SR) via Ovid was conducted on 21 April 2021.

Databases searched were as follows:

- AMED (Allied and Complementary Medicine) 1985 to April 2021
- Embase Classic+Embase 1947 to 2021 April 19
- Ovid Emcare 1995 to 2021 Week 14
- APA PsycINFO® 1806 to April Week 2 2021
- Ovid MEDLINE(R) ALL 1946 to April 19, 2021

**Table A-6 Search results: Acupressure via Ovid**

#	Searches	AMED	EMBASE	Emcare	PsycINFO	MEDLINE
1	exp meta analysis/ or meta analysis.mp. or exp systematic review/ or systematic review.mp. or pooled analysis.mp. or ((exp review/ or review.mp.) and (systemat* or pool*).mp.)	6531	618273	217800	73390	406398
2	case report/	8215	2733920	471320	23042	2169214
3	(editorial or letter or comment or historical article).pt.	15266	1898982	631255	0	2293815
4	(animals/ or nonhuman/) not humans/	10302	6747666	655109	7299	4780671
5	2 or 3 or 3	33568	11033534	1688502	30337	8910468
6	1 not 4	6406	568575	207745	73280	381957
7	exp acupressure/	350	2395	1487	0	797
8	Digitopression.ti,ab.	0	3	0	0	1
9	Digitopuncture.ti,ab.	0	1	0	0	1
10	Acupresion.ti,ab.	0	1	0	0	1
11	Acupressure.ti,ab.	273	1667	951	175	1199
12	Acupression.ti,ab.	1	6	4	0	4
13	Acupressao.ti,ab.	0	1	0	0	2
14	Acupress*.ti,ab.	274	1674	954	175	1202
15	Or/7-14	438	2680	1556	175	1432
16	(acupoint and massage).ti,ab.	18	111	47	4	63
17	(acupoint adj3 pressure).ti,ab.	14	29	11	0	22
18	acupoint therap*.ti,ab.	9	34	12	0	22
19	(meridian* and (stretching or massage)).ti,ab.	17	112	51	5	61
20	(meridian* adj3 pressure).ti,ab.	3	5	0	0	3
21	(meridian* adj3 manipulat*).ti,ab.	2	11	3	0	7
22	or/16-21	57	279	116	9	162
23	5 and (15 or 22)	31	467	172	27	253

### A3.2.2 EBSCOHost

The search for SRs via EBSCOHost was conducted on 21 April 2021.

Databases searched were as follows:

- CINAHL Complete
- SPORTDiscus with Full Text

**Table A-7 Search results: Acupressure via EBSCOHost – SPORTDiscus**

#	Searches	CINAHL	SPORTDiscus
1	meta analysis+ OR TI meta analysis OR AB meta analysis OR systematic review+ OR TI systematic review OR AB systematic review OR TI pooled analysis OR AB pooled analysis OR ((review+ OR TI review OR AB review) AND (TI systemat* OR TI pool* OR AB systemat* OR AB pool*))	160,213	16,967
2	MH "case report+"	0	0
3	PT (editorial OR letter OR comment OR historical article)	682,245	36,319
4	MH "(animals+ or nonhuman+)" NOT MH "humans+"	0	0
5	S2 OR S3 OR S4	682,245	36,319
6	S1 NOT S5	155,552	16,763
7	(MH "Acupressure+")	1622	0
8	TI Digitopression OR AB Digitopression	0	1
9	TI Digitopuncture OR AB Digitopuncture	0	0
10	TI Acupresion OR AB Acupresion	14	0
11	TI Acupressure OR AB Acupressure	1213	238
12	TI Acupression OR AB Acupression	2	0
13	TI Acupressao OR AB Acupressao	12	0
14	TI Acupress* OR AB Acupress*	1217	240
15	S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14	1990	241
16	TI (acupoint W1 massage) OR AB (acupoint W1 massage)	79	5
17	TI (acupoint W3 pressure) OR AB (acupoint W3 pressure)	13	0
18	TI acupoint therap* OR AB acupoint therap*	147	6
19	TI (meridian* W1 (stretching OR massage)) OR AB (meridian* W1 (stretching OR massage))	23	2
20	TI (meridian* W3 pressure) OR AB (meridian* W3 pressure)	0	0
21	TI (meridian* W3 manipul*) OR AB (meridian* W3 manipul*)	2	0
22	S16 OR S17 OR S18 OR S19 OR S20 OR S21	247	10
23	S6 AND (S15 OR S22)	216	8

### A3.2.3 Cochrane

The search for SRs via Cochrane Database of Systematic Reviews (Issue 4 of 12) was conducted on 21 April 2021.

**Table A-8 Search results: Acupressure via Cochrane Database of Systematic Reviews**

#	Cochrane	Results
1	MeSH descriptor [acupressure] explode all trees	367
2	(digitopression):ti,ab,kw	1
3	(digitopuncture):ti,ab,kw	5
4	(acupresion):ti,ab,kw	29
5	(acupressure):ti,ab,kw	1525
6	(acupression):ti,ab,kw	12
7	(acupressao):ti,ab,kw	8
8	(acupress):ti,ab,kw	1
9	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8	1528
10	(acupoint and massage):ti,ab,kw	143
11	(acupoint adj3 pressure):ti,ab,kw	0
12	(acupoint therap*):ti,ab,kw	1369
13	(meridian* and (stretching or massage)):ti,ab,kw	60

#	Cochrane	Results
14	(meridian* adj3 pressure):ti,ab,kw	0
15	(meridian* adj3 manipulat*):ti,ab,kw	0
16	#10 OR #11 OR #12 OR #13 OR #14 OR #15	1478
17	#9 OR #16	34

### A3.2.4 PubMed

The search for in-process citations and citations from journals (or parts of journals) that are not currently MEDLINE-indexed via PubMed was conducted on 21 April 2021.

**Table A-9 Search results: Acupressure via PubMed**

#	PubMed	Results
1	((("meta-analysis as topic"[MeSH Terms]) OR ("meta-analysis"[Text Word])) OR (("systematic reviews as topic"[MeSH Terms]) OR ("systematic review"[Text Word])) OR ("pooled analysis"[Text Word]) OR ("review literature as topic"[MeSH Terms] AND ("systemat*" [Text Word] OR "pool*" [Text Word]))	330563
2	case report/	2230377
3	"editorial"[Publication Type] OR "editorial"[All Fields] OR "letter"[Publication Type] OR "correspondence as topic"[MeSH Terms] OR "letter"[All Fields] OR "comment"[Publication Type] OR "comment"[All Fields] OR "historical article"[Publication Type] OR "historical article"[All Fields]	2456300
4	"animals"[MeSH Terms:noexp] NOT "humans"[MeSH Terms:noexp]	4781083
5	(#2 OR #3 OR #4)	4458573
6	#1 NOT #5	311903
7	"Acupressure"[Mesh] OR Digitopression[Title/Abstract] OR Digitopuncture[Title/Abstract] OR Acupresion[Title/Abstract] OR Acupressure[Title/Abstract] OR Acupression[Title/Abstract] OR Acupressao[Title/Abstract] OR Acupress*[Title/Abstract]	1462
8	"acupoint" [Title/Abstract] AND "massage"[Title/Abstract]	66
9	"acupoint" [Title/Abstract] AND "pressure"[Title/Abstract]	288
10	"acupoint therapies"[Title/Abstract] OR "acupoint therapy" [Title/Abstract]	21
11	(meridian[Title/Abstract] AND ("stretching"[Title/Abstract] OR massage[Title/Abstract]))	42
12	"meridian"[Title/Abstract] AND "pressure"[Title/Abstract]	178
13	"meridian"[Title/Abstract] AND ("manipulation"[Title/Abstract] OR "manipulate"[Title/Abstract])	84
14	#7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13	624
15	#6 AND (#7 OR #14)	239
16	(15 AND pubmednotmedline[sb])	0

### A3.2.5 PAHO Virtual Health Library

The search for SRs via PAHO Virtual Health Library was conducted on 21 April 2021. Citations indexed from MedLine were not included.

Databases searched were as follows:

- LILACS
- IBECs
- Index Psychology – Scientific journals
- CUMED
- Multimedia Resources
- MOSAICO – Integrative health
- BDEFN – Nursing

- LIS – Health Information Locator
- Sec. Munic. Saúde SP
- SOF – Formative Second Opinion
- CVSP – Brazil
- PAHO
- WHO IRIS
- DeCS – Descriptors in Health Sciences
- Desastres – Disasters-
- Coleciona SUS
- Index Psychology – Theses
- ARGMSAL
- BBO – Dentistry
- Hanseníase Leprosy
- PHS Repository

**Table A-10 Search results: Acupressure via PAHO Virtual Health Library**

#	Limiters/ Expanders	Search		Results <sup>a</sup>
1		acupressure	Title, abstract, subject	
2	OR	digitopression		
3	OR	digitopuncture		
4	OR	acupresion		
5	OR	acupressure		
6	OR	acupression		
7	OR	acupressao		
8	OR	acupress*		
9	OR	acupoint AND massage		
10	OR	acupoint AND pressure		
11	OR	acupoint therap*		
12	OR	meridian*AND massage		
13	OR	meridian* AND stretching		
14	OR	meridian* AND pressure		
15	OR	meridian* AND manipulat*		
16	AND NOT	DB: ("MEDLINE")	Unique identifier	18

<sup>a</sup> Note: Results are only available for final search

### A3.2.6 Systematic Review Data Repository

The search for SRs published by the Agency for Healthcare Research and Quality was conducted on 21 April 2021.

**Table A-11 Search results: Acupressure via Systematic Review Data Repository**

#	Search	Results
1	Acupressure	7

## A4 Study selection criteria

This appendix documents the criteria used to identify studies eligible for inclusion in the systematic review on the effect of shiatsu for preventing and treating any health condition.

### A4.1 Types of studies

#### A4.1.1 Systematic review of shiatsu

Eligible studies were RCTs or NRSIs that examined the effectiveness of shiatsu compared to placebo/sham, no intervention or another intervention.

The primary study of interest was an RCT. 'Pseudo' or 'quasi' randomised studies<sup>1</sup> were also eligible for inclusion, as were cluster-randomised and crossover trials. These studies were to be evaluated alongside RCTs, with any concerns about the method of randomisation examined in the risk of bias assessment and addressed in the data synthesis (using methods appropriate to the study design [see *Unit-of-analysis issues*]) (7).

NRSIs were eligible for inclusion for all conditions. This was to ensure the evidence review adequately covered the breadth of health conditions and outcomes; particularly in the absence or paucity of RCT evidence for a health condition. To be eligible, NRSIs must also have included design features as outlined in Figure A.1 and, at a minimum, include the following design features:

- allocation to, or practice of, the intervention occurred by choice (by the participant or other)
- the effect of the intervention in individuals (or clusters of individuals or groups) was compared with a contemporaneous control group.

Eligible NRSIs that were assessed to be at critical risk of bias for one or more domains (see Appendix B1) *were not included in the evidence synthesis* because results from these studies were likely to lead to misinformed judgements about the effect estimate.

NRSIs in which the effect of the intervention was compared to a historical (or non-parallel or non-concurrent) control group *were not eligible for inclusion* due to concerns regarding residual confounding or unmeasurable changes in clinical practice over time.

Case series with either post-test or pre-test/post-test outcomes, cross-sectional studies and case reports were also *not eligible for inclusion*, as these study designs are too problematic when assessing the effect of the intervention with any confidence (8, 9).

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<sup>1</sup> Studies were judged to be quasi-randomised if the method of randomisation was not strictly random (e.g. alternate allocation) or if not specifically stated (e.g. the authors mention 'random' allocation but there is no discussion on the method used)

**Figure A.1 Eligible design features of nonrandomised studies of interventions**

Source: Adapted from NHMRC (8, 9); Chapter 24 Including nonrandomised studies on intervention effects (10); Cochrane Childhood Cancer (11)

#### A4.1.2 Supplementary overview of acupressure

Eligible studies for the overview were SRs (of RCTs and quasi-RCTs), with or without a meta-analysis that examined the effectiveness of acupressure compared to placebo/sham, no intervention or another intervention. Where a SR included quasi-RCTs, these were considered alongside the data from RCTs.

The choice to review published SRs on acupressure was made because a scoping review indicated that a SR of primary studies (i.e. RCTs or NRSIs) examining acupressure would not be feasible, given the timeframe and resources. As acupressure is a central technique used in shiatsu, evidence from SRs of acupressure was used to augment the evidence found for shiatsu.

Eligible SRs that included a single RCT were included as were SRs that include both RCTs and NRSIs; however, only evidence from the RCTs (or quasi-RCTs) was considered for the overview.

SRs that considered a broader question than intended for this overview (e.g. assessed the effect of acupressure among other interventions such as acupuncture) were included if the SR specifically reported the effect of acupressure independent of the other included interventions. If a subset of primary studies contained within the SR meet the eligibility criteria for this overview, then only the subset of primary studies were considered for the overview.

Reviews that did not report study eligibility criteria or conduct a comprehensive search of the literature (i.e. searching more than one database) were *not eligible for inclusion*. These reviews do not meet the minimum criteria to be considered 'systematic' and may not accurately summarise the body of evidence.

Supplementary primary studies were also *not eligible for inclusion*. This included individual RCTs or quasi-RCTs not part of a SR, nonrandomised experimental trials, observational cohort studies, case-control studies, interrupted times series, cross-sectional studies, and case series with either post-test or pre-test/post-test outcomes.

Overviews (a systematic review of systematic reviews) were also *not eligible for inclusion*; however, any overviews identified in the study selection process were checked to ensure eligible SRs had been included.

## A4.2 Types of participants

People of any age with any injury, disease, medical condition or preclinical condition were eligible for inclusion. Studies in at-risk individuals were also eligible for inclusion. To be considered at-risk, individuals needed to be assessed at study entry to have met a minimal threshold for being at-risk: such as having early symptoms, being appraised for symptoms or having a history of a previous condition (or family history).

Studies in which there was a broad general statement about the enrolment population were not included (e.g. one study that enrolled nurses to measure relaxation and anxiety was not included because the nurses were not specifically identified as being at-risk for elevated stress or anxiety at enrolment). Where there was uncertainty about whether a minimum threshold had been met, a process was developed to seek NTWC review of the 'aim' of the study in question and for NTWC to decide on eligibility. This process was not required for the shiatsu review or acupressure overview.

At-risk was broadly defined as those who are at increased risk of becoming ill or injured based on social, biomedical or behavioural risk factors (12). For the purposes of the shiatsu review and the acupressure overview, social determinants included factors such as income, education, employment and social support; biomedical factors included a person's age, genetic make-up or health status (such as obesity, high blood pressure, high cholesterol, vitamin deficiency); and behavioural factors include a person's lifestyle choices (e.g. alcohol consumption, diet, exercise, tobacco and other drug use, etc.).

Healthy participants seeking health improvement, such as general wellbeing, fitness, aesthetic improvements, resilience and cognitive or emotional intelligence were not eligible for inclusion. Studies that included both eligible and ineligible populations were to be included if separate data were available for the eligible population/s. There were no studies identified that met this criterion.

## A4.3 Types of interventions

### A4.3.1 Intervention

All styles and forms of massage described as shiatsu, or a type of shiatsu were eligible for inclusion. This meant any therapy in the name of shiatsu instruction that was delivered by a therapist to an individual or group of individuals, or shiatsu that was self-administered was eligible for inclusion. Studies were included irrespective of whether the intervention was delivered by a therapist or through other media (e.g. instructional videos). There were no limits on intensity (number of sessions), duration (session time), or mode of delivery (individual, group, instructional video etc.).

Terminology specific to the Japanese language is not used in the standardised nomenclature (13). Therefore, studies using other traditional oriental terms to describe the intervention were included in the review. This included, but was not limited to, shiatsu massage, Anma (or Amna) massage, An mo massage, Tsubo (acupoint) therapy. Studies described as 'Traditional Japanese massage' or 'Japanese massage' were included if the description of the intervention was consistent with the definition of shiatsu.

Other components of practice used by shiatsu therapists in Australia (such as moxibustion, cupping, self-acupressure, oriental diet, corrective exercises, lifestyle, relaxation, breathing techniques and meditation) were only included if they were delivered in the context of whole-system/multi-component shiatsu therapy. This meant primary studies only evaluating component interventions, such as acupressure<sup>2</sup>, moxibustion, cupping and meridian exercises, were excluded.

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<sup>2</sup> Primary studies evaluating acupressure are excluded from the shiatsu component of the review (SR of RCTs and NRSIs). However, SRs of acupressure were considered within the Overview (SR of SRs) component of the review (see Supplement 1).

Studies that examined shiatsu delivered as an adjunct to another therapy were excluded unless the effect of shiatsu alone could be discerned (i.e. both groups received the other therapy). For example, studies where shiatsu was delivered in combination with Chinese herbal foot baths were excluded, except when both groups received the Chinese herbal foot bath.

Therapies that are described as Tuina (or tui na) or other styles of massage or manual therapies (e.g. Korean massage, traditional Chinese massage, remedial massage, Swedish massage etc.) were excluded. Interventions that include high-velocity joint manipulation or oils were also excluded, as these components are not consistent with shiatsu practice in Australia.

#### A4.3.2 Comparators

There were no restrictions on eligible comparators, noting that the evidence was stratified into 3 comparisons<sup>3</sup>: (i) sham; (ii) no intervention, wait list or usual care (unless active); and (iii) other interventions (inclusive of usual care if considered active). A judgement about the appropriate comparator group for analysis was made when collating the included studies (see Appendix A5.4).

The decision to separate sham and no intervention was made to account for any potential placebo effect that could occur. This is because a sham intervention is intended to simulate the intervention in a way that participants remain blinded to the intervention they are allocated. For instance, while sham interventions are designed to be a placebo, they are not always perfect, and some have demonstrable clinical effects (14).

Where usual care is poorly described or where usual care is described as an adjunct (i.e., shiatsu plus usual care versus usual care alone), it was considered an inactive intervention. ‘Other’ comparators could include pharmacologic treatments, manual therapies, exercise programs or other forms of physical activity designed to improve health.

Studies with co-interventions (such as diet, education programs, lifestyle modification or medication) that were not provided within the context of shiatsu therapy were included if all arms of a study receive the same co-intervention (i.e. the effectiveness of shiatsu was not confounded).

Studies comparing different styles, forms, or components of shiatsu with one another (including studies comparing shiatsu with acupuncture) were excluded.

### A4.4 Types of outcome measure

#### A4.4.1 Outcome role

All outcomes were eligible for inclusion.

#### A4.4.2 Outcome domains of interest

Eligible outcome domains were intended to be those that align with the reasons why patients use the therapy and/or practitioners prescribe the therapy. This included recovery, rehabilitation, and changes in disease outcomes and symptoms (e.g. pain, joint range of motion, strength, balance and accepted surrogate outcomes such as HbA1C for diabetes, body mass index for weight gain or loss, lung function tests), health-related psychological/behavioural outcomes, health-related quality of life, self-reported benefits, symptoms and functional ability, medication use or compliance with conventional medicine treatment; and injury or disease specific prevention outcomes (e.g. falls prevention, smoking cessation).

It was out of scope to assess personal health care preferences, patient-reported experience measures (PREMS) (e.g. satisfaction with care), safety, quality or economic outcomes.

<sup>3</sup> For the overview of acupuncture, one SR reported combined data for the comparator groups (sham and control [no intervention]). Data for this combined group were presented separately.

All outcome domains (and measures) prespecified in each eligible SR (for acupressure) and RCT or NRSI (for shiatsu) were listed in the '*Characteristics of included studies*' tables (see Appendix F1.1 and Appendix F1.2). For each included population, outcome domains were prioritised then selected using a prespecified approach, with the data and results extracted for all outcomes identified as critical or important to the review (see Appendix A6). To avoid introducing bias, outcomes were prioritised by the NTWC, who remained blinded to the characteristics (e.g. study design) or results of eligible studies to prevent any influence on decision-making.

Prioritised outcome domains are highlighted in Appendix F2.1 (shiatsu) and Appendix F2.2 (acupressure) in blue.

#### A4.4.3 Outcome measures and timepoints of interest

There were no limits on outcome measure or timepoints (e.g. short- or long-term) of interest when selecting studies. Objective (such as clinical and laboratory assessments) and subjective outcome measures (such as patient-reported outcome measures [PROMS]) were eligible, preferably measured (although not mandatory) using a validated tool.

Outcomes reported at different timepoints (across studies) were to be grouped and considered in the evidence synthesis as follows: short term, intermediate term, long-term, or not specified. Determining whether something was considered short, intermediate or long term for a population was to be guided by the published evidence, the NTWC and COMET.

Within studies, to avoid unit-of-analysis issues associated with repeated observations, data from a single time point was to be selected, as determined by the NTWC during outcome prioritisation. If multiple timepoints were considered critical or important for decision-making (e.g. short- and long- term remission in symptoms) separate outcomes were to be specified for each timepoint. For all outcomes, end of treatment scores were preferred, but in the absence of this information we reported the mean change from baseline results (see Section B2.1).

## A5 Selection of studies (inclusion decisions)

This appendix documents how studies were identified, collected and managed so as to conduct the systematic review on the effect of shiatsu for preventing and treating any health condition.

### A5.1 Studies identified in the literature searches

#### A5.1.1 Title/abstract screening

A framework used for screening studies at title abstract/stage is provided below (Framework 1).

Citations (title/abstracts) retrieved by the literature searches were imported into EndNote and duplicates removed. Citations were then imported into Covidence ([www.covidence.org](http://www.covidence.org)), an online tool that streamlines the screening and data extraction stages of a systematic review.

Each citation (titles and abstract) was screened by a single evidence reviewer (either AT, ES or MJ) who discarded ineligible studies (marked as irrelevant and tagged with a reason for exclusion) and retained potentially eligible ones (marked as relevant or maybe). Where there was uncertainty regarding relevance, a decision was made through discussion with the lead reviewer (MJ), who decided to either mark the citation as irrelevant or take it through to full text. Citations that were in a language other than English were tagged and managed as described below (see *Studies published in languages other than English*).

#### A5.1.2 Full text screening

A framework used for screening studies at full text (Framework 2) is provided below. A prespecified, hierarchical approach was used to annotate reasons for exclusion, with the results of the study selection process illustrated in a PRISMA flow.

Full text articles identified for possible inclusion in the evidence synthesis were retrieved and assessed independently by any 2 out of 3 reviewers (either AT, ES or MJ (89.2% agreement, Cohen's Kappa = 0.642)). Conflicts were resolved by discussion. As per protocol, where additional expertise regarding the application of the PICO criteria was required, excerpts from the publication relevant to the query (e.g. the description of the intervention) were provided to the NTWC for advice. For example, 9 queries were made relating to confirming if the described intervention (acupoint stimulation or massage) met the criteria for shiatsu as practised in Australia. The NTWC remained blinded to other identifying details such as the study citation, study design and size, risk of bias and results.

Trial registration numbers, author names and study titles, locations and dates were used to identify multiple reports arising from the same study. As per Cochrane guidelines the unit of analysis is considered to be the study, not the report, to avoid including the same data multiple times. Published errata or corrigenda identified in the search were checked and linked to the appropriate study. All studies identified for inclusion were cross checked with the [Retraction Watch](#) database via [Zotero](#). There were no retracted studies identified.

Eligible studies that are not available in English were noted and managed as described below under *Studies published in languages other than English*.

### A5.2 Evidence provided through the Department's public call for evidence

Potentially relevant primary studies identified by NTWC, NTREAP, and other key stakeholders were considered for inclusion if they satisfied the eligibility criteria described in Appendix A4. The submitted literature was collated, tabulated, and cross-referenced with the evidence identified in the literature search (see Appendix A3). In-scope studies not identified in the literature search were incorporated into the evidence evaluation, with a rationale for exclusion provided for all studies considered out of scope (see Appendix C2).

Studies that focused specifically on acupressure were considered within the context of the overview for acupressure. This meant RCTs in acupressure were noted as awaiting classification, then later cross-referenced with primary studies identified within the included systematic reviews. RCTs not identified within the SR were noted, but as per protocol, supplementary primary studies were not eligible for inclusion (see Appendix A4.1.2).

### A5.3 Studies published in languages other than English

Studies published in languages other than English that were assessed as potentially eligible for inclusion in the review were recorded in a '*Studies Awaiting Classification*' table (see Appendix C3.1.2 and Appendix C3.2.2), with this information also reflected in the PRISMA flow diagram. No studies in a language other than English were included in the evidence synthesis.

To identify studies published in languages other than English, citations (title and/or abstract) identified in our searches that already had an English translation available were screened in Covidence as described above (see Appendix A5.1.1). In the absence of an English translation, we used Google translate to facilitate understanding of the title and/or abstract. If only the title was identified in the search, we retrieved the abstract directly from the journal or publishing house (if available). If online translation did not facilitate understanding of the title or abstract, then the study was listed in a table as '*Studies unable to be translated or interpreted at the title/abstract stage*' (see Appendix C3.1.4 and Appendix C3.2.4).

Translated titles and abstracts were reviewed and evaluated against the study selection criteria outlined in Appendix A4. Irrelevant citations were removed (marked as irrelevant and tagged with a reason for exclusion) and citations deemed as potentially eligible were retained (marked as 'awaiting classification' and 'publication not in English'). Full text translation did not occur to determine eligibility.

### A5.4 Collation of studies

A framework used for confirming and reviewing eligible studies is provided below (Framework 3).

All potential studies identified for inclusion were imported into an Excel 'progress' spreadsheet and sorted according to a Study ID (using separate tabs for eligible studies, studies awaiting classification and ongoing studies). The Study ID incorporated all linked citations that related to the same trial (i.e., could be associated with more than one citation and, if available, included the clinical trial registry number). The Study ID (usually automatically assigned in Covidence) was the first author surname followed by the first publish date (conference abstract or full study report).

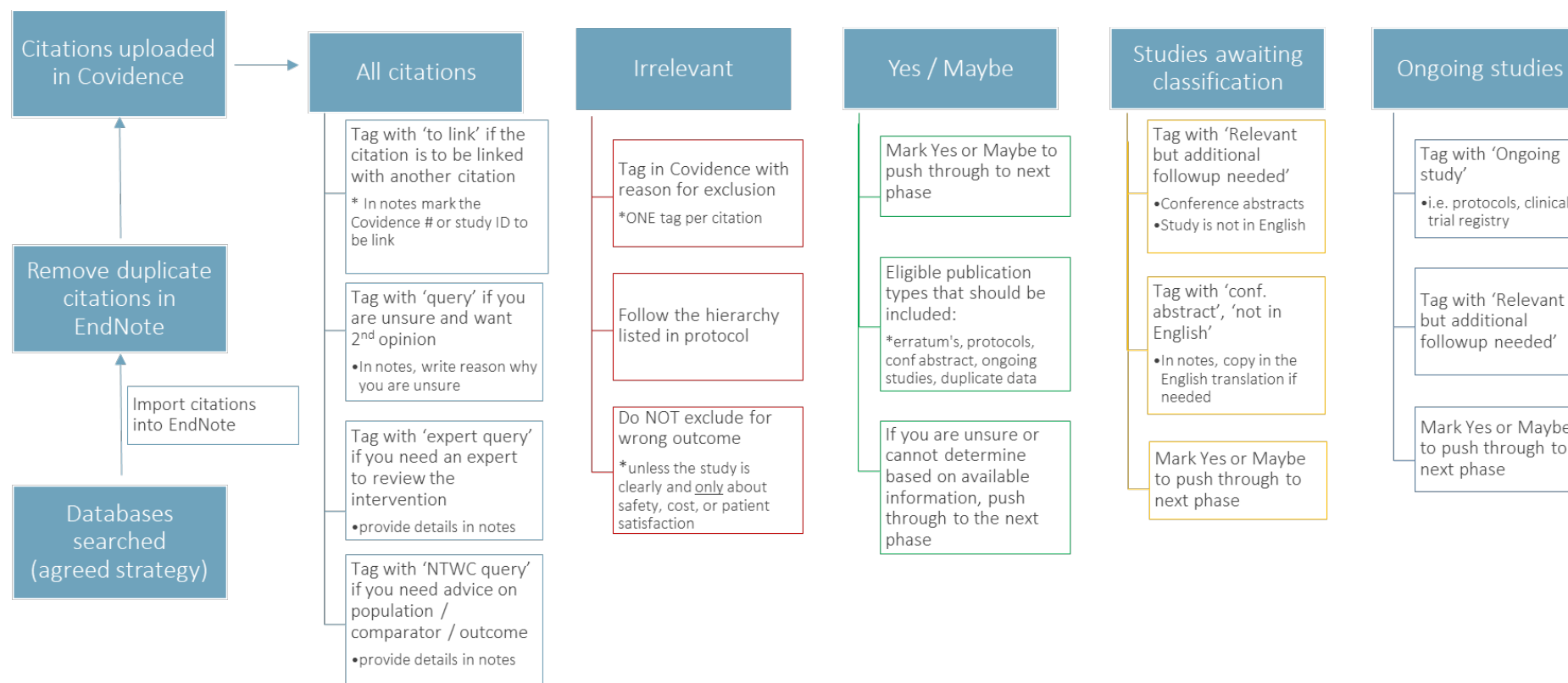
Preliminary data extraction for each Study ID then ensued, which included a summary of the PICO criteria entered in each respective column (see sample in Table A-12) and assignment to an ICD-11 Category based on the population enrolled in the study (see Figure A.2). To facilitate assignment to a population (P), reviewers reviewed the trial enrolment criteria, and attributed a population based on the primary underlying condition. Reported outcomes were not used as the basis for assigning studies. Cells were highlighted if there were queries that required clarification either from the lead reviewer or the NTWC.

Each Study ID was then assessed or checked by the project lead (AT). The focus was to ensure the study had been assigned to the most appropriate ICD-11 Category; being that which was considered the primary underlying clinical or preclinical condition, rather than the presenting symptoms or potential outcome. For example, a study that assessed the effect of shiatsu on sleep quality was assigned to ICD-11 Category 07 (Sleep-Wake Disorders) if the participants had been diagnosed with insomnia; or the study was assigned to ICD-11 Category 21 (Menopausal symptom or complaint) if the participants were women in peri- or post-menopause with sleep disturbance.

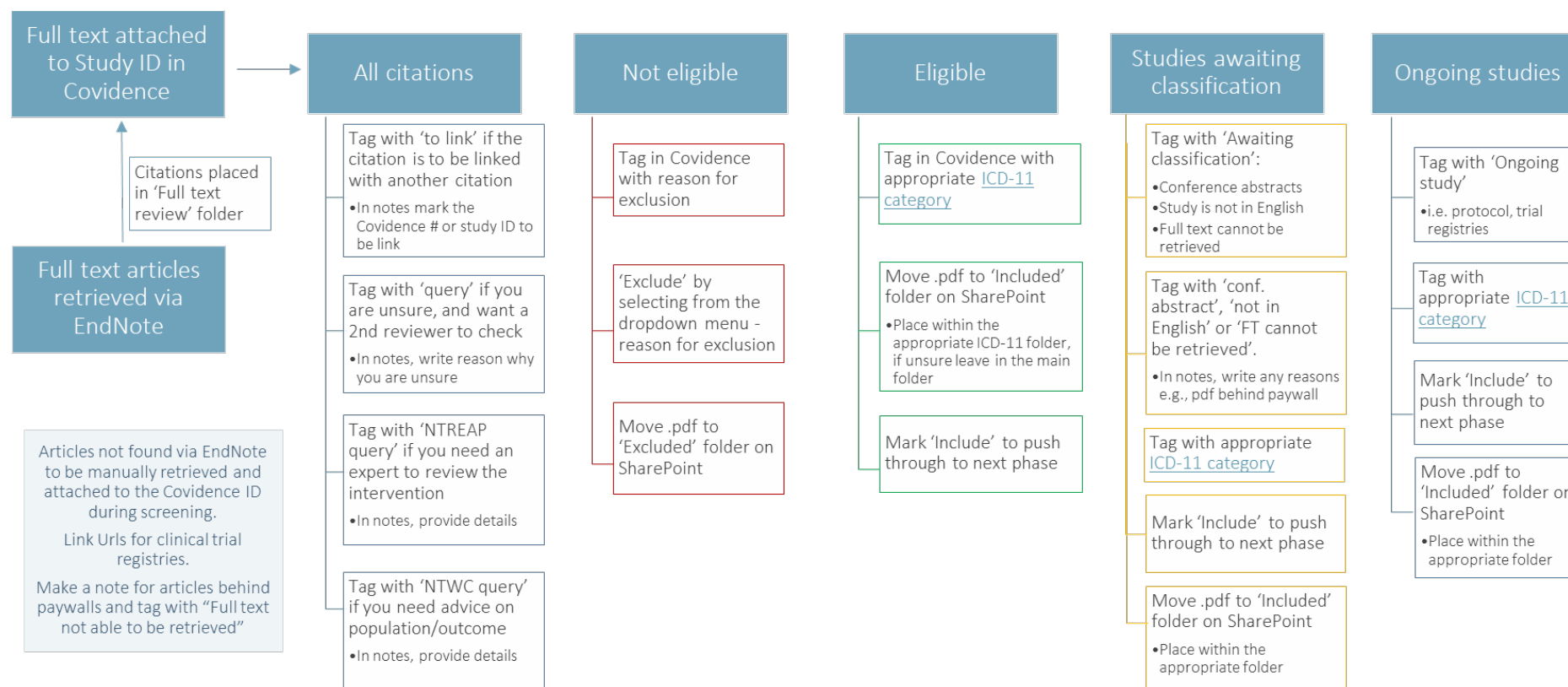
ICD-11 categories were used to help facilitate management of the project, to provide an understanding of the population/ underlying condition, and to help determine the most appropriate place a study would contribute for evidence synthesis (i.e. to ensure the same data was not used in the analysis across multiple conditions, and to minimise heterogeneity). ICD-11 population groupings were assigned prior to any critical appraisal, data synthesis or review of study size or results.

Other areas that were checked or confirmed related to the description of the comparator (being 'inactive' or 'active') or whether there was a co-intervention delivered to both treatment groups). Where shiatsu was delivered as an adjunct (i.e. shiatsu plus usual care versus usual care alone), the usual care was listed as a co-intervention and the comparator listed as control (no intervention, waitlist, usual activities). Where Shiatsu was compared to 'usual care', a judgement was made as to whether it would be considered 'active' or 'inactive'. Active 'usual care' interventions were then further described (e.g. Physiotherapy [TENS, stretching]). Cells were highlighted if there were queries that required clarification either from the project manager (MJ) or NTWC.

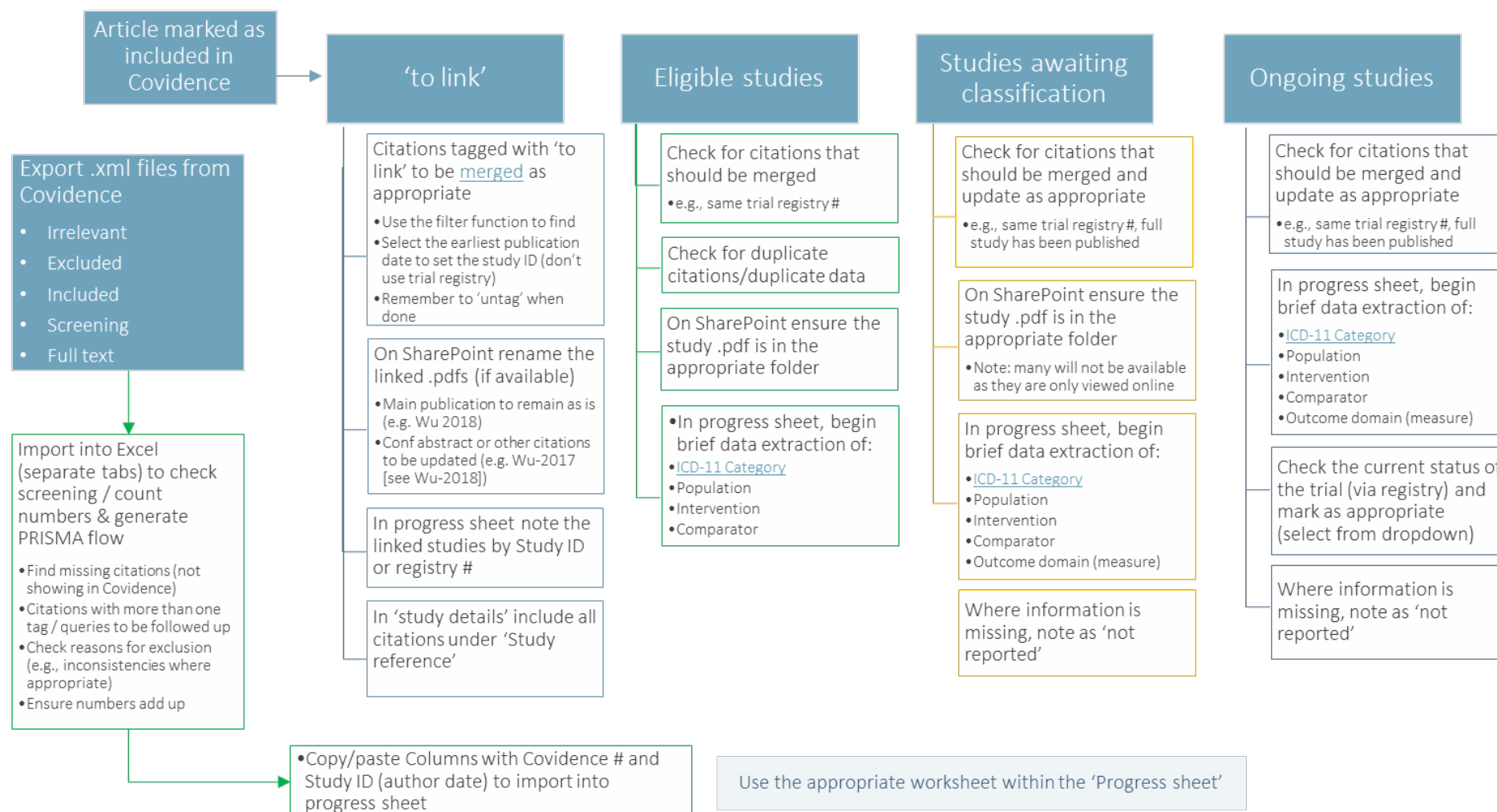
### Framework 1 Framework for screening studies at abstract / title stage



## Framework 2 Framework for screening studies at full text



### Framework 3 Framework for confirming and reviewing eligible studies



**Table A-12 Sample preliminary data extraction (for prioritisation and progress checks)**

STUDY ID	Additional citations	ICD-11 Category	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	CO-INTERVENTION	OUTCOME 1	OUTCOME 2	OUTCOME 3
Ardabili 2014	Mohaddes Ardabili 2015	22 Injury, poisoning or certain other consequences of external causes	Burns (inpatient)	Shiatsu (hand and leg)	Control (no intervention)	Shiatsu (hand) OR Shiatsu (leg)	Standard care	Pain (VAS)	Pain-Anxiety (Burn Specific Pain Anxiety Scale)	
Chen 2008	Chen 2008 (erratum)	19 Certain conditions originating in the perinatal period	Premature infants	Acupressure and acupoint massage	Control (no intervention)	--	Standard care	Complications (PDA, RDS, IVH)	Average daily weight gain	
Chen 2021	--	13 Diseases of the digestive system	Functional constipation (chronic)	Acupoint massage	Control (no intervention)	--	--	Bristol classification of faeces	HRQoL (PAC-QoL)	Cytokines in Serum
Donoyama 2010	--	15 Diseases of the musculoskeletal system or connective tissue	Neck and shoulder stiffness (chronic)	Shiatsu	--	Attention control (rest)	--	Pain (VAS)	Anxiety (STAI)	Cortisol (stress)
Donoyama 2013	Donoyama 2016; Donoyama 2018; Donoyama 2017; JPRN-UMIN000009097	02 Neoplasms	Cancer, gynaecological (survivors)	Shiatsu	Control (no intervention)	--	Standard care	HRQoL	Physical functioning	Role functioning
Faull 2005	--	15 Diseases of the musculoskeletal system or connective tissue	21 Fibromyalgia	Watsu	--	Aix	--	HRQoL (SF-36)	--	--

Abbreviations: HRQoL, health-related quality of life; IVH, intraventricular haemorrhage; PDA, patent ductus arteriosus, RDS, respiratory distress syndrome, STAI, state-trait anxiety inventory; VAS, visual analogue scale

**Figure A.2 Overview of potential ICD-11 categories**

Refer to <https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/628615515>

There categories will be used to guide decisions on appropriate meta-analysis.

Subgrouping to be applied where appropriate.

The intent is to categorise studies according to the underlying condition

For example:

People with cancer seeking help for symptoms of insomnia or chronic pain to be categorised under cancer (not insomnia or chronic pain)

People with symptoms of peri/menopause seeking help for symptoms of insomnia, depression etc. to be categorised under Disease of genitourinary system.

Both groups assess symptoms of sleep disturbance but would be considered to be sufficiently different to consider separately in a meta-analysis (also different from clinical sleep disorder).

Exactly where/how they will be included in the review will be guided through discussion with NTWC

(see Framework for evidence review)

## A6 Refining the research questions

This appendix documents how populations and outcomes were prioritised to inform the data synthesis for the systematic review on the effect of shiatsu for preventing and treating any health condition.

Throughout the population and outcome prioritisation exercise, the NTWC remained blinded to the screening results (i.e. number of studies identified) or characteristics of included studies (e.g. study design, size, quality) to prevent any influence on decision-making. Framework 4 outlines the process for refining the research questions and conducting the evidence review.

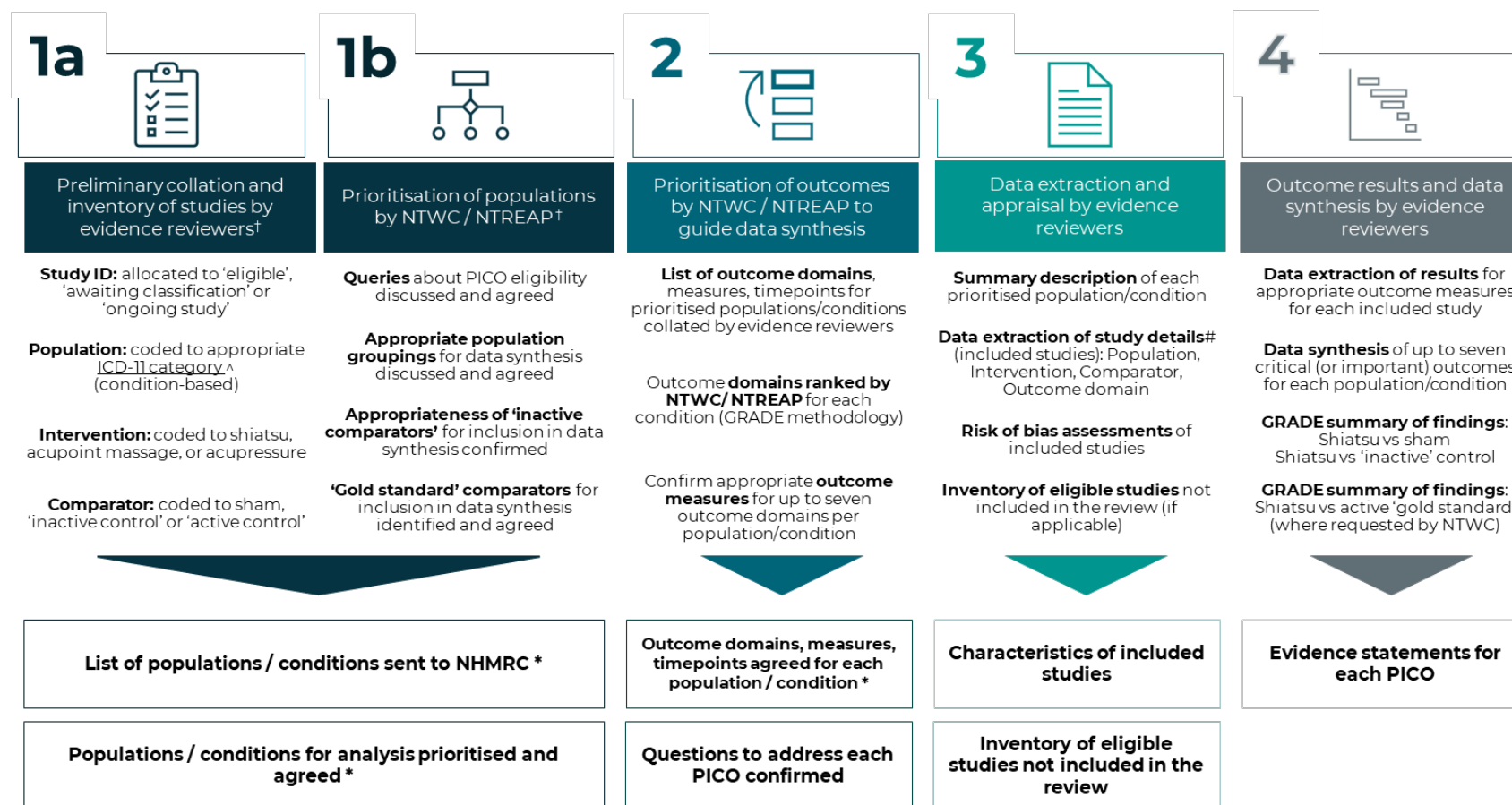
### A6.1 Population prioritisation process

As there were a manageable number of studies identified for shiatsu, it was agreed that all identified populations would be considered for inclusion in the evidence synthesis. The populations identified (ordered by ICD-11 category) were therefore grouped into conditions for analysis based on those agreed for other natural therapies reviews (Pilates, yoga, Tai Chi) as outlined in Table A-13.

After this, the NTWC agreed to exclude one population (see Table A-14) as the delivery of shiatsu to preterm infants within a hospital setting was determined to be inconsistent with the practise of shiatsu within the Australia setting.

Populations for acupressure were limited to those included in the systematic review of shiatsu, as the review of acupressure was intended to elucidate whether there was evidence for this component of shiatsu and hence the same populations were prioritised for data synthesis.

## Framework 4 Framework for refining the research questions and conducting the evidence review



Notes:

† Step 1a and 1b occurred simultaneously. NTWC/NTREAP to prioritise populations independently from evidence reviewers collating inventory of RCTs.

^ ICD-11, International Classification of Diseases for Mortality and Morbidity Statistics (ICD-11 MMS) 11<sup>th</sup> Revision (available at <https://icd.who.int/browse11/l-m/en>)

\* No identifying information about study ID, study design, study size, study quality or outcome results available (see Framework 2).

# Preliminary data extraction of included studies will begin at step 2 to inform outcome domains.

**Table A-13 List of populations to be considered in the review for shiatsu**

ICD-11 CATEGORY	POPULATION	COMMENT
02 Neoplasm	Cancer (survivors)	Study is in gynaecological cancer – but the eligible population is broader and would include any type of cancer (survivors)
05 Endocrine, nutritional and metabolic diseases	Type 2 diabetes (T2DM)	Study is in those with peripheral neuropathy (due to diabetes) – but eligible population is broader and would include all T2DM
	Overweight and obesity	
06 Mental and behavioural disorders	Symptoms of stress	Non-clinical (i.e. participants do not meet DSM-V criteria for clinical depression or anxiety or burnout)
	Dementia	Study is in Alzheimer's – but eligible population is broader and would include dementia or mild cognitive impairment
07 Sleep-wake disorders	Insomnia or sleep problems	Eligible population does not require diagnosis of insomnia.
08 Diseases of the nervous system	Headache disorders (migraine, tension headache)	
	Hypertension	
11 Diseases of the circulatory system	Stroke recovery	As per Tai Chi, categorized as ICD-11 rather than 08 Disease of nervous system
13 Disease of the digestive system	Functional gastrointestinal disorders (irritable bowel etc.)	Includes functional constipation
15 Diseases of the musculoskeletal system or connective tissue	Chronic musculoskeletal pain (includes low back pain, chronic neck pain and fibromyalgia)	Grouped as per yoga.
18 Pregnancy, childbirth and the puerperium	Pregnancy and childbirth	As per Pilates - relating to the provision of care in the antenatal and intrapartum period to manage conditions associated in the lead up to birth, or issues associated with labour
	Postpartum care	As per Pilates - relating to the provision of care in postnatal period (up to six weeks after birth) to manage conditions associated with the fetus of the mother after birth
19 Certain conditions originating in the perinatal period	Preterm infants	Excluded - the delivery of shiatsu to preterm infants within a hospital setting is considered by the NTWC to be inconsistent with the practise of shiatsu within Australia so was not considered for analysis.
22 Injury, poisoning or certain other consequences of external causes	Burns	
24 Factors influencing health status or contact with health services	Recovery after minimally invasive surgery (e.g., pain, nausea)	Recovery after major surgery (e.g., C-section, spinal, joint replacement) not included.

Abbreviations: DSM-V, Diagnostic and Statistical Manual of Mental Disorders - 5th edition; ICD-11, International Classification of Disease – 11th edition; NTWC, Natural Therapies Working Committee

**Table A-14 PICO criteria of studies not included in the data synthesis: Preterm infants**

STUDY ID	STUDY DESIGN	POPULATION	INTERVENTION	COMPARATOR	CO-INTERVENTION	OUTCOME DOMAINS
<b>Shiatsu vs sham</b>						
No studies found						
<b>Shiatsu vs control (no intervention, waitlist, usual care)</b>						
Chen 2008 (15)	RCT	Premature infants	Acupressure and meridian massage	No intervention	Standard care (not further described)	Feeding/ nutrition Weight gain

Abbreviations: RCT, randomised control trial;

## A6.2 Outcome prioritisation process

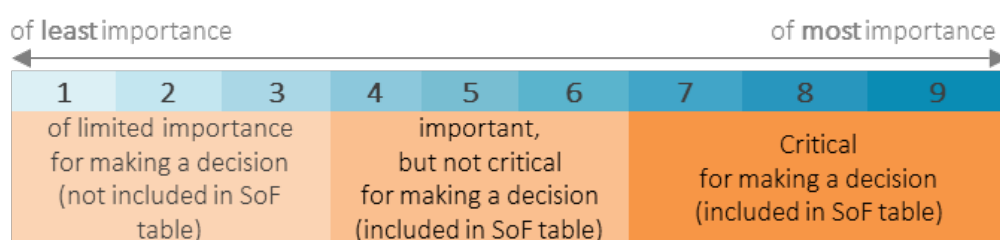
A spreadsheet listing each condition, with associated outcome domains and outcome measures (including measurement tools) was developed and provided to the NTWC to prioritise critical and important outcomes for inclusion in the evidence synthesis.

To ensure the process for prioritising outcomes was blinded, a 2 staged prioritisation process was developed.

- Stage 1 involved prioritising outcome domains for each developing a list of the outcome domains for populations and conditions prioritised for analysis (see sample in Table A-15).
  - To minimise potential reporting bias within the review, the list of outcome domains was supplemented with outcomes identified in core outcome sets for a particular condition (where available).
  - Core outcome sets were identified by searching COMET (<http://www.comet-initiative.org/>), ICHOM (<https://www.ichom.org/>), and PubMed (simple search “core outcome set” OR “core outcome measure” AND “XXX” [where XXX equals the population/condition of interest]). In the absence of a published core outcome set, outcomes reported in relevant Cochrane reviews for that condition were also listed (if available).
  - In determining the critical and important outcomes, the NTWC sought NTREAP advice on priority outcome domains for each population and condition and used the GRADE rating scale (Figure A.3) (5) to rate outcome domains, with the focus being on the relevance of outcome domains for the intervention and research question.
- Stage 2 of the outcome prioritisation process involved NTWC prioritisation of the most relevant and valid outcome measures for each prioritised outcome domain (see stage 1 process) and the validity of outcome measures (5).

The final prioritised outcomes for each prioritised condition are provided in Tables in Appendix D.

**Figure A.3 GRADE rating scale**



Source: (5)

Abbreviations: SoF summary of findings

The outcome domains and measures were derived from the outcomes reported in studies identified for inclusion in the review. Only rating scales that had been described in peer-reviewed journals were included. We anticipated that included studies would use different measures to assess outcomes relevant to the shiatsu review and the acupressure overview; in particular, a variety of rating scales or patient-reported outcome measures. Therefore, each reported outcome measure was grouped into an appropriate outcome domain of interest (see Figure A.4).

Studies with no prioritised outcome domains and/or measures were not included in analysis.

**Table A-15 Sample outcome spreadsheet (for prioritisation)**

POPULATION	Outcome domain	Working Group Consensus Rating (1-9)	Outcome measure/s (reported in studies)	Validated measure? (Y/N)	Suggested priority rank (1 to X)	EVIDENCE REVIEWER - Comment/rationale (for prioritising measure/s)	consensus - agree/ disagree with reviewers	comments/ rationale
Pregnancy and childbirth	Severe maternal morbidity*	6	No measures reported in eligible studies					
			Bishop score	Y	4	Outcome measures correlate to labour induction (not experience)	WG queried whether should be 4 or 0 based on Reviewer comments	Maybe not relevant for those who didn't have induction? clarify with reviewers
			Spontaneous labour	Y	4			
			Labour initiation	Y	4			
			Use of inductive medicines	Y	4			
	Birth experience*	7	Duration of labour	Y	1	Preferences as per yoga review that identified as primary outcomes in a relevant / related Cochrane review	agree	(include both, but report separate)
			Length of labour stages	Y	1		agree	
			Pain relief	Y	2		agree	
			Type of birth (normal, caesarean)	Y	3		agree	
	Functional capacity	7	SF-36 - Physical functioning subscale	Y	1	Role functioning and physical functioning are equal measures of functional capacity. Pilates/Yoga equally preferences both outcomes	agree	reviewers to clarify
			SF-36 - role-physical subscale	Y			agree	(i.e. to include both, but report separate)
	Foetal health	6	Ultrasound	Y	1	normal amniotic fluid index is 5 cm to 25 cm using the standard assessment method	agree	
			Doppler exam	Y	2		agree	
	Quality of life*	7	SF-36 - physical component score	Y	1	Pilates WG considered both measures equal	agree	reviewers to clarify

POPULATION	Outcome domain	Working Group Consensus Rating (1-9)	Outcome measure/s (reported in studies)	Validated measure? (Y/N)	Suggested priority rank (1 to X)	EVIDENCE REVIEWER - Comment/rationale (for prioritising measure/s)	consensus - agree/ disagree with reviewers	comments/ rationale
			SF-36 - mental component score	Y			agree	(i.e. to include both, but report separate)
	Perceived Stress	7	Visual analogue scale (0-10)	Y	1		agree	
	Pregnancy-related pain	7	0-10 visual analogue scale	Y	1		agree	
			SF-36 - bodily pain subscale	Y	2		agree	

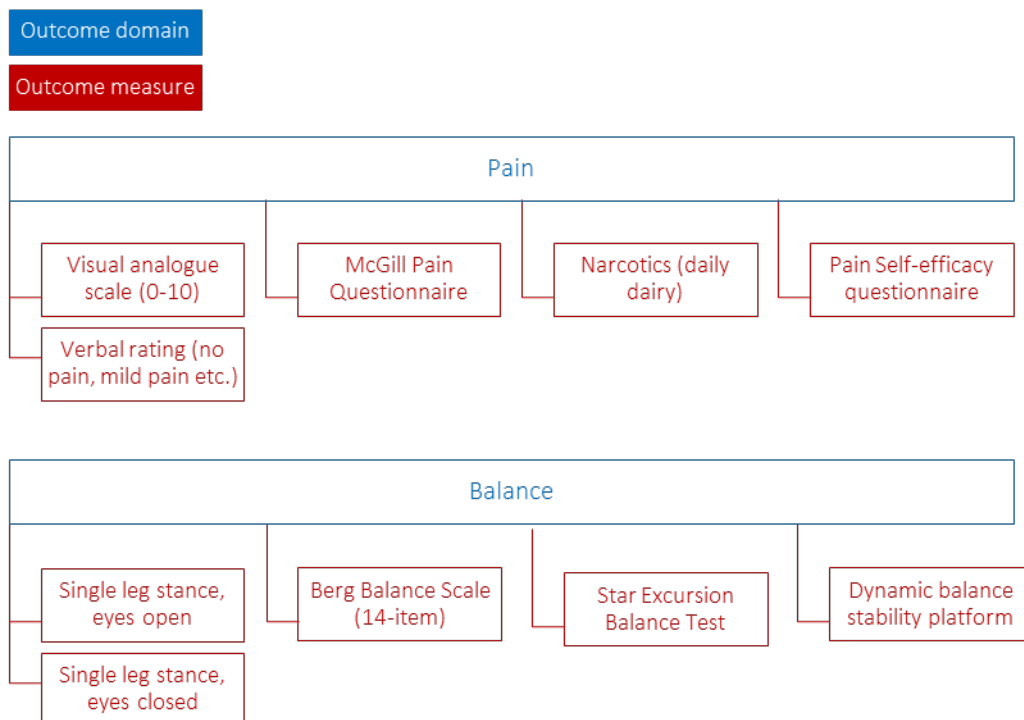
## KEY

\* Core outcome domain or measure (based on one or more of the core outcomes sets)

^ Identified as a primary outcome in a relevant/related Cochrane review

# Identified as a secondary outcome in a relevant/related Cochrane review

**Figure A.4 Sample outcome domain and outcome measures**



## A8 Summary screening results

### A8.1 Search of published literature

Studies were excluded based on hierarchical, prespecified exclusion criteria, with all citations returned by the literature searches reviewed based on information in the publication title and abstract (where available). Potentially relevant publications were then retrieved and reviewed in full text before a final decision was made on their inclusion or exclusion for the review.

Results of the literature search and application of the study selection criteria are summarised in Table A-16.

Citation details of studies assessed at full text but not included in the evidence review (with reasons for exclusion) are listed in [Appendix C1](#).

**Table A-16 Screening results: studies identified in the literature search and additional evidence provided through the Department's public call for evidence**

Database (no. of hits)	Acupressure SRs	Shiatsu RCTs or NRSIs	Submitted literature
MEDLINE 1946 to June 19, 2020	253	649	--
Embase 1974 to June 19, 2020	467	330	
Emcare to Week 25 2020	172	170	
PsycINFO® to June Week 3 2020	27	13	
AMED	31	33	
SPORTDiscus	8	11	
CINAHL	216	281	
Cochrane (CCRCT)	34	1762	
PubMed (not MEDLINE)	0	0	
PEDro	7	--	
PAHO	18	178	
Submitted literature	--	--	57
<b>TOTAL</b>	<b>1233</b>	<b>3427</b>	<b>57</b>
Duplicates removed in EndNote	436	934	--
Duplicates removed by Covidence	21	313	
Duplicate citations (manually removed)	37	57	
Duplicate citation submitted to the Department (RCT / NRSI already identified in this SR)	--	--	26
<b>TOTAL DUPLICATES</b>	<b>494</b>	<b>1304</b>	<b>26</b>
<b>Number of citations screened in Covidence</b>	<b>739</b>	<b>2123</b>	<b>31</b>
<b>TITLE/ABSTRACT</b>			
nonhuman study	13	26	0
intervention out of scope	322	1300	6
population out of scope	0	8	1
comparator out of scope	0	0	0
outcome out of scope	0	0	0
publication type out of scope			
<i>opinion piece, editorials, books, etc.</i>	43	17	0
<i>not an interventional study examining effectiveness</i>	33	42	2
study design out of scope			
<i>nonsystematic reviews</i>	18	9	4
<i>RCT or pseudo RCT</i>	15	0	0

Database (no. of hits)	Acupressure SRs	Shiatsu RCTs or NRSIs	Submitted literature
<i>Systematic review of RCTs and/or NRSIs</i>	0	92	1
<i>Nonrandomised studies of interventions</i>	0	0	0
<i>Case series, case reports, noncomparative studies etc.</i>	17	61	14
<i>Systematic review of systematic reviews</i>	9	0	0
<i>Duplicate data (multiple reports arising from the same study)</i>	1	0	0
<b>TOTAL irrelevant</b>	<b>471</b>	<b>1555</b>	<b>28</b>
<b>Unable to be translated or interpreted at the title/abstract stage</b>	<b>0</b>	<b>6</b>	<b>1</b>
<b>Number of citations screened in Covidence FULL TEXT</b>	<b>268</b>	<b>562</b>	<b>2</b>
nonhuman study	0	1	0
intervention out of scope	58	407	0
population out of scope	2	8	0
comparator out of scope	0	3	0
outcome out of scope	1	0	0
publication type out of scope			
<i>opinion piece, editorials, books, etc.</i>	6	16	0
<i>not an interventional study examining effectiveness</i>	2	5	0
<i>grey literature</i>	0	2	0
study design out of scope			
<i>nonsystematic reviews</i>	3	2	0
<i>systematic review of RCTs and/or NRSIs</i>	2	4	0
<i>case series, case reports, noncomparative studies etc.</i>	1	16	0
<i>systematic review of systematic review</i>	9	0	0
other			
<i>duplicate data</i>	1	4	0
<i>superseded</i>	15	0	0
<i>Withdrawn</i>	4	0	0
<b>TOTAL EXCLUDED</b>	<b>104</b>	<b>468</b>	<b>0</b>
<b>RELEVANT CITATIONS</b>	<b>165</b>	<b>94</b>	<b>2</b>
<b>Relevant but additional follow up needed</b>			
<i>Ongoing study</i>	11	14	0
<i>Publication not available in English</i>	13	38	1
<i>Conference proceeding, poster or abstract</i>	11	3	0
<i>Article not able to be retrieved</i>	1	0	0
<b>TOTAL ONGOING/AWAITING CLASSIFICATION</b>	<b>36</b>	<b>55</b>	<b>1</b>
<b>INCLUDED CITATIONS</b>	<b>128</b>	<b>39</b>	<b>1</b>
<b>CORRESPONDING NUMBER OF STUDIES</b>	<b>126 SRs</b>	<b>27</b>	<b>1</b>

## A8.2 Evidence provided through the Department's public call for evidence

A total of 57 citations were received through the Department's public call for evidence. Of these, 17 citations were already identified through our literature search and included. A further 9 citations had been identified in our search but had been excluded. Of the remaining 31 citations not identified in the search, 2 were considered eligible for inclusion in the review, with one awaiting classification and one included.

A summary of the application of the study selection criteria to studies provided through the Department's public call for evidence is provided in Table A-17.

Citation details of studies provided through the Department's public call for evidence (with reasons for inclusion/exclusion) are listed in Appendix C2 (separate file).

**Table A-17 Screening result: evidence provided through the Department's public call for evidence**

	Submitted literature	Duplicate citations	Totals
<b>Total submitted</b>	<b>57</b>		<b>57</b>
Duplicate citation (already identified in the review)		26	
<b>Number of new citations to screen</b>	<b>31</b>	Reason for exclusion	
nonhuman study	0	0	0
intervention out of scope	6	1	7
population out of scope	1	0	0
comparator out of scope	0	0	1
outcome out of scope	0	0	0
publication type out of scope			
<i>opinion piece, editorials, books, etc.</i>	0	0	0
<i>not an interventional study examining effectiveness</i>	2	0	2
<i>grey literature</i>	0	0	0
study design out of scope			
<i>Nonsystematic reviews</i>	4	0	4
<i>Systematic review of RCTs and/or NRSIs</i>	1	3	4
<i>Case series, case reports, noncomparative studies etc.</i>	14	5	19
<b>TOTAL Excluded</b>	<b>28</b>	<b>9</b>	<b>37</b>
<b>Unable to be translated or interpreted at the title/abstract stage</b>	1	0	1
<b>RELEVANT CITATIONS</b>	<b>2</b>	<b>17</b>	<b>19</b>
<b>Relevant but additional follow up needed</b>			
<i>Ongoing study</i>	0	0	0
<i>Publication not available in English</i>	1	0	1
<i>Conference proceeding, poster or abstract</i>	0	0	0
<i>Article not able to be retrieved</i>	0	0	0
<b>TOTAL ONGOING/AWAITING CLASSIFICATION</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>INCLUDED CITATIONS</b>	<b>1</b>	<b>17 (already identified in search)</b>	<b>18</b>

## Appendix B Methods of data appraisal, extraction, analysis and reporting (included studies)

### B1 Risk of bias

#### B1.1 Tools used

##### B1.1.1 Systematic review of shiatsu

The risk of bias of RCTs was assessed using the revised Cochrane Risk of Bias tool v2.0 (16, 17) and critical appraisal of NRSIs was assessed using the methods described by Cochrane using the ROBINS-I tool (18).

For each included RCT or NRSI, potential sources of bias were assessed, and a judgement recorded against each domain specific to the risk of bias tool (i.e. either 'high', 'low', or 'some concerns' for RCTs or 'low', 'moderate', 'serious', 'critical', or 'no information provided' for NRSIs). Concerns of bias were raised when it was considered plausible (i.e. likely, probable, possible or conceivable) that bias was present, with the algorithms provided for the RoB 2 and ROBINS-I tools (available online at <https://www.riskofbias.info>).

Supporting information and a rationale for each judgement is provided in Appendix E1.1 (RCTs) and Appendix E1.2 (NRSIs).

Consistent with the order of preference for analysis of intervention studies to inform health policy decisions (see Appendix B2.1) as recommended by the Australian Government (19, 20) (when claiming superiority), The Cochrane Collaboration (16, 21) and GRADE (5), the risk of bias for domain 2 was judged according to the effect of assignment to the intervention (the intention-to-treat effect).

Other considerations specific to domain 2 and domain 3 included the following:

- *Bias due to deviations from the intended intervention.* Although there is a *potential* for bias associated with non-blinding of trial participants or trial personnel (in studies that did not include a sham comparator), the only deviations from the intended intervention that were assessed were (i) those considered to arise because of the trial context (i.e. unconscious or conscious processes associated with recruitment and engagement activities), (ii) those considered to be inconsistent with the trial protocol, and (iii) those judged likely to influence the outcome (as per guidance for RoB 2 (16)). This means that any deviations considered to occur *outside* the trial context (e.g. dropout due to a change in participants' ability to attend sessions), do not lead to a judgement of bias for the effect of assignment to the intervention.
- *Bias due to missing outcome data.* No hard rule was set for an expected dropout rate to be considered reasonable for a mind-body intervention (reported ranges between 5% and 50%) (22-25) (domain 2); and, for continuous outcomes, if more than 5% data was missing a judgement was made on the likelihood the missingness of data would affect the outcome (domain 3).

An overall risk of bias judgement for each RCT or NRSI was then described in the '*Characteristics of included studies*' table (Appendix F1.1 and Appendix F1.2).

The overall risk for RCTs was based on the following criteria:

- *overall low risk of bias* – low risk of bias for all domains
- *some concerns* – at least one domain has some concerns raised, but none are found to be at high risk of bias
- *overall high risk of bias* – high risk of bias for one or more domains

The overall risk of bias judgement for each NRSI was made using the following guide:

- *overall low risk of bias* – the study is comparable to a well-performed RCT and is judged to be a low risk of bias for ALL domains.

- *overall moderate risk of bias* – the study appears to provide sound evidence for a nonrandomised study but cannot be considered comparable to a well-performed randomised trial. The study is judged to be a low or moderate risk of bias for ALL domains.
- *overall serious risk of bias* – the study has some important problems and is judged to be at serious risk of bias in at least ONE domain, but not a critical risk of bias in any domain.
- *overall critical risk of bias* – the study is too problematic with regards to this domain to provide any useful evidence on the effectiveness of the intervention. The study is judged to be at critical risk of bias in at least ONE domain.
- *no information* – there is no information on which to base a judgement about overall risk of bias. There is no clear indication that the study is at serious or critical risk of bias AND there is a lack of information in one or more key domains of bias.

### B1.1.2 Supplementary overview of acupressure

The methodological quality of included systematic reviews was assessed using the AMSTAR-2 quality assessment checklist (26). For each item on the AMSTAR-2 checklist (see Appendix E2) we answered 'yes', 'no', or 'partial yes'; with a 'yes' answer denoting a positive result. In systematic reviews that were broader in scope than the clinical question posed in the overview (i.e. includes other interventions or NRSIs not eligible for inclusion), the overall quality of the systematic review was assessed.

It is noted that the AMSTAR-2 leads to a judgement of methodological quality (or limitations) of a SR, not a judgement about risk of bias of the body of evidence included *within* the SR. Implications concerning relevant AMSTAR-2 items for the risk of bias of primary studies and assessing the certainty of evidence are discussed in Sections B3.4.4 and B4.1.

## B1.2 Assessment process

To ensure consistency among reviewers, pre-testing of risk of bias assessments were achieved by all reviewers completing assessments for two SRs, two RCTs and two NRSIs (using AMSTAR-2, RoBv2.0 and ROBINS-I, respectively). The lead reviewer then inspected the forms to ensure consistency, and any differences were resolved through discussion.

### B1.2.1 Systematic review of shiatsu

The risk of bias for each included study was assessed by one reviewer (AT or EC). The assessments were then checked and confirmed by the alternate reviewer. Disagreements were resolved by discussion, with advice sought from the project lead (MJ) where needed.

Initial assessments were completed for all studies at 2 levels: (i) subjective outcome measures (e.g. patient-reported measures such as pain visual analogue scale, that could be influenced by knowledge of the intervention received) and (ii) objective outcome measures (e.g. measures that cannot be influenced, such as blood glucose).

Checks made by the second reviewer against the initial risk of bias assessment were made at the same time as the evidence synthesis (i.e. when examining the outcome results for inclusion in a meta-analysis and when developing GRADE summary of findings tables), with the focus of the assessment being on the outcome of interest. That is, the reviewer checked that the 'study level' assessment was appropriate for the outcome, with any additional notes added to the RoB comment column in Appendix E1.

At that time, [robvis](#) (27) was used to create risk of bias traffic light and summary plots.

The assessment reported in the traffic light and summary plots (including the overall assessment) is based on the primary outcome measure for that study (if stated) or the key reported outcome/s (usually the subjective measure). Studies that do not report a critical or important outcome would have been through a brief check by the second reviewer, but the assessment is not outcome specific.

When considering treatment effects for an outcome in the summary of findings tables, the risk of bias of each study (for that outcome) that contributed data was considered as per the GRADE process (see Appendix B4.1).

### B1.2.2 Supplementary overview of acupressure

The methodological quality of each included systematic review was assessed by one reviewer (AT or EC). The assessments were then checked and confirmed by the alternate reviewer. Disagreements were resolved by discussion, with advice sought from the project lead (MJ) where needed.

Systematic reviews were judged to probably provide an accurate and comprehensive summary of the available studies for use in this overview if they met (or partially met) pre-specified AMSTAR-2 outlined below.

- Domain 4: the review authors used a comprehensive literature search strategy
- Domain 8: the review authors described the included studies in adequate detail
- Domain 9: the review authors used a satisfactory technique for assessing the risk of bias in individual studies that were included in the review
- Domain 11: if meta-analyses were performed, the review authors used appropriate methods for statistical combination of results

To establish the systematic review that included the best available information for each PICO, any notable strengths or limitations of the systematic review in reference to the prespecified critical AMSTAR-2 domains (4, 8, 9 or 11) were recorded in the '*Characteristics of included studies*' table (See Appendix F2).

As per protocol, an independent assessment of the risk of bias of RCTs, quasi-RCTs or NRSIs included within an eligible systematic review was not performed and the primary studies were not retrieved to check or redo assessments. Instead, the risk of bias of the studies (or outcomes) as reported within the included systematic review was recorded in the '*Characteristics of included studies*' table (See Appendix F2).

Where a study was included in multiple SRs, a crosscheck of the risk of bias assessment across SRs was performed and any discrepancies were reconciled based on available information. In the absence of any risk of bias information for an individual study or when appropriate risk of bias information was not available (e.g. the SR reports risk of bias for the overall study and not at the outcome-level, or the SR does not use an appropriate tool to assess risk of bias), inferences about risk of bias when assessing the certainty of evidence were made as described in Section B4.1.

## B2 Data extraction process

The characteristics of all included studies (i.e., RCTs and NRSIs for shiatsu and systematic reviews for acupressure) were extracted by a single evidence reviewer (AT or EC) using a standardised data collection form (see Appendix F1.1 and Appendix F1.2). Studies were grouped according to the ICD-11 Category and population or condition to which they had been categorised.

All data extraction forms were checked for completeness and accuracy by a second reviewer (AT, EC or MJ), with checks made at the same time as the evidence synthesis. Where there was uncertainty or disagreement about included data, a decision was made through discussion with the lead reviewer (MJ).

### B2.1 Data items

#### B2.1.1 Step one

A standardised data collection form was used to collect all data items (see Appendix F1.1 and Appendix F1.2).

For the systematic review of shiatsu, this included (but was not limited to) the following:

- study identifier (author date)
- study Reference (including all citations)
- study design (RCT, cluster RCT, quasi-RCT, NRSI)
- author affiliation
- source of funds
- declared interests of study authors
- setting & provider (such as hospital, community, nursing home, research clinic)

- Country(s) & region (if reported)
- enrolment period (if reported)
- length of treatment & duration of followup
- description of population (including the number of participants, inclusion and exclusion criteria and any notable demographics or comorbidities)
- description of intervention & comparators (including the number of sessions, session duration and program duration, if the practitioner/instructor was certified, if the comparator was considered inactive)
- description of co-interventions
- list of outcomes, including the following:
  - outcome (as reported by the study authors),
  - timing of measurements (e.g. baseline, mid-treatment [6 wks.], end of treatment [12 wks.]),
  - outcome measure used to measure the outcome and,
  - any measure details reported by the study authors required to interpret the measure (e.g. scale range, cut-offs used, direction of effect).

For the supplementary overview of acupressure, this included (but was not limited to) the following:

- review objectives
- study design (e.g. qualitative review, meta-analysis)
- year conducted
- databases searched
- date (and range) of documented search
- systematic review eligibility criteria for:
  - participant characteristics (including demographics, comorbidities, etc. [if specified])
  - intervention and comparator characteristics (including number of treatment sessions, program duration, co-interventions [if specified])
  - outcomes to be assessed in the SR (including measurement method, timing or severity [if specified])
- the method of synthesis/analysis employed
- characteristics of included primary studies (number, study design features)
- risk of bias tool used to appraise included primary studies
- eligible primary studies within the systematic review (author, date) and their risk of bias rating (noting review authors comments or concerns)
- funding sources and the overall conclusion of the SR

### B2.1.2 Step two

For the systematic review of shiatsu, outcome results reported by the study authors at the end of treatment were subsequently extracted into a different form (see Appendix F2.1) after agreement was reached with NTWC regarding critical and important outcomes to be considered in the evidence synthesis (see [Appendix A6](#)).

For each comparison and outcome, the extracted data included (but was not limited to) the following:

- condition (e.g., Low back pain)
- comparison (shiatsu vs control or shiatsu vs 'other')
- outcome domain to which the outcome had been broadly categorised during the prioritisation process (e.g. functional disability, pain, quality of life, emotional wellbeing, physical wellbeing)
- timing of measurement (preference was for end of treatment scores, but in the absence of this information we reported the mean change from baseline results)
- outcome measure and scale range (e.g. SF-36 – mental component score (0-100))
- measure interpretation (e.g. higher score means better health-related quality of life)
- number of participants in the intervention group / comparator group
- reported results in the intervention group / comparator group (e.g. means and standard deviations or medians and interquartile ranges)

- estimates of effect (e.g. mean differences or adjusted mean differences, 95% confidence intervals, *p*-values)
- risk of bias judgement for that outcome

If a study used (and reported) different approaches to assess the effect of the intervention, we reported the effect based on the following order of preference (16):

- 1) Full intention-to-treat analysis (i.e. an analysis of participants in the intervention groups to which they were randomised at baseline, regardless of the intervention they received).
  - a) When outcome data were missing, imputations for the missing data were made using either:
    - i) a model-based approach (e.g. likelihood-based analysis, inverse-probability weighting) (preferred), or
    - ii) calculated as if they were observed (e.g. last observation carried forward, mean imputation, regression imputation, stochastic imputation).
- 2) Modified intention-to-treat analysis (i.e. an analysis that adheres to intention-to-treat principles except certain data are justifiably not included). This includes participants with missing outcome data, certain patients who never start treatment, and individuals deemed ineligible after randomisation.
- 3) An 'as-treated' or 'per-protocol' analysis (i.e. an analysis of the effect of adhering to the intervention as described in the trial protocol). This includes participants analysed according to the intervention they received, even if randomised to a different treatment group; or the exclusion of individuals who did not adhere to the assigned intervention.

For the overview of acupuncture, a separate form for data extraction was not used (see Appendix G2). Details on handling data for the overview of acupuncture are provided in Appendix B3.4.

## B2.2 Requests for data

No attempts were made to obtain or clarify data from published peer-reviewed studies. There was also no attempt made to obtain additional data from eligible primary studies (shiatsu or acupuncture) not published in English, ongoing trials and studies published as conference abstracts.

## B2.3 Transformations of data

All reported data included in the evidence synthesis was collected from the published reports and entered in RevMan 5.4. No additional transformations of the data were made (e.g. adjustments for skewed baseline data, transformation of data reported in graphs). If the reported information allowed for direct calculation of effect estimates or missing statistics (e.g. standard deviations), calculations were performed in RevMan 5.4 (usually transformed from published confidence intervals or standard errors of the mean) (28). When standard deviations could not be calculated, imputation (i.e., using the SD from another study) was not applied.

## B2.4 Missing outcome data

All outcomes measured in the included studies were extracted into the study details sheet (see Appendix F1.1 and Appendix F1.2). Outcomes measured in the studies awaiting classification, and outcomes listed in the ongoing studies were recorded in the progress sheets.

No imputation for missing outcome data was conducted. Studies with missing results were included alongside other studies for that condition; either in the narrative (non-quantitative) synthesis of results or on forest plots showing the sample size. Investigations into missing data within a study (e.g. a review of the clinical trial protocol) was noted when assessing the risk of bias for that study.

Implications of the missing data was considered when interpreting the evidence (see Appendix B3.3).

## B3 Data analysis

This appendix documents the methods used to synthesise the evidence for priority outcomes to inform the evaluation of the effect of shiatsu for preventing and treating any health condition.

### B3.1 Measures of treatment effect

#### B3.1.1 Effect measures

##### Systematic review of shiatsu

For each study, continuous data were reported as a mean and standard deviation (SD), along with the number of participants in each group. Effect estimates were reported either as mean difference (MD) or standardised mean differences (SMD) (when different scales were used to measure the same conceptual outcome [e.g. depression]), along with the 95% confidence interval (CI) and *p* values. For consistency, and to ensure that all the scales pointed in the same direction of effect, data were adjusted by multiplying the mean value by -1 where needed (e.g. the MD was reported as a negative value for outcomes in which a higher score is better, with an effect favouring shiatsu to sit on the left-hand side of the forest plot).

Dichotomous data were presented as risk ratios (RR) with 95% confidence intervals and *p*-values. Time-to-event data were to be presented as hazard ratios; however no hazard ratios were encountered.

To reduce effects of confounding, summary statistics from NRSIs were to be reported as adjusted effect estimates (e.g. adjusted odds ratios (OR) from logistic regression or adjusted rate ratios from Poisson regression analyses), if available. No adjusted affects were available. Any variables that were used for adjustment were recorded.

##### Supplementary overview of acupressure

Many of the systematic reviews for acupressure did not conduct a meta-analysis, and those that did also included primary studies not applicable to this review (e.g., included studies in acupuncture or combined results across conditions). Therefore, effect estimates from primary studies were reported (where possible) as described above for shiatsu. Where appropriate, meta-analyse was performed as per Section B3.4.1. In the absence of data for the primary studies being reported, the meta-analysis results of the systematic review (if available) were reported (including the MD [or SMD], 95% CI, *p* values and *I*<sup>2</sup> statistic).

#### B3.1.2 Clinical relevance

Given the broad range of populations and outcomes eligible for inclusion in the review, the minimal clinically important difference (MCID) for each outcome were not prespecified. At the time of synthesis, the MCID for each outcome measure (or other scoring information) was sourced from published reports for that measure (where possible). This involved quick searches of relevant databases (e.g. [Physiopedia](#)), by directly searching for published reports relating to licensed outcome measurement tools (e.g. [Pittsburgh Sleep](#)), or by sourcing expert opinion via a relevant society (e.g. [Australasian Menopause Society](#)).

For each outcome, we have stated and referenced the relevant source in the technical report (see Appendix D), taking care to note if the reported value is an MCID (clinical) (i.e. the smallest difference between the scores in a questionnaire that the patient perceives to be beneficial) not a minimal detectable change (MDC: statistical) (i.e. the smallest change in score that likely reflects true change more than measurement error alone).

In the absence of an MCID, the magnitude of the effect estimate was considered on 3 levels: small (MD <10% of the scale), moderate (MD between 10% to 20% of the scale), or large (MD more than 20% of the scale). If the effect was quantified using an SMD (or it was not possible to use the scale<sup>4</sup>), we used Cohen's guidance for interpreting the magnitude of the SMD: 0.2 represents a small difference, 0.5 is moderate, and 0.8 is a large difference (29). For binary outcomes, a 25% relative reduction (i.e. RR < 0.75) or increase (i.e. RR > 1.25) was considered important.

### B3.2 Unit-of-analysis issues

No adjustments were made for intervention-related clustering using a statistical method. One study (Yuan 2013) was identified that randomised participants according to the rehabilitation clinic they were attending (i.e. cluster design), but the study was not included in the evidence synthesis as it compared shiatsu with an active intervention (see Appendix D8.1).

One crossover trial (Donoyama 2010) was identified in which participants initially received the intervention according to the group they were randomised, after which they switched to receive the alternate intervention. Only data from the first period (end of initial treatment) was included in the analysis (see Appendix D8.1).

Only single pairwise comparisons of the intervention with a comparator (i.e. 'control') were to be considered. Where appropriate, we planned to combine groups to create a single pairwise comparison (as described in Chapter 6 of the Cochrane Handbook (28)); otherwise a note was to be made to record which group was included in the evidence synthesis. There were no instances where treatment groups were combined or needed.

### B3.3 Risk of reporting bias across studies

Judgements regarding missing results across the identified studies were made based on available information (e.g. through inspection of outcomes reported in studies identified for a particular condition, including potentially eligible studies listed as '*Ongoing*', '*Awaiting Classification*' or '*Published in a language other than English*') (see Appendix C3). Here, an assessment of 'known-unknowns' (i.e. non-reporting of results from identified studies or non-inclusion of results from studies published in a language other than English) was made through judgement on whether missingness of the results was likely related to the observed effect (e.g. in favour of the comparator, no observed effect) and if the missing result for the outcome would materially influence the meta-analysis results. Given most of the outcome results came from small studies, any missing results due to non-reporting was considered likely to impact the results.

A judgement about 'unknown-unknowns' was made based on the likelihood that missing data from studies not identified was likely to have included that outcome. No additional statistical analysis for testing for small-study effects (e.g. funnel plots) was conducted because no condition included results from more than 10 studies. Therefore, reporting bias was suspected when the evidence for an outcome was limited to a small number of small trials.

Note: the implications for missing data *within* studies was considered within the overall bias judgement for an outcome (i.e. removing these studies materially changed the estimate of effect) (see Section B3.4.5). This was made through a sensitivity analysis, where trials judged to be at a high risk of bias were excluded from the meta-analysis (and the results noted alongside the original estimate of effect).

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<sup>4</sup> i.e. measures that do not have an upper and lower range (e.g. BMI, blood pressure, distance)

### B3.4 Data synthesis

Given the size and breadth of this review, a broad approach to data synthesis was implemented. This meant that summary estimates were focused on a specified outcome domain (e.g. pain) measured at a single time point (end of treatment) using any reported (and appropriate) measurement tool (e.g. McGill Pain Questionnaire, Visual Analogue Scale, Numeric Rating Scale). This approach was intended to capture as many studies as possible for any given PICO.

#### B3.4.1 Quantitative synthesis

Synthesis was only undertaken for studies that compared shiatsu or acupressure with sham or 'control' (no intervention, wait list or inactive comparators). Results data from studies comparing shiatsu with 'other' interventions (or pooled data from systematic reviews comparing acupressure with 'other' interventions) were extracted and presented in data tables but have not been further synthesised (see Appendix F2.1 and Appendix F2.2).

##### Shiatsu

Data synthesis from RCTs (and NRSIs) was performed using RevMan 5.4 and forest plots presented (see Evaluation report). Data for RCTs and NRSIs were considered in separate subgroups. Effect estimates of NRSIs were only included if the NRSI was judged to be at low to moderate risk of bias and was considered sufficiently homogenous to be combined (i.e. the PICO criteria and study design features of the NRSIs were sufficiently similar or comparable).

For each comparison and outcome, effect estimates were combined across studies using a random effects model (to account for expected differences between studies). Statistical heterogeneity was assessed by visually inspecting the overlap of confidence intervals on the forest plots, formally testing for heterogeneity using the Chi<sup>2</sup> test (using a significance level of  $\alpha=0.1$ ), and quantifying heterogeneity using the I<sup>2</sup> statistic (30).

Effect estimates were not combined across outcomes if analysis of covariance has been used to adjust for baseline measures (e.g. skewed data). This is because means and SDs are not available for each intervention group separately. If available, the adjusted mean change from baseline scores were reported and included in the analysis (as per Cochrane guidance (31)), otherwise the end of treatment scores were extracted, and a footnote included in the data extraction sheet (see Appendix F2.1).

No time-to-event data (hazard ratios) were encountered.

Results data from studies comparing shiatsu with 'other' (active) interventions were extracted and presented in data tables but were not synthesised or considered further. These data are presented as an 'evidence inventory' and provide a snapshot of the available evidence comparing shiatsu with 'other' interventions (Appendix F2.1 and Appendix F2.2).

##### Acupressure

When several eligible systematic reviews were identified that evaluated the effectiveness of acupressure across the same PICO, preference was given to extracting pooled results (where available) from the best available source (e.g. the most recent and comprehensive SR) based on the framework outlined below (Framework 5).

Where the selected meta-analysis identified or included all available primary studies across the breadth of the PICO (i.e. all eligible comparisons and outcomes for a population or condition), pooled data from the appropriate meta-analysis was presented with no further data synthesis; that is, summary effect estimates (95% confidence intervals, *p*-values) were extracted as reported by the systematic review authors. The effect estimates of the primary studies were not extracted, however the individual studies contributing data were recorded. The meta-analysis model fitted, number of included studies, and any reported measures of heterogeneity were included (e.g. I<sup>2</sup> statistic and associated *p*-value). When available, the certainty of evidence (GRADE) (and any sensitivity analysis) was recorded.

There were no studies included in the shiatsu component of this review that had also been identified and included within a meta-analysis by a SR for acupressure.

Where the selected systematic review results did not include all eligible studies for a given comparison and outcome (or includes studies that were ineligible for inclusion), the meta-analysis reported by the selected systematic reviews was updated (or re-analysed). Data from all eligible studies were included, and any ineligible studies removed (where possible).

The decision to re-analyse data was determined by:

- PICO characteristics of any additional studies were judged to be sufficiently similar (based on comparisons relevant to the Overview question, rather than individual SR questions),
- required summary statistics were available (or able to be calculated within RevMan) for that study,
- the SR presented sufficient data to facilitate the addition of eligible studies or removal of any studies ineligible for inclusion in this Overview, and
- the inclusion of results from the additional study or studies were likely to change the direction of effect (i.e. where the direction of effect is inconsistent with the pooled estimate of effect).

Where a meta-analysis of an eligible SR was found to include an ineligible study (e.g. included other interventions or study designs not eligible for inclusion in this overview), re-analysis involved removal of the ineligible data from the meta-analysis (where possible). When it was not possible to remove the data from the meta-analysis, then the implications for indirectness was considered during the GRADE assessment (see Section B4.1).

Comparisons that included a mix of quantitative and qualitative data that were unable to be quantitatively synthesised (e.g. due to incomplete data or missing information) were presented in a structured summary (see Section B3.4.2).

When the best-available systematic reviews did not report a meta-analysis for a relevant comparison, data synthesis was performed using RevMan 5.4 and forest plots presented (where appropriate), as described above for shiatsu.

For systematic reviews where the meta-analysis or primary study results were incompletely reported (e.g. no effect estimate was reported, but the direction of effect was reported along with a *p*-value), we reported the available information (see Section B3.1.1). When the reported information allowed for calculation of effect estimates or imputation of missing statistics (e.g. SD), we performed these calculations as described in Chapter 6 of the Cochrane Handbook (28).

### B3.4.2 Non-quantitative synthesis

#### Shiatsu

The narrative summary included a brief description of the condition and studies identified (including study design, size and population demographics). Where possible, a visual representation of the results of included studies was presented in a forest plot (without a summary estimate) grouped by study design features and risk of bias.

Result from each study were reported, with the range and magnitude of observed effects noted. For studies where the results were incompletely reported (i.e. only the direction of effect is reported; the effect estimate is reported but with no confidence intervals; or the direction of effect is reported along with a *p*-value, but there is of no effect estimate), we reported the available information.

To describe an overall effect across multiple studies for each outcome, we described the magnitude, range and distribution of observed effects across the studies using a simple vote count based on direction of effect (e.g. X of Y studies reported an effect favouring the intervention for the outcome Z) and GRADE. Any important differences in study size or design features that may influence the interpretation of results was considered and discussed in the text for that outcome (Appendix D). Qualitative descriptors describing the size of the effect (small, large etc.) were used only in relation to the clinical importance (see Section B3.1.2) and were, where available, based on the smallest difference that patients perceive as beneficial (or detrimental) for that outcome.

## Acupressure

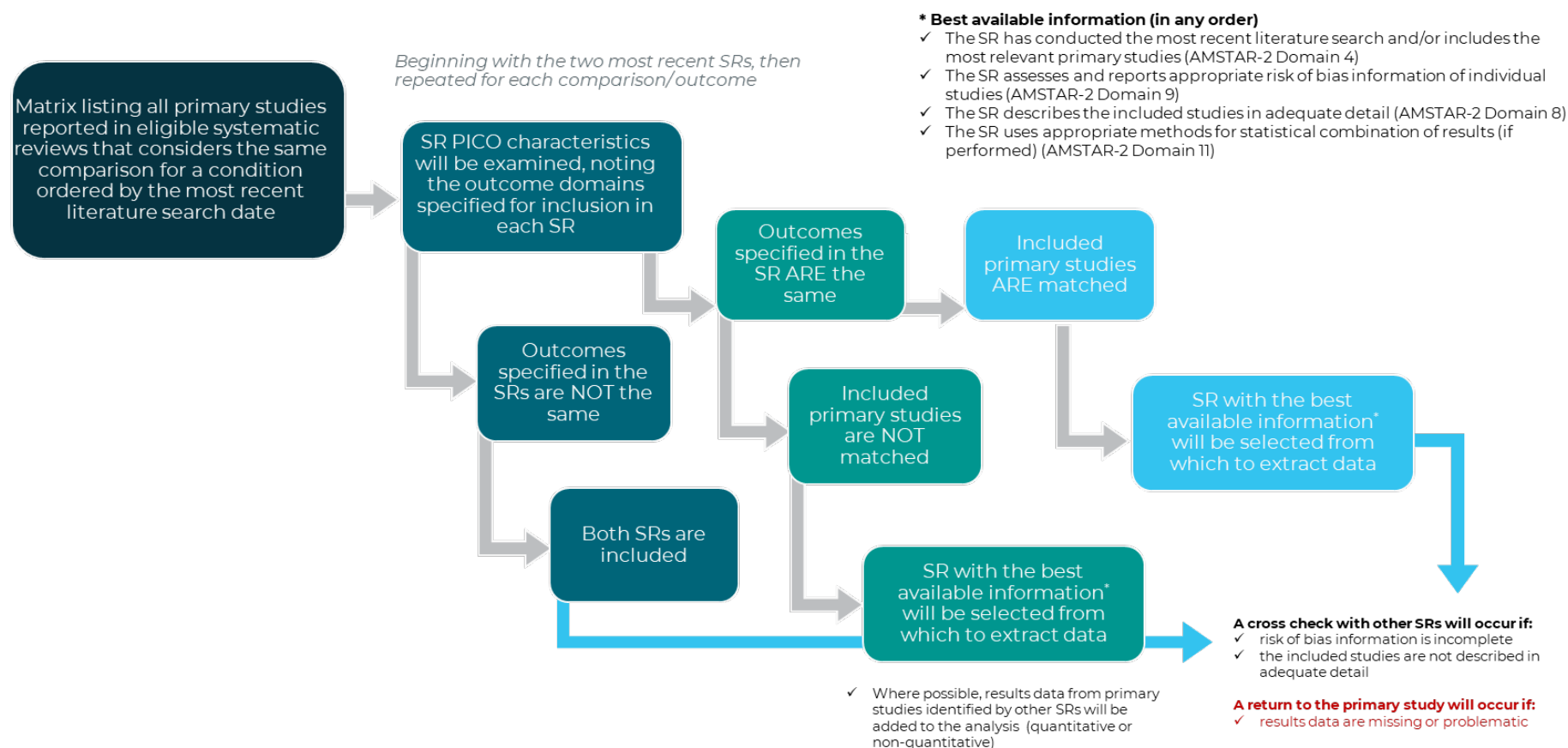
The narrative summary included a brief description of the condition and reviews identified (including a summary of the critical appraisal and applicability of the studies to shiatsu). Any notable weaknesses within a review, or inconsistency across reviews was recorded. This was followed by a summary of results grouped by comparator (sham, control, active or sham or control) and outcome domain.

Details regarding the number of systematic reviews that inform the data were included, with a brief statement regarding any overlap of primary studies provided (per outcome). Any important differences in review criteria or in control group risks that may influence the interpretation of results were considered and discussed in the text.

When there were several eligible systematic reviews identified that evaluate the effectiveness of acupressure across the same PICO, results were reported from the selected systematic reviews based on pre-specified criteria, as outlined in Framework 5. In the absence of supplementary quantitative data, results from additional studies identified in other systematic reviews were described, with the range and distribution of observed effects noted (where possible), according to the following principles:

- ✓ A study result is available for inclusion in the synthesis
- \* A study result is available and reported in another systematic review nominated as the best available evidence.
- X A study result is available for inclusion, but the systematic review reported incomplete data. Due to time and resource constraints, only the information presented in the systematic review is reported.
- † A study result is available for inclusion, but the systematic review only reports the direction of effect, Due to time and resource constraints, only the information presented in the systematic review is reported.
- The systematic review assessed this outcome but did not find or include any eligible primary studies that reported the outcome.
- ? The systematic review did not assess this outcome. It is unclear if the outcome was assessed by the primary studies included in the SR. Due to time and resource constraints, only the information presented in the systematic review is reported.

### Framework 5 Framework for selecting the systematic review from which to extract data, for any given comparison and outcome for acupuncture



Note: Given time and resource constraints, we did not return to the primary studies for any additional information. (noted as a change from protocol – see Appendix G2)

### B3.4.3 Subgroup analyses and investigations of heterogeneity

To allow for potential subgroup analysis (and to inform decision-making), studies were to be stratified based on the style or form of shiatsu massage delivered; however, given the small number of studies found no subgroup analysis were done.

We did not undertake any subgroup analyses of subsets of participants within or across studies for shiatsu or acupressure. Subgroup analysis was planned to explore heterogeneity, but this was not possible because of the small number of studies in each condition. See Appendix G1 for changes from protocol.

Note: For some outcomes, results are presented in forest plots showing separate measures, but these were not examined further.

### B3.4.4 Addressing risk of bias

#### Shiatsu

All eligible RCTs were included in the review, regardless of judgements made regarding risk of bias.

To examine the impact of bias, a sensitivity analysis was conducted if there were more than 2 studies available for a PICO, with studies judged to be at high risk of bias removed from the analysis. The impact of this change was noted and discussed in the narrative summary for that outcome.

Eligible NRSIs that were assessed to be at critical risk of bias for one or more domain (see Section B1) were not included in the evidence synthesis (i.e. the reporting of results, synthesis and conclusion) because results from these studies are likely to lead to misinformed judgements about the effect estimate. Study details were included under '*Characteristics of included studies*' (see Appendix F1.1)

#### Acupressure

All eligible systematic reviews were included in the review, regardless of judgements made regarding methodological quality, noting that:

- methodological flaws in a systematic review do not reflect the risk of bias at the primary study level, which is the level at which results are synthesised, and
- the framework in Framework 5 aims to preferentially report results from systematic reviews with fewer methodological limitations for any given comparison and/or PICO.

No formal analysis specifically addressing the risk of bias at the systematic review-level was conducted; however, where there are concerns related to the methodological quality of a systematic review (e.g. due to concerns with study eligibility criteria, methods used to identify, select, or appraise studies, or concerns with interpretation of findings) we attempted to mitigate the potential bias by cross-checking data across systematic reviews, re-analysing and re-interpreting results.

A brief statement about the changes made to the evidence reported by a systematic review (e.g. removal of a study due to inappropriate inclusion, change to the risk of bias assessment for that study, update on the data reported by the systematic review because they reported an incorrect number) on the overall conclusions of the evidence review was included under the relevant result sections of the review.

Judgements regarding the risk of bias of primary studies were based on that reported in the systematic reviews. If sensitivity analyses have been reported (e.g. removal of studies judged to be at high risk of bias), these were considered as part of the GRADE assessment for that result (see Section B4.1).

Sensitivity analyses relating to study bias were conducted and reported (see Appendix D) for one condition (recovery after minimally invasive surgery).

### B3.4.5 Sensitivity analysis

No additional sensitivity analyses were undertaken.

## B4 Evidence statements

This appendix documents how the data were used to inform the certainty of evidence and to develop evidence statements about the effect of shiatsu for preventing and treating any health condition.

### B4.1 Summary of findings and certainty of the evidence

Across each population, we assessed the certainty of the evidence for up to 7 critical or important outcomes using the GRADE approach (5), in which the certainty of evidence is categorised as follows:

- High ( $\oplus\oplus\oplus\oplus$ ): we are very confident that the true effect lies close to that of the estimate of the effect
- Moderate ( $\oplus\oplus\oplus\ominus$ ): we are moderately confident in the effect estimate: the true effect is probably close to the estimate of the effect, but there is a possibility that it is substantially different
- Low ( $\oplus\oplus\ominus\ominus$ ): our confidence in the effect estimate is limited: the true effect may be substantially different from the estimate of the effect
- Very low ( $\oplus\ominus\ominus\ominus$ ): we have very little confidence in the effect estimate: the true effect is likely to be substantially different from the estimate of effect

Only evidence comparing shiatsu with 'inactive control' was presented. All critical and important outcomes were reported, regardless of whether the findings demonstrate a clinically meaningful change. To ensure consistency, GRADE summary of findings tables were drafted by the lead evidence reviewer for each population using GRADEpro GDT software ([www.grade-pro.org](http://www.grade-pro.org)), then checked by the overall project lead (MJ).

The GRADE process provides a framework for determining the certainty of the evidence and is based on consideration of the following 5 factors:

- *Risk of bias*. Based on the summary assessment (i.e. the overall risk of bias) across studies for each outcome reported (32). Serious concerns were raised if the outcome result was influenced by the inclusion of studies judged to be at high risk of bias (i.e. removing these studies changed the size of the effect). Serious concerns were also likely to be raised when it was considered plausible (i.e. likely, probable or conceivable) that missing outcome data made a difference to the estimated effect.
- *Inconsistency*. Based on heterogeneity in the observed intervention effects across studies that suggests important differences in the effect of the intervention and whether this can be explained (33). This included considering measures of statistical heterogeneity (e.g.  $I^2$  statistic) and any non-overlap of confidence intervals (suggesting important difference in the observed effect). Inconsistency was not downgraded when there was only one study.
- *Imprecision*. Based on interpretation of the upper and lower confidence limits in relation to a minimal clinically important threshold (i.e. the confidence interval includes both appreciable benefit and harm); and whether the optimal information size has been reached (i.e. the total number of patients meets the required sample size for a sufficiently powered individual study) (34). In the absence of a published MCID a rough guide was used (i.e. a 25% relative risk reduction or increase for dichotomous outcomes and for continuous outcomes, based on a defined threshold for a small effect [the mean difference being less than 10% of the scale]) (see Section B3.1.2).
- *Indirectness*. Based on important differences between the review questions and the characteristics of included studies that may lead to important differences in the intervention effects (35). For example, a judgement on whether evidence in a Chinese hospital is also applicable to the Australian community and whether it is sensible to apply.
- *Publication bias*. Based on the extent to which the evidence is available (see Section B3.3). This included: checking trial registries for missing outcome results in published studies, checking the ongoing studies and studies awaiting classification (including those published in a language other than English) and making a judgement on whether the studies were not complete, failed to report an outcome, were not published (or translated) due to the nature of their results (i.e. selective non-reporting of results). Given most of the outcome results came from small studies, any missing results due to non-reporting in a meta-analysis was considered likely to impact the results.

Publication bias was also suspected when the evidence was limited to a small number of small trials (36).

For each factor, a judgement was made about whether there were no concerns, or if the concerns were serious or very serious. Scoring of the certainty of the evidence began as 'high' (score=4), which was downgraded by –1 for each factor with serious concerns or –2 for very serious concerns (5, 37). Footnotes were used to record judgements made about downgrading the evidence. In certain circumstances, the certainty of evidence could also be upgraded (3 factors relating to magnitude of effect, dose-response gradient, and confounding); however, we did not upgrade the evidence for any outcome recorded.

## B4.2 Development of evidence statements

An evidence statement pertaining to each outcome was included as part of the summary of findings table. This was guided by the prescribed format provided in GRADEPro, with the preferred statement selected listed in Table B-1.

**Table B-1 List of informative statements to communicate results of systematic reviews**

Size of the effect estimate	Suggested statements *
<b>HIGH Certainty of the evidence</b>	
Large effect	X results in a large reduction/increase in outcome
Moderate effect	X reduces/increases outcome
Small important effect	X reduces/increases outcome slightly
Trivial, small unimportant effect or no effect	X results in little to no difference in outcome
<b>MODERATE Certainty of the evidence</b>	
Large effect	X probably results in a large reduction/increase in outcome
Moderate effect	X probably reduces/increases outcome
Small important effect	X probably results in a slight reduction/increase in outcome
Trivial, small unimportant effect or no effect	X probably results in little to no difference in outcome
<b>LOW Certainty of the evidence</b>	
Large effect	X may result in a large reduction/increase in outcome
Moderate effect	X may result in a reduction/increase in outcome
Small important effect	X may result in a slight reduction/increase in outcome
Trivial, small unimportant effect or no effect	X may result in little to no difference in outcome
<b>VERY LOW Certainty of the evidence</b>	
Any effect	The evidence is very uncertain about the effect of X on outcome

Source: modified from Santesso et al. (2020) (38)

\* Replace X with intervention, replace 'reduce/increase' with direction of effect, replace 'outcome' with name of outcome, include 'when compared with Y' when needed)

# Appendix C Details of studies assessed at full text but not included

## C1 Citation details of excluded studies (not eligible)

### C1.1 Systematic review of shiatsu

This appendix documents the studies that were screened in full text for a systematic review on the effect of shiatsu for preventing and treating any health condition but were not included in the evidence synthesis as they did not meet the eligibility criteria (see Table C-1).

As per Cochrane guidelines the table does not list every study that was excluded, only those that appear on the surface to meet eligibility criteria, but which turn out not to. The table is sorted by reason for exclusion. Each study notes the primary reason for exclusion, but there may have been multiple reasons.

**Table C-1 Citation details of studies screened and excluded a full text (by reason for exclusion): Shiatsu**

(see separate file)

### C1.2 Supplementary overview of acupressure

This appendix documents the studies that were screened in full text for a systematic review of systematic reviews on the effect of acupressure for preventing and treating any health condition but were not included in the evidence synthesis as they did not meet the eligibility criteria (see Table C-2).

As per Cochrane guidelines the table does not list every study that was excluded, only those that appear on the surface to meet eligibility criteria, but which turn out not to. The table is sorted by reason for exclusion. Each study notes the primary reason for exclusion, but there may have been multiple reasons.

**Table C-2 Citation details of systematic reviews screened and excluded a full text (by reason for exclusion): Acupressure**

(see separate file)

## C2 Citation details of studies provided through the Department's public call for evidence

This appendix documents the studies that were provided through the Department's public call for evidence for a systematic review on the effect of shiatsu for preventing and treating any health condition (see Table C-3). Studies that were already identified through the search of published literature were noted as duplicate citations, with the reason for exclusion (or inclusion) noted under the eligibility criteria. Studies that were not previously identified in the literature search were subsequently screened, with their reasons for inclusion/exclusion noted.

The table is sorted first by whether the studies had already been found in the search (duplicate studies), then by whether they were excluded (with reasons) or included. As above, studies could be not eligible for multiple reasons, but only one reason is listed for each.

**Table C-3 Citation details of studies provided through the Department's public call for evidence with reasons: Shiatsu & acupressure**

(See separate file)

## C3 Citation details of studies awaiting classification

### C3.1 Systematic review of shiatsu

This appendix documents the studies that potentially meet the prespecified inclusion criteria for a systematic review on the effect of shiatsu for preventing and treating any health condition, but certainty of inclusion is precluded by missing information (i.e. they were published in another language, incomplete reporting), or they were published after the literature search date.

An overview of studies awaiting classification (by ICD-11 disease category) is provided in Table C-4.

**Table C-4 Overview of studies awaiting classification (by ICD-11 disease category): Shiatsu**

ICD-11 Disease Category	# studies with incomplete information	# studies published in languages other than English	# studies not able to be retrieved	TOTALS
02 Neoplasms	0	2	0	<b>2</b>
05 Endocrine, nutritional or metabolic diseases	0	2	0	<b>2</b>
06 Mental and behavioural disorders	0	1	0	<b>1</b>
07 Sleep-wake disorders	0	1	0	<b>1</b>
08 Diseases of the nervous system	2	5	0	<b>7</b>
09 Diseases of the visual system	0	1	0	<b>1</b>
11 Diseases of the circulatory system	0	2	0	<b>2</b>
12 Diseases of the respiratory system	0	2	0	<b>2</b>
13 Diseases of the digestive system	0	6	0	<b>6</b>
15 Diseases of the musculoskeletal system or connective tissue	0	4	0	<b>4</b>
16 Diseases of the genitourinary system	0	3	0	<b>3</b>
18 Pregnancy, childbirth or the puerperium	0	3	0	<b>3</b>
19 Certain conditions originating in the perinatal period	1	1	0	<b>2</b>
23 External causes of morbidity or mortality	0	4	0	<b>4</b>
25 Prevention	0	2	0	<b>2</b>
<b>Totals</b>	<b>3</b>	<b>39</b>	<b>0</b>	<b>42</b>

## C3.1.1 Studies with incomplete information or missing data

**Table C-5 Characteristics of studies with incomplete or missing data (by ICD-11 disease category): Shiatsu**

STUDY ID	STUDY DESIGN	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR1 (inactive)	COMPARATOR2 (active)	CO-INTERVENTIONS	Notes
<b>Li 2020 (39)</b>	RCT?	08 Diseases of the nervous system	Stroke recovery	60	Acupoint massage therapy	?	Control (no intervention)	--	Nursing intervention measures of TCM	Conference abstract/poster
<b>Villani 2012 (40)</b>	RCT?	08 Diseases of the nervous system	Headache disorders, migraine	20	Shiatsu	4 wks., 1x ?min. sessions per wk.	--	Amitriptyline (10 mg oral)	--	Conference abstract/poster
<b>Chen 2014 (41)</b>	RCT?	19 Certain conditions originating in the perinatal period	Premature infants	41	Acupressure and acupoint massage	?	Control (no intervention)	--	--	Conference abstract/poster

Abbreviations: ? not reported; RCT, randomised controlled trial; TCM, Traditional Chinese Medicine wk., week

## C3.1.2 Studies published in languages other than English

**Table C-6 Characteristics of studies published in languages other than English (by ICD-11 disease category): Shiatsu**

STUDY ID	STUDY DESIGN	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR1 (inactive)	COMPARATOR2 (active)	CO-INTERVENTIONS	Notes
<b>Zhang 2020 (42)</b>	RCT?	02 Neoplasms	Cancer, Advanced gastric	156	Acupoint massage	?	--	5 element music OR acupoint massage and 5 element music	--	Not in English
<b>Feng 2018 (43)</b>	Quasi-RCT?	02 Neoplasms	Cancer, rectal (undergoing colostomy)	90	Acupoint massage	?	Control (no intervention)	--	Standard care and health education	Not in English
<b>Lyu 2019 (44)</b>	?	05 Endocrine, nutritional and metabolic diseases	Diabetes, Type 2	66	Acupoint Massage (self)	?	Control (no intervention)	--	--	Not in English
<b>Zhang 2020 (45)</b>	RCT?	05 Endocrine, nutritional and metabolic diseases	Diabetes, Type 2	93	Acupoint massage	12 wks., ?x ?min. sessions per week	Control (no intervention)		Usual care and health education	Not in English
<b>Yang 2010 (46)</b>	RCT?	05 Endocrine, nutritional and metabolic diseases	Diabetic foot (Grade 0)	?	Acupoint massage (foot)	?	Control (no intervention)	--	Usual care	Not in English
<b>Wan 2017 (47)</b>	?	06 Mental and behavioural disorders	Neurocognitive, Dementia	80	Acupoint massage	?	Control (no intervention)	--	Usual care	Not in English
<b>Wang 2016 (48)</b>	?	07 Sleep-wake disorders	21 Sleep problems (sleep status self-assessment scale $\geq$ 23 points)	60	Acupressure massage	4 wks., ?x ?min. sessions per wk.	Control (no intervention)	--	Health education	Not in English
<b>Kang 2008 (49)</b>	Quasi-RCT?	08 Diseases of the nervous system	21 Cervical vertigo (dizziness)	76	Acupoint massage	?	Rotary reduction manipulation group	--	--	Not in English
<b>Hu 2014b (50)</b>	RCT?	08 Diseases of the nervous system	Brain injury (premature infants)	210	Acupoint massage	?	Control (no intervention)	--	Routine medical care	Not in English
<b>Xia 2017 (51)</b>	NRSI	08 Diseases of the nervous system	Headache disorders, migraine	?	Acupoint massage (self)	12 wks., 7x ?min. sessions per week	Control (no intervention)	--	Usual care and health education	Not in English
<b>Pan 2011 (52)</b>	RCT	08 Diseases of the nervous system	Stroke recovery	80	Du-channel massage	8 wks., ?x ?min. sessions per wk.	Control (no intervention)	--	Routine rehabilitation	Not in English

STUDY ID	STUDY DESIGN	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR1 (inactive)	COMPARATOR2 (active)	CO-INTERVENTIONS	Notes
<b>Wang 2015 (53)</b>	RCT	08 Diseases of the nervous system	Stroke recovery	?	Meridian massage	?	?	--	?	Not in English
<b>Sun 2015 (54)</b>	RCT?	09 Disease of the visual system	Asthenopia (video display terminal associated)	224	Acupoint massage (eye)	?	--	Esculin and digitalis glycosides eye drops OR acupoint massage and digitalis glycosides	--	Not in English
<b>Chen Ouying 2017 (55)</b>	Quasi-RCT?	11 Diseases of the circulatory system	Coronary heart disease (heart and kidney yang deficiency type)	80	Acupoint application	4 wks., ?x ?min. sessions per wk.	Control (no intervention)	Indirect monkshood moxibustion and acupoint OR indirect monkshood moxibustion	--	Not in English
<b>Dojianlin 2018 (56)</b>	Quasi-RCT?	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	79	Acupoint massage	?	Control (no intervention)	--	Usual care	Not in English
<b>Gao 2017 (57)</b>	Quasi-RCT?	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease (with AECB)	60	Acupoint massage	1 wk., ?x ?min. session per week	--	Mechanical-assisted expectoration	Standard care	Not in English
<b>Chung 2011 (58)</b>	RCT?	13 Diseases of the digestive system	Functional constipation	38	Acupoint massage	4 wks., 5x ?min. sessions per wk.	--	Aroma massage	--	Not in English
<b>Jeon 2005 (59)</b>	Quasi-RCT?	13 Diseases of the digestive system	Functional constipation (after stroke)	31	Acupoint massage	?	Control (no intervention)	--	--	Not in English
<b>Liu 2017 (60)</b>	RCT?	13 Diseases of the digestive system	Functional constipation (elderly)	151	Acupoint massage	4 wks., ?x ?min. sessions per wk.	--	Bisacodyl (5 mg oral, once daily) OR acupoint massage plus bisacodyl (5mg, once daily)	--	Not in English, Full text not able to be retrieved
<b>Huang 2016 (61)</b>	RCT?	13 Diseases of the digestive system	Functional constipation (with acute back pain)	80	Acupoint massage	?	Control (no intervention)	--	Routine nursing care and health education	Not in English

STUDY ID	STUDY DESIGN	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR1 (inactive)	COMPARATOR2 (active)	CO-INTERVENTIONS	Notes
<b>Dong 2018 (62)</b>	RCT?	13 Diseases of the digestive system	Functional constipation (during pregnancy)	96	Meridian acupoint massage	?	Control (no intervention)	--	Usual care	Not in English
<b>Zhang 2015 (63)</b>	RCT?	13 Diseases of the digestive system	Ulcerative colitis (with depression)	60	Acupoint massage and 5-tone therapy	?	Control (no intervention)	--	Usual care	Not in English
<b>Xiao 2020 (64)</b>	RCT?	15 Diseases of the musculoskeletal system or connective tissue	Low back pain (degenerative lumbar spine instability)	57	Meridian Massage	--	Massage manipulation (myofascial chain theory)	--	--	Not in English
<b>Eberhardt 2015 (65)</b>	RCT	15 Diseases of the musculoskeletal system or connective tissue	Low back pain (nursing staff)	40	Zen Shiatsu	1 wk., 1x ?min. session per week	--	Auricular acupuncture	--	Not in English
<b>Li 2016 (66)</b>	Quasi-RCT?	15 Diseases of the musculoskeletal system or connective tissue	Arthritis, cervical spondylosis	134	Acupoint massage plus emotional nursing	?	--	Emotional nursing OR Xangbi's traditional Chinese medicine	--	Not in English
<b>Chen 2016 (67)</b>	RCT?	15 Diseases of the musculoskeletal system or connective tissue	Osteoarthritis (after total knee arthroplasty)	120	Acupoint massage and mild moxibustion	Massage: 1hr after operation till soreness presents; Moxibustion: 5x ?min. sessions for one wk.	Control (no intervention)	--	Routine detumescence	Not in English
<b>Guo 2020 (68)</b>	Quasi-RCT	16 Diseases of the genitourinary system	CKD, recovery after autologous arteriovenous internal fistula (AVF for haemodialysis)	66	Acupoint massage	1 wk, 1x ?min. session per week	Control (no intervention)	--	Routine perioperative nursing care	Not in English
<b>Mirtajadini 2016 (69)</b>	RCT	16 Diseases of the genitourinary system	CKD, undergoing haemodialysis	72	Shiatsu	? wks., ?x 20min sessions per wk.	Control (no intervention)	--	Usual care	Not in English, submitted literature
<b>Yang 2008 (70)</b>	NRSI	16 Diseases of the genitourinary system	21 Menopausal symptoms or complaints	34	Meridian massage	4 wks., 3x 20min session per week	Control (no intervention)	--	--	Not in English

STUDY ID	STUDY DESIGN	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR1 (inactive)	COMPARATOR2 (active)	CO-INTERVENTIONS	Notes
<b>Qu 2016 (71)</b>	RCT?	18 Pregnancy, childbirth or the puerperium	Women in labour (primigravida)	100	Acupoint massage	?	Control (no intervention)	--	Routine delivery	Not in English
<b>Wan 2016 (72)</b>	RCT?	18 Pregnancy, childbirth or the puerperium	Women in labour (primiparous)	120	Acupoint pressure therapy	?	Control (no intervention)	--	--	Not in English
<b>Zhu 2018 (73)</b>	RCT?	18 Pregnancy, childbirth or the puerperium	Puerperal, after C-section	60	Acupoint massage	1 wk., 5x ?min. sessions per week	Control (no intervention)	--	Usual care	Not in English
<b>Rugiero 2008 (74)</b>	Quasi-RCT?	19 Certain conditions originating in the perinatal period	Premature infants	40	Shiatsu massage	2 wks., 3x 15min sessions per day, every 6 days	Control (no intervention)	--	--	Not in English
<b>Huang 2009 (75)</b>	RCT?	24 Factors influencing health status or contact with health services	Pre-operative anxiety (elective rectal/intestinal surgery)	80	Acupoint massage	?	Control (no intervention)	--	Standard pre/post-operative care	Not in English
<b>Zhao 2019 (76)</b>	NRSI	24 Factors influencing health status or contact with health services	Patients undergoing colonoscopy	120	Acupoint massage (0.5 hr prior to taking medicine)	Once prior to surgery	Control (no intervention)	--	Usual care	Not in English
<b>Xin 2016 (77)</b>	Quasi-RCT?	24 Factors influencing health status or contact with health services	DVT after gynaecologic laparoscopic surgery	106	Acupoint massage	?	--	Intermittent limb pressure	Usual care	Not in English
<b>Jiang 2020 (78)</b>	RCT	24 Factors influencing health status or contact with health services	DVT after hip replacement surgery	120	Acupoint passage	?	Control (no intervention)	--	Ankle pump exercises	Not in English
<b>Zhang 2011 (79)</b>	RCT?	25 Prevention	Age-related decline (elderly)	144	Acupoint massage	24 wks., ?x ?min. sessions per week	--	Cognitive training	--	Not in English
<b>Dong Choon 2014 (80)</b>	NRSI	25 Prevention	Age-related decline (institutionalised)	50	Upper meridian massage	2 wks., 4x 10min sessions per wk.	Control (no intervention)	--	--	Not in English

Abbreviations: ? not reported; DVT, deep vein thrombosis; hr, hour; NRSI, nonrandomised study of intervention; RCT, randomised controlled trial; wk., week

## C3.1.3 Studies not able to be retrieved

Nil.

## C3.1.4 Studies unable to be translated or interpreted at the title/abstract stage

**Table C-7 List of studies unable to be translated or interpreted at the title/abstract stage (by ICD-11 disease category): Shiatsu**

STUDY ID	STUDY DESIGN	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR1 (inactive)	COMPARATOR2 (active)	CO-INTERVENTIONS
<b>Gusarova 1998</b> (81)	?	08 Diseases of the nervous system	Transitory ischaemic attack in the vertebrobasilar area	41	Point and classical massage	?	?	?	?
<b>Jia 2016</b> (82)	?	11 Diseases of the circulatory system	Hypertension	?	Acupoint massage	?	?	?	?
<b>Yang 1994</b> (83)	?	15 Diseases of the musculoskeletal system or connective tissue	Mild to severe low back pain	?	Acupoint finger pressure massage	?	?	?	?
<b>Chen 2019</b> (84)	RCT?	19 Certain conditions originating in the perinatal period	Brachial plexus nerve injury (newborns)	?	Acupoint massage	?	?	?	?
<b>Chu 2015</b> (85)	RCT?	21 Symptoms, signs or clinical findings, NEC	Stroke recovery (cerebral apoplexy with sleep disorder)	?	Acupoint massage	?	?	?	?
<b>Li 2013</b> (86)	?	24 Factors influencing health status or contact with health services	Abdominal distention after spine surgery (prevention)	?	Acupoint massage and moxibustion	?	?	?	?
<b>EAMS 2014</b> (87)	SR & RCTs	Various	Various	?	Shiatsu	?	?	?	?

## C3.1.5 Studies submitted or published after the literature search date

Nil.

### C3.2 Supplementary overview of acupressure

This appendix documents the studies that potentially meet the prespecified inclusion criteria for a systematic review on the effect of acupressure for preventing and treating any health condition, but certainty of inclusion is precluded by missing information (i.e. they were published in another language, incomplete reporting), or they were published after the literature search date.

An overview of studies awaiting classification (by ICD-11 disease category) is provided in Table C-8

**Table C-8 Overview of studies awaiting classification (by ICD-11 disease category): Acupressure**

Disease Category	# studies with incomplete information	# studies published in languages other than English	# studies not able to be retrieved	TOTALS
02 Neoplasms	1	4	0	<b>5</b>
05 Endocrine, nutritional and metabolic diseases	0	1	0	<b>1</b>
07 Sleep-wake disorders	2	0	0	<b>2</b>
08 Diseases of the nervous system	1	1	0	<b>2</b>
09 Disease of the visual system	0	1	0	<b>1</b>
14 Diseases of the skin	1	0	0	<b>1</b>
16 Diseases of the genitourinary system	0	1	0	<b>1</b>
18 Pregnancy, childbirth or the puerperium	3	3	0	<b>6</b>
19 Certain conditions originating in the perinatal period	1	0	0	<b>1</b>
22 Injury, poisoning or certain other consequences of external causes	2	0	0	<b>2</b>
24 Factors influencing health status or contact with health services	0	2	1	<b>3</b>
<b>TOTALS</b>	<b>11</b>	<b>13</b>	<b>1</b>	<b>25</b>

## C3.2.1 Reviews with incomplete information or missing data

**Table C-9 Characteristics of reviews with incomplete or missing data (by ICD-11 disease category): Acupressure**

REVIEW ID	STUDY DESIGN	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR	CO-INTERVENTION	OUTCOME/S
<b>Talas 2014 (88)</b>	individual studies?	02 Neoplasms	Cancer (undergoing treatment)	?	Acupressure or other CAM therapies	?	Control (not specified)	?	Nausea; Vomiting
<b>Ames 2019 (89)</b>	meta-analysis	07 Sleep-wake disorders	Insomnia	?	Acupressure	?	Control (not specified)	?	Sleep quality
<b>Ji 2019 (90)</b>	meta-analysis	07 Sleep-wake disorders	Insomnia/sleep disturbance	?	Acupressure or other CAM therapies	?	Control (not specified)	?	Sleep quality; Depression; Anxiety
<b>Thompson 2015 (91)</b>	narrative	08 Diseases of the nervous system	Stroke recovery	?	Acupressure or other CAM therapies	?	Control (not specified)	?	Motor function; Cognitive function; Psychological function
<b>Hsieh 2013 (92)</b>	individual studies	14 Diseases of the skin	Atopic dermatitis	?	Acupressure or Acupuncture	?	Control (not specified)	?	Itch intensity; Lichenification
<b>Boz 2017 (93)</b>	individual studies	18 Pregnancy, childbirth or the puerperium	Postpartum (caesarean section pain)	?	Acupressure	?	Control (not specified)	?	Pain intensity; Anxiety
<b>Bejar 2016 (94)</b>	meta-analysis	18 Pregnancy, childbirth or the puerperium	Women in labour	?	Acupressure	?	Control (not specified)	?	Pain; Labour duration; Caesarean sections; Apgar Scores
<b>Gameiro 2016 (95)</b>	individual studies	18 Pregnancy, childbirth or the puerperium	Women in labour	?	Acupressure	?	Control (not specified)	?	Pain; Stress; Anxiety; Fear of labour pain
<b>Abdelrahman 2019 (96)</b>	meta-analysis	19 Certain conditions originating in the perinatal period	Neonatal jaundice	?	Acupressure massage	?	Control (not specified)	?	Serum bilirubin level
<b>Paul 2011 (97)</b>	meta-analysis	24 Factors influencing health status or contact with health services	Acute anxiety (pre-hospital)	?	Acupressure	?	Control (sham)	?	Anxiety
<b>Paul 2011 (98)</b>	meta-analysis	24 Factors influencing health status or contact with health services	Acute pain (pre-hospital)	?	Acupressure	?	Control (sham)	?	Pain

Abbreviations: CAM, complementary and alternative medicines

## C3.2.2 Reviews published in languages other than English

**Table C-10 Characteristics of reviews published in languages other than English (by ICD-11 disease category): Acupressure**

REVIEW ID	STUDY DESIGN	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR	CO-INTERVENTION	OUTCOME/S
<b>Chen Feng 2020 (99)</b>	meta-analysis	02 Neoplasms	Chemotherapy induced nausea and vomiting	?	Neiguan acupoint pressure	?	Control (no intervention)	?	Nausea; Vomiting; Retching
<b>Jang 2011 (100)</b>	meta-analysis	02 Neoplasms	Chemotherapy induced nausea and vomiting	?	Acupressure	?	Control (not specified)	?	Nausea; Vomiting
<b>Silva 2009 (101)</b>	individual studies?	02 Neoplasms	Chemotherapy induced nausea and vomiting	?	Acupressure	?	Control (not specified)	?	Nausea; Vomiting
<b>Καλογεροπούλου 2020 (102)</b>	individual studies?	02 Neoplasms	Chemotherapy induced nausea and vomiting (children)	?	Acupressure	?	Control (not specified)	?	Nausea; Vomiting
<b>Ernst 1997 (103)</b>	individual studies?	05 Endocrine, nutritional and metabolic diseases	Overweight/obese	?	Acupressure	?	Control (placebo/sham)	?	Appetite; Body weight
<b>Wang Jiangling 2020 (104)</b>	meta-analysis	08 Diseases of the nervous system	Stroke recovery (dysphagia)	?	Acupoint massage	?	Control (not specified)	?	Swallow function; Aspiration pneumonia
<b>Welte 2017 (105)</b>	individual studies?	09 Disease of the visual system	Glaucoma, cataract or age-related macular degeneration	?	Acupressure	?	Control (not specified)	?	?
<b>Ghiasi 2017 (106)</b>	individual studies?	16 Diseases of the genitourinary system	Primary dysmenorrhoea	?	Acupressure (Sanyinjiao point)	?	Control (not specified)	?	?
<b>Keramat 2014 (107)</b>	individual studies?	18 Pregnancy, childbirth or the puerperium	Women in labour	?	Acupressure	?	Control (not specified)	?	Pain
<b>Mafetoni 2013 (108)</b>	individual studies?	18 Pregnancy, childbirth or the puerperium	Women in labour	?	Acupressure	?	Control (not specified)	?	Pain ; Labour progression; Rate of caesarean births
<b>Santiago-Vasco 2017 (109)</b>	individual studies?	18 Pregnancy, childbirth or the puerperium	Women in labour	?	Acupressure	?	Control (placebo/sham)	?	Pain ; Labour progression; Rate of caesarean births
<b>Chunxiang 2019 (110)</b>	meta-analysis?	24 Factors influencing health status or contact with health services	Laparoscopic surgery (postsurgical gastrointestinal complications)	?	Acupoint massage	?	Control (usual care)	?	Nausea/vomiting; Abdominal distention; Time to defecation; Defecation; Bowel movement
<b>Zhu 2010 (111)</b>	meta-analysis	24 Factors influencing health status or contact with health services	Post-operative nausea and vomiting	?	Acupressure	?	Control (placebo/sham)	?	Nausea; Vomiting

## C3.2.3    Reviews not able to be retrieved

**Table C-11    List of reviews not able to be retrieved (by ICD-11 disease category): Acupressure**

STUDY ID	STUDY DESIGN	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR	CO-INTERVENTION	OUTCOME/S
<b>Zhang 2015 (112)</b>	Meta-analysis	24 Factors influencing health status or contact with health services	Post-operative recovery	?	Wristband acupoint pressure	?	Control (not specified)	?	Nausea Vomiting

C3.2.4    Reviews unable to be translated or interpreted at the title/abstract stage  
Nil.C3.2.5    Reviews submitted or published after the literature search date  
Nil.

## C4 Citation details of ongoing studies

### C4.1 Systematic review of shiatsu

This appendix documents the studies that met the prespecified inclusion criteria for a systematic review on the effect of shiatsu for preventing and treating any health condition but outcome data from the study is not yet available.

An overview of ongoing studies (by ICD-11 disease category) is provided in Table C-12.

**Table C-12 Overview of ongoing studies (by ICD-11 Category): Shiatsu**

Disease Category	# studies Not yet recruiting	# studies Recruiting	# studies Active, not recruiting	# studies Recruitment complete	# studies Complete, results not available	# studies brief results published	# studies Unknown	TOTAL
02 Neoplasms	0	0	0	0	0	0	1	<b>1</b>
05 Endocrine, nutritional and metabolic diseases	0	0	0	1	0	0	0	<b>1</b>
06 Mental and behavioural disorders	0	1	0	2	0	0	1	<b>4</b>
08 Diseases of the nervous system	2	2	0	0	0	0	0	<b>4</b>
12 Diseases of the respiratory system	0	0	0	1	0	0	0	<b>1</b>
15 Diseases of the musculoskeletal system or connective tissue	0	0	0	0	0	0	1	<b>1</b>
24 Factors influencing health status or contact with health services	0	0	0	1	0	0	1	<b>2</b>
<b>Totals</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>14</b>

**Table C-13 List of ongoing studies (by ICD-11 Category): Shiatsu**

STUDY ID	Status	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR1 (inactive)	COMPARATOR2 (active)	CO-INTERVENTION	OUTCOME/S
<b>Irct201510020 24290N</b>	Unknown	02 Neoplasms	Breast cancer (undergoing treatment)	72	Shiatsu	1 wk., 1x 20 min. sessions per wk.	--	Sham (touch without pressure)	Usual care	Anxiety (STAI); Blood pressure; Number of breaths; Heart rate; Pain (VAS)
<b>JPRN-UMIN000035 434</b>	Recruitment complete	05 Endocrine, nutritional and metabolic diseases	Obesity (women older than 40 years, BMI 25 or more)	24	Anma	4 wks., 1x 40 min. sessions per wk.	--	Massage with oil	--	Adiponectin levels; Weight; Abdominal circumference; Body fat percentage; Leptin levels; Cholesterol (total, HDLC, LDLC); C-reactive protein; Mood
<b>NCT04100850</b>	Recruiting	06 Mental and behavioural disorders	Depression	78	Watsu	4 wks., 2x 50 min. sessions per wk.	Control (no intervention)	Aquatic exercises (aerobics and resistance exercises)	--	Depression (BDI); Stress (DASS-21); QoL (SF-12); Sleep quality (PSQI); Lifestyle (Fantastic Lifestyle Scale); Cognitive function (MCA); Functional capacity (6MWT); Improvement (Improvement Perception Scale)
<b>NCT04355091</b>	Recruitment complete	06 Mental and behavioural disorders	Depression, postpartum	140	Emotional Freedom Techniques	?	Control (no intervention)	--	Usual care	Depression (Edinburgh Postpartum Depression Scale); Stress Coping Styles Scale; State-Trait Anxiety Inventory
<b>JPRN-UMIN000036 272</b>	Recruitment complete	06 Mental and behavioural disorders	Neurodevelopmental, Autism spectrum disorder (adolescents)	20	Anma	4 wks., 1x 40 min. sessions per wk.	Control (no intervention)	--	--	Oxytocin levels; Pain; Sensory disorder (Sensory profile 2015); Developmental coordination disorders; Mood state; Social skills

STUDY ID	Status	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR1 (inactive)	COMPARATOR2 (active)	CO-INTERVENTION	OUTCOME/S
<b>NCT00788970</b>	Unknown	06 Mental and behavioural disorders	Schizophrenia	150	Acupressure / shiatsu	4 wks., 2x 40 min. sessions per wk.	Control (waitlist)	Sham acupressure	--	Brief Psychiatric Rating Scale;
<b>ChiCTR1900021666</b>	Not yet recruiting	08 Diseases of the nervous system	Cerebral palsy (1-3 years)	182	Acupoint massage	12 wks., 5x 15-20 min. sessions per wk.	Control (no intervention)		Rehabilitation	Muscle tone (Modified Ashworth scale); Gross motor function rating scale; Children's language and intelligence related scale; Systematic physical examination; Brain CT/MRI; Comprehensive evaluation summary; Health economic indicators; 6/5000 Acupoint sensitisation
<b>ChiCTR-ION-16009815</b>	Recruiting	08 Diseases of the nervous system	21 Cervical vertigo (dizziness)	135	Acupoint massage	?	--	Acupoint massage (different kinetic parameter combination)	--	Cervical vertigo symptoms; Visual analogue scale
<b>RBR-2c6ymn</b>	Not yet recruiting	08 Diseases of the nervous system	Multiple sclerosis	20	Shiatsu	4 wks., 1x 50 min. sessions per wk..	--	Acupressure OR muscle stretching OR massage	Physical activity orientation and educational booklet	Pain (DN4 questionnaire); Fatigue (Modified Fatigue Impact Scale); Sleep quality (PSQI); MS Impact (The Multiple Sclerosis Impact Scale)
<b>ChiCTR1800018368</b>	Recruiting	08 Diseases of the nervous system	Stroke recovery	60	Acupoint massage	?	--	Acupuncture OR conventional treatment	--	Immune function (T cells); Immune function (B cells)
<b>Irct201112214613N</b>	Recruitment complete	12 Diseases of the respiratory system	Asthma (children)	?	Mixture massage	? wks., ?x 30 min. sessions per wk.	Control (no intervention)	--	Usual care	Lung function (Spirometry); Asthma symptoms; Asthma severity (Type and amount of each respiratory drug use); Anxiety (parent reported)

STUDY ID	Status	ICD-11 Category	POPULATION	N	INTERVENTION	Intervention details	COMPARATOR1 (inactive)	COMPARATOR2 (active)	CO-INTERVENTION	OUTCOME/S
<b>JPRN-UMIN000041076</b>	Unknown	15 Diseases of the musculoskeletal system or connective tissue	Shoulder stiffness (chronic)	?	Anma/Shiatsu	?	Attention control (45 mins rest)	Traditional Japanese massage	--	Pain; Near infrared spectroscopy
<b>Irct201203159302N 2012</b>	Unknown	24 Factors influencing health status or contact with health services	Acute pain (during venepuncture) (16-45 years)	?	Acupoint fingertips massage	Minimum weight of 3 kg and duration of 9 mins (3 mins per acupoint) before and during the venepuncture procedure on the other hand of subjects	Control (no intervention)	--	--	Pain (VAS); Arterial oxygen saturation (Pulse oximetry)
<b>Irct20130424013110N 2020</b>	Recruitment complete	24 Factors influencing health status or contact with health services	Agitation (patients undergoing mechanical ventilation, 30-60 years)	68	Shiatsu (Hugo points)	5 min. massage and 2-min. rest to 20 mins	Sham (touch without pressure)	--	Standard care	Agitation (Richmond agitation scale); Blood pressure; Pulse rate; Respiratory rate; Temperatures

Abbreviations: ? not reported; 6MWT; 6-minute walk test; BDI, Beck Depression Inventory; BMI, body mass index; CT, computerised tomography; DASS-21, 21-item Depression, Anxiety and Stress Scale; DVT, deep vein thrombosis; HDLC, high-density lipoprotein cholesterol; hr, hour; LDLC, low-density lipoprotein cholesterol; MCA, Montreal Cognitive Assessment; MRI, magnetic resonance imaging; PSQI, Pittsburgh Sleep Quality Index; SF-12, 12-Item Short-Form Health Survey; STAI, State-Trait Anxiety Inventory; wks., weeks

## C4.2 Supplementary overview of acupressure

This appendix documents the studies that met the prespecified inclusion criteria for a systematic review of systematic reviews on the effect of acupressure for preventing and treating any health condition but outcome data from the review is not yet available.

A list of ongoing systematic reviews (by ICD-11 disease category) is provided in Table C-14.

**Table C-14 Overview of ongoing systematic reviews (by ICD-11 Category): Acupressure**

Disease Category	Review ongoing	Review complete, not published	Review discontinued	Review withdrawn	TOTAL
02 Neoplasms	1	0	0	0	1
07 Sleep-wake disorders	2	0	0	0	2
08 Diseases of the nervous system	1	0	0	0	1
11 Diseases of the circulatory system	1	0	0	0	1
16 Diseases of the genitourinary system	2	0	0	0	2
21 Symptoms, signs or clinical findings, NEC	2	0	0	0	2
24 Factors influencing health status or contact with health services	2	0	0	0	2
<b>Grand Total</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>

Abbreviations: NEC, not elsewhere classified

**Table C-15 List of ongoing studies (by ICD-11 Category): Acupressure**

REVIEW ID	Registry	Status	ICD-11 Category	POPULATION	INTERVENTION	COMPARATOR1 (inactive)	COMPARATOR2 (active)	CO- INTERVENTION	OUTCOME/S
<b>Hu 2019 (113)</b>	CRD42019125 538	Ongoing	02 Neoplasms	Cancer (undergoing treatment)	Acupoint therapies, including acupuncture, acupressure, acupoints injection, massage and moxibustion	Control (not specified)	--	--	Severity; Duration and frequency of nausea or vomiting
<b>Dong-Jie 2018 (114)</b>	CRD42018104 155	Ongoing	07 Sleep-wake disorders	Insomnia	Acupressure and auricular acupuncture	Control (placebo/sham or any other intervention)	--	--	Sleep efficiency; Sleep onset latency; Wake after sleep onset; Sleep time; Adverse events
<b>Wu 2018 (115)</b>	CRD42018104 155	Ongoing	07 Sleep-wake disorders	Insomnia	Acupressure	Control (not specified)	--	--	Sleep quality
<b>Chen 2017 (116)</b>	CRD42014013 296	Ongoing	08 Diseases of the nervous system	Post stroke spasticity	Acupoint stimulation (including acupressure or acupuncture)	Control (placebo/sham or no intervention)	--	--	Ashworth scale; Modified Tardieu Scale ; Fugel- Mayer Motor Assessment; Activities of daily living ; Barthel Index; QoL; Brunnstrom recovery stages; Neurological deficit; Adverse events
<b>Jiang 2021 (117)</b>	OSF: 10.17605/OSF.I O/VNXWE	Ongoing	11 Diseases of the circulatory system	Angina pectoris	Acupoint therapies, including acupuncture, acupressure, acupoints injection, massage and moxibustion	Control (not specified)	--	--	Pain; Disability/function ; QoL; Adverse events
<b>QiuJun 2020 (118)</b>	DOI 10.17605/OSF.I O/VZCKU	Ongoing	16 Diseases of the genitourinary system	Perimenopause	Acupuncture or acupressure (subgroup)	Control (not specified)	--	--	Flushes per 24 hours; Frequency of hot flashes; Severity of hot flashes; Menopause-related symptom score; Treatment efficacy; Adverse events
<b>Zhu 2020 (119)</b>	OSF: DOI 10.17605/OSF.I O/H7KQJ	Ongoing	16 Diseases of the genitourinary system	Prostatitis	Acupoint therapies, including massage, acupuncture, acupoints injection, acupressure and moxibustion	Control (not specified)	--	--	Effective rate; Quality of life ; Cure rate; Recurrence rate; Complication

REVIEW ID	Registry	Status	ICD-11 Category	POPULATION	INTERVENTION	COMPARATOR1 (inactive)	COMPARATOR2 (active)	CO- INTERVENTION	OUTCOME/S
<b>Haiyang 2020 (120)</b>	OSF: DOI 10.17605/OSF.I O/4H3Y9	Ongoing	21 Symptoms, signs or clinical findings, NEC	Chronic low back pain	TCM or other non- pharmacological interventions	Control (not specified)	--	--	Pain intensity; Disability/function ; Global improvement; QoL; Treatment satisfaction; Adverse events
<b>Zhao 2015 (121)</b>	Cochrane: CD011508	Ongoing	21 Symptoms, signs or clinical findings, NEC	Post-operative recovery (urinary retention)	Conservative measures (e.g. behavioural therapies, bladder massage, warm bath, meridian massage, acupuncture, acupressure, warm needling or moxibustion)	Control (not specified)	--	--	Urinary retention; Adverse events
<b>Yang 2019 (122)</b>	CRD42019135 598	Ongoing	24 Factors influencing health status or contact with health services	Post-operative recovery (nausea and vomiting)	Acupressure PC6 point	Control (not specified)	--	--	Nausea and vomiting; Use of emergency drugs; Adverse events
<b>Hersi 2019 (123)</b>	CRD42018099 691, CRD42018099 692	Ongoing	24 Factors influencing health status or contact with health services	Smoking cessation	Any intervention (including acupressure and other alternative therapies)	Control (not specified)	--	--	Tobacco use abstinence; Reduction in smoking; Relapse; QoL; Adverse events; Weight gain; Negative emotional changes; Negative social changes

Abbreviations: NEC, not elsewhere classified

## C5 Systematic reviews of acupressure not included in the synthesis (no analogous shiatsu population)

The primary purpose of this report is to assess the effectiveness of shiatsu, with supplementary information about acupressure included as a component of shiatsu. This appendix documents the studies that met the prespecified inclusion criteria for a systematic review of systematic reviews on the effect of acupressure for preventing and treating any health condition, but the systematic review was not included in the synthesis as there was no analogous shiatsu population.

A list of systematic reviews (by ICD-11 disease category) is provided in Table C-16.

**Table C-16 Overview of systematic reviews of populations not included in the synthesis (no analogous shiatsu population)**

REVIEW ID	DESIGN FEATURE	ICD-11 Category	POPULATION	Eligible Study IDs	Population of eligible studies	Outcomes reported
<b>Chao 2009 (124)</b>	individual studies	02 Neoplasms	Cancer, breast (undergoing treatment)	Dibble 2007; Molassiotis 2007; Dibble 2000	Breast (on treatment)	
<b>Ezzo 2005 (125, 126)</b>	individual studies	02 Neoplasms	Cancer, any (undergoing treatment)	Dibble 2000; Noga 2002; Roscoe 2003	Mixed	Nausea, vomiting,
<b>Gupta 2021 (127)</b>	individual studies	02 Neoplasms	Cancer, advanced (adults >18 yrs.)	Dogan 2020	Lung cancer (advanced, on chemo)	Breathlessness (6-min. walk test)
<b>Harvie 2019 (128)</b>	Umbrella review: individual studies	02 Neoplasms	Cancer, breast (undergoing treatment)	Dibble 2007; Lee 2010	Breast (on treatment)	
		02 Neoplasms	Cancer, any (adults >18 yrs.)	Zick 2016; Hughes 2015	Breast, on treatment	Fatigue, Sleep
<b>Klein 2004 (129)</b>	narrative	02 Neoplasms	Cancer, any (undergoing treatment)	Dibble 2000; Roscoe 2003	Breast, blood	Nausea, vomiting,
<b>Lau 2016 (130)</b>	individual studies	02 Neoplasms	Cancer, advanced (adults >18 yrs.)	Tang 2014	Lung cancer (advanced, on chemo)	
<b>Lee 2011c (131)</b>	Umbrella review: individual studies	02 Neoplasms	Cancer, any (undergoing treatment)	Roscoe 2003; Molassiotis 2007; Dibble 2000; Roscoe 2009	Mixed, mainly breast (& acustimulation bands)	Nausea, vomiting
<b>Liu 2017b (132)</b>	individual studies	02 Neoplasms	Cancer, any (undergoing treatment)	Chao 2013; Hsiung 2015	Gastric, Colorectal cancer	Recovery of bowel function
<b>Lofti-Jam 2008 (133)</b>	individual studies	02 Neoplasms	Cancer, any (undergoing treatment)	Roscoe 2003; Dibble 2000; Roscoe 2006; Roscoe 2005; Roscoe 2002	Mixed, mainly breast (& acustimulation bands)	Nausea, vomiting, bowel issues, fatigue, hair loss, mucositis
<b>Miao 2017 (134)</b>	meta-analysis	02 Neoplasms	Cancer, any (undergoing treatment)	Dibble 2000; Noga 2002; Roscoe 2002; Roscoe 2003; Treish 2003; Roscoe 2005; Molassiotis 2007; Suh 2012; Wu 2012; Molassiotis 2013; Kaur 2015; Min. 2015	Mixed, mainly breast (& acustimulation bands)	Nausea, vomiting
<b>Robinson 2011 (22)</b>	Umbrella review: narrative	02 Neoplasms	Cancer, any (undergoing treatment)	Dibble 2007; Shin 2004 (NRSI); Ezzo 2006	Mixed, mainly breast (& acustimulation bands)	Nausea, vomiting
<b>Song 2015 (135)</b>	Umbrella review: narrative	02 Neoplasms	Cancer, stomach (undergoing treatment)	Shin 2004 (NRSI)	Stomach cancer (on chemo)	Nausea, vomiting

REVIEW ID	DESIGN FEATURE	ICD-11 Category	POPULATION	Eligible Study IDs	Population of eligible studies	Outcomes reported
<b>Tan 2015 (136)</b>	Umbrella review; individual studies	02 Neoplasms	Cancer, any (undergoing treatment)	Dibble 2007	Breast cancer (on chemo)	Nausea, vomiting
		02 Neoplasms	Cancer, advanced (adults >18 yrs.)	Tang 2014	Lung cancer (advanced, on chemo)	Fatigue
		02 Neoplasms	Cancer, any (undergoing treatment)	Bao 2011; Molassiotis 2013; Suh 2012	Mixed	Fatigue, Pain, Nausea, vomiting
<b>Waits 2018 (137)</b>	Umbrella review: individual studies	02 Neoplasms	Cancer, lung (undergoing treatment)	Tang 2014	Lung cancer (advanced, on chemo)	Sleep quality
<b>Wang 2016 (138)</b>	individual studies	02 Neoplasms	Cancer, any (children, adults)	Tang 2014	Lung cancer (advanced, on chemo)	Anxiety, depression, sleep quality
<b>Zeng 2018 (139)</b>	individual studies	02 Neoplasms	Cancer, any (palliative care)	Perkins 2008	Not specified (terminal)	Nausea, vomiting, pain
<b>Yeung 2012 (140)</b>	Umbrella review: individual studies	05 Endocrine, nutritional and metabolic diseases	Any clinical condition	Feng 2007	Hyperthyroidism	Sleep quality
<b>Au 2015 (141)</b>	meta-analysis	06 Mental and behavioural disorders	21 Symptoms of anxiety	Agarwal 2005; Barker 2006; Kober 2003; Mansoorzadeh 2014; Mora 2007; Valiee 2012; Wang 2005	Mixed (presurgical, emergency setting, healthy adults of preoperative children)	Anxiety
<b>Cheuk 2011 (142)</b>	meta-analysis	06 Mental and behavioural disorders	Neurodevelopmental	Zhou 2008; Chan 2009	autism spectrum disorders	
<b>Hmwe 2016 (143)</b>	Umbrella review: individual studies	06 Mental and behavioural disorders	Mood disorder (>65 years)	Lu 2013	Psychogeriatric inpatients from psychiatric hospital	Sleep quality (PSQI, Actigraphy)
<b>Hmwe 2019 (144)</b>	Umbrella review: individual studies	06 Mental and behavioural disorders	Mood disorder (>65 years)	Lu 2013	Psychogeriatric inpatients from psychiatric hospital	Sleep quality (PSQI, Actigraphy)
<b>Lee 2011b (145)</b>	individual studies	06 Mental and behavioural disorders	Neurodevelopmental	Zhou 2008	Autism spectrum disorders	
<b>Lv 2015 (146)</b>	individual studies	06 Mental and behavioural disorders	Nocturnal enuresis (children)	Yukse 2003		
<b>Robinson 2011 (22)</b>	narrative	06 Mental and behavioural disorders	21 Symptoms of anxiety	Agarwal 2005	Preoperative anxiety	
		06 Mental and behavioural disorders	Nocturnal enuresis (children)	Yukse 2003		
<b>Tan 2015 (136)</b>	Umbrella review: individual studies	06 Mental and behavioural disorders	21 Symptoms of anxiety	Vallee 2012; Wang 2008; Wang 2005	Preoperative	Anxiety, HR, RR, Blood pressure
<b>Tsitsi 2014 (147)</b>	individual studies	06 Mental and behavioural disorders	21 Symptoms of anxiety	Mehling 2012	healthy adults of preoperative children	Anxiety

REVIEW ID	DESIGN FEATURE	ICD-11 Category	POPULATION	Eligible Study IDs	Population of eligible studies	Outcomes reported
<b>Waits 2018 (137)</b>	Umbrella review: individual studies	06 Mental and behavioural disorders	Mood disorder (>65 years)	Lu 2013		Sleep quality (PSQI, Actigraphy)
<b>White 2014 (148)</b>	individual studies	06 Mental and behavioural disorders	Substance abuse, nicotine	White 2007	Smoking cessation	
<b>Yeung 2012 (140)</b>	Umbrella review: individual studies	06 Mental and behavioural disorders	Any clinical condition	Wang 2007	Mood disorder, depression (outpatients)	Sleep quality
<b>Hu 2015 (149)</b>	individual studies	08 Diseases of the nervous system	Epilepsy	Wei 2013		normalisation of EEG
<b>Robinson 2011 (22)</b>	Umbrella review: narrative	08 Diseases of the nervous system	Neurological patients	Chen 2006	Parkinson's, MS, Stroke? (not in English [Chinese])	Gastrointestinal motility
		08 Diseases of the nervous system	Postviral fatigue syndrome	Yao 2007		
<b>Tan 2015 (136)</b>	Umbrella review: individual studies	08 Diseases of the nervous system	21 Vertigo (acute)	Alessandrini 2012		
<b>Harvie 2019 (128)</b>	Umbrella review: individual studies	11 Diseases of the circulatory system	Ischaemic heart disease	Bergman 2014		Stress, depression, HRQoL
<b>Lee 2011c (131)</b>	Umbrella review: individual studies	11 Diseases of the circulatory system	Myocardial infarction (acute)	Dent 2003		Nausea, vomiting, antiemetic use
<b>Robinson 2011 (22)</b>	Umbrella review: narrative	11 Diseases of the circulatory system	Angina, peripheral arterial occlusive disease	Ballegaard 2004; Li 2007	Angina, peripheral arterial occlusive disease	transcutaneous oximetry
<b>Tan 2015 (136)</b>	Umbrella review: individual studies	11 Diseases of the circulatory system	Myocardial infarction (acute)	Dent 2003		Nausea, vomiting, antiemetic use
<b>Wang 2017 (150)</b>	Umbrella review: individual studies	11 Diseases of the circulatory system	Any clinical condition	Yang 2015	hospitalised patients with coronary heart disease	HAM-A, clinical effect for insomnia
<b>Fernández-Jané 2020 (151)</b>	individual studies	12 Diseases of the respiratory system	COPD	Wu 2004; Wu 2007; Maa 1997; Guo 2017; Huang 2018; Wu 2017; Xu 2018; Tsay 2005; Cao 2012; Li 2017		Dyspnoea, Anxiety, Depression
<b>Hmwe 2019 (144)</b>	Umbrella review: individual studies	12 Diseases of the respiratory system	COPD	Wu 2007; Wu 2004; Tsay 2005		Anxiety, Depression
<b>Lee 2011c (131)</b>	Umbrella review: individual studies	12 Diseases of the respiratory system	Asthma, chronic	Maa 2003		Dyspnoea, Borg scale, St George Resp. Q, Symptom checklist
		12 Diseases of the respiratory system	Bronchiectasis	Maa 2007		Dyspnoea, sputum volume, 6-min. walk test, St George respiratory questionnaire

REVIEW ID	DESIGN FEATURE	ICD-11 Category	POPULATION	Eligible Study IDs	Population of eligible studies	Outcomes reported
		12 Diseases of the respiratory system	COPD	Wu 2004; Tsay 2005		Dyspnoea, Anxiety, Depression, Pulmonary function, RR, HR, 6-min. walk test
<b>Liang 2017 (152)</b>	Umbrella review: narrative	12 Diseases of the respiratory system	Asthma	Gan 2013; Maa 2003	chronic & bronchial asthma	
		12 Diseases of the respiratory system	Allergic rhinitis	Chen 2015; Liu 2014		
<b>Robinson 2011 (22)</b>	Umbrella review: narrative	12 Diseases of the respiratory system	Asthma, chronic	Maa 2003		
		12 Diseases of the respiratory system	Bronchiectasis	Maa 2007		
		12 Diseases of the respiratory system	COPD	Maa 1997; Wu 2004; Wu 2007; Tsay 2005		
<b>Song 2015 (135)</b>	Umbrella review: narrative	12 Diseases of the respiratory system	Bronchiectasis	Maa 2007		
		12 Diseases of the respiratory system	COPD	Maa 1997		
		12 Diseases of the respiratory system	Allergic rhinitis	Xue 2011		
<b>Tan 2015 (136)</b>	Umbrella review: individual studies	12 Diseases of the respiratory system	Bronchiectasis	Maa 2007		
		12 Diseases of the respiratory system	COPD	Wu 2004; Wu 2007		
<b>von Trott 2020 (153)</b>	meta-analysis	12 Diseases of the respiratory system	COPD	Maa 1997; Wu 2004; Tsay 2005		
<b>Eachempati 2019 (154)</b>	meta-analysis	13 Diseases of the digestive system	Gag reflex, patients undergoing dental treatment	Lu 2020		
<b>Badiee Aval 2018 (155)</b>	individual studies	14 Diseases of the skin	Uraemic pruritis (due to end-stage renal disease)	Akca 2016	on dialysis	discomfort level
<b>Campbell 2020 (156)</b>	individual studies	14 Diseases of the skin	Uraemic pruritis (due to end-stage renal disease)	Jedras 2003; Akca 2016	on dialysis	
<b>Harvie 2019 (128)</b>	Umbrella review: individual studies	14 Diseases of the skin	Atopic dermatitis	Lee 2012		
<b>Song 2015 (135)</b>	Umbrella review: narrative	14 Diseases of the skin	Atopic dermatitis	Lee 2012		
<b>Vieira 2016 (157)</b>	individual studies	14 Diseases of the skin	Atopic dermatitis	Lee 2012		

REVIEW ID	DESIGN FEATURE	ICD-11 Category	POPULATION	Eligible Study IDs	Population of eligible studies	Outcomes reported
<b>Yeam 2021 (158)</b>	individual studies	14 Diseases of the skin	Uraemic pruritis (due to end-stage renal disease)	Jedras 2003	on dialysis	
<b>Harvie 2019 (128)</b>	Umbrella review: individual studies	15 Diseases of the musculoskeletal system or connective tissue	Osteoarthritis, knee	Li 2018; Zhang 2012		WOMAC-pain, VAS, WOMAC function, stiffness, SF-36
<b>Hmwe 2019 (144)</b>	Umbrella review: individual studies	15 Diseases of the musculoskeletal system or connective tissue	Knee pain (chronic)	Tse 2010	presumed osteoarthritis, study not available online	
<b>Tang 2019 (159)</b>	individual studies	15 Diseases of the musculoskeletal system or connective tissue	Osteoarthritis, knee	Li 2018		
<b>Yeung 2012 (140)</b>	Umbrella review: individual studies	15 Diseases of the musculoskeletal system or connective tissue	Any clinical condition	Yu 2007	Cervical spondylosis	Sleep quality
<b>Alencar Melo 2020 (160)</b>	individual studies	16 Diseases of the genitourinary system	Chronic kidney disease	Sabouhi 2013		Symptom management
<b>Armour 2018 (161)</b>	individual studies	16 Diseases of the genitourinary system	Premenstrual syndrome or premenstrual dysphoric disorder	Bazarganipour 2017		
<b>Cao 2009 (162)</b>	Umbrella review: individual studies	16 Diseases of the genitourinary system	Chronic kidney disease	Tsay 2003; Tsay 2004		Sleep quality, SF-36, Fatigue, BDI
<b>Dehghanmehr 2017 (163)</b>	narrative	16 Diseases of the genitourinary system	Chronic renal failure	not clear		
<b>Ebrahimi 2020 (164)</b>	individual studies	16 Diseases of the genitourinary system	Menopausal women	Armand 2017; Ahmadienezhad 2017; Abedian 2015; Jokar 2017		Symptom management
<b>Hmwe 2016 (143)</b>	Umbrella review: individual studies	16 Diseases of the genitourinary system	Chronic kidney disease	Tsay 2003; Tsay 2008; Nasiri 2011; Shariati 2012	on dialysis	Sleep quality
<b>Kim 2010 (165)</b>	narrative	16 Diseases of the genitourinary system	Chronic kidney disease	Tsay 2003a; Tsay 2003b; Tsay 2004; Cho 2004; Dai 2007; Zhu 2006; Jedras 2003	end-stage	Symptom management
<b>Kim 2016 (166)</b>	meta-analysis	16 Diseases of the genitourinary system	Chronic kidney disease	Cho 2004; Dai 2007; Jedras 2003; Shariati 2002; Tsay 2003a; Tsay 2004a; Tsay 2004b		Symptom management
<b>Kondo 2020 (167)</b>	meta-analysis	16 Diseases of the genitourinary system	Chronic kidney disease	Kalani 2019; Tsay 2004	end-stage	Depression
<b>Lee 2011c (131)</b>	Umbrella review: individual studies	16 Diseases of the genitourinary system	Chronic kidney disease	Tsay 2003; Tsay 2004; Cho 2004		
<b>Natale 2018 (168-170)</b>	meta-analysis	16 Diseases of the genitourinary system	Chronic kidney disease	Arab 2016; Dai 2007; Shariati 2012; SIESTA 2017; Tsay 2003; Tsay 2004; Zhao 2011; Zou 2015		

REVIEW ID	DESIGN FEATURE	ICD-11 Category	POPULATION	Eligible Study IDs	Population of eligible studies	Outcomes reported
<b>Robinson 2011 (22)</b>	Umbrella review: narrative	16 Diseases of the genitourinary system	Chronic kidney disease	Cho 2004; Tsay 2003; Tsay 2003; Tsay 2004; Tsay 2004		Symptom management
<b>Tan 2015 (136)</b>	Umbrella review: individual studies	16 Diseases of the genitourinary system	Chronic kidney disease	Tsay 2003		Symptom management
		16 Diseases of the genitourinary system	Urinary incontinence (stress)	Chang 2011		
<b>Waits 2018 (137)</b>	Umbrella review: individual studies	16 Diseases of the genitourinary system	Chronic kidney disease	Arab 2015; Shariati 2012; Tsay 2003	on dialysis	Sleep quality
		16 Diseases of the genitourinary system	Menopausal women (PSQI >5)	Abedian 2015		Sleep quality
<b>Wang 2020 (171)</b>	meta-analysis	16 Diseases of the genitourinary system	Chronic kidney disease	Tsay 2003; Tsay 2004; Nasiri 2011; Shariati 2012; Zou 2015; Arab 2016; Shen 2017	on dialysis	Sleep quality
<b>Wen 2020 (172)</b>	meta-analysis	16 Diseases of the genitourinary system	Chronic kidney disease	Tsay 2004; Tsay 2004a; Cho 2004; Hmwe 2015	on dialysis	Depression
<b>Yang 2015 (173)</b>	individual studies	16 Diseases of the genitourinary system	Chronic kidney disease	Tsay 2003; Tsay 2004; Tsay 2004a	on dialysis	Sleep quality
<b>Yeung 2012 (140)</b>	Umbrella review: individual studies	16 Diseases of the genitourinary system	Any clinical condition	Dai 2007; Tsay 2003; Tsay 2004	Chronic kidney disease	Sleep quality
<b>Crepinsek 2020 (174)</b>	meta-analysis	18 Pregnancy, childbirth or the puerperium	Breastfeeding mothers (with infective mastitis)	He 2018		
<b>Chaillet 2014 (175)</b>	individual studies	18 Pregnancy, childbirth or the puerperium	Pregnant women	Hjelmstedt 2010; Chung 2003	Active labour	pain management
<b>Chen 2014 (176)</b>	Umbrella review: individual studies	18 Pregnancy, childbirth or the puerperium	Pregnant women	Chung 2003; Hjelmstedt 2010; Lee 2004	Active labour	pain management
<b>Chen 2020b (177)</b>	meta-analysis	18 Pregnancy, childbirth or the puerperium	Pregnant women	Akbarzadeh 2014; Calik 2014; Chung 2003; Dabiri 2014; Hamidzadeh 2012; Hamlaci 2017; Hjelmstedt 2010; Kashanian 2010; Lee 2004; Mafetoni 2016; Ozgoli 2016; Sehhatie-Shafaie 2013; Wan 2016	Active labour	pain management

REVIEW ID	DESIGN FEATURE	ICD-11 Category	POPULATION	Eligible Study IDs	Population of eligible studies	Outcomes reported
<b>Karimi 2020 (178)</b>	meta-analysis	18 Pregnancy, childbirth or the puerperium	Pregnant women	Hamid 2012; Akbarzadeh 2014; Akbarzadeh 2015; Chung 2003; Daibiri 2014; Gonenc 2019; Hamidzadeh 2012; Hamlaci 2017; Heidari 2008; Hjelmstedt 2010; Hosseinpour 2012; Kashanian 2010; Kordi 2010; Lee 2004; Mafetoni 2016; Ozgoli 2016; Salehian 2011; Samadi 2010; Sebastian 2014; Sehhatie 2013; Turkmen 2019; Yesilcicek Calik 2014	Active labour	pain management
<b>Lee 2011c (131)</b>	Umbrella review: individual studies	18 Pregnancy, childbirth or the puerperium	Pregnant women	Chung 2003; Lee 2004	Active labour	pain management
		18 Pregnancy, childbirth or the puerperium	Pregnant women	Norheim 2001; Werntoft 2001; Habek 2004; Heazell 2006; Shin 2007; Jamigorn 2007	Early pregnancy (<20 wks)	treatment of nausea and vomiting
<b>Mascarenhas 2019 (179)</b>	narrative	18 Pregnancy, childbirth or the puerperium	Pregnant women	Yildirim 2018; Hamlaci 2017; Mafetoni 2016; Dabiri 2014	Active labour	pain management
<b>Raana 2020 (180)</b>	meta-analysis	18 Pregnancy, childbirth or the puerperium	Pregnant women	Chung 2003; Lee 2004; Kashanian 2009; Hjelmstedt 2010; Hamidzadeh 2012; Sehhatie-Shafaie 2013; Dabiri 2014; Mafetoni 2016; Ozgoli 2016; Hamlazi 2017	Active labour	pain management
<b>Festin 2014 (181)</b>	individual studies	18 Pregnancy, childbirth or the puerperium	Pregnant women	Rad 2012; Werntoft 2001; Norheim 2001; Puangsricharern 2008; Shin 2007; Matthews 2010; Jamigorn 2007	Early pregnancy (<20 wks)	treatment of nausea and vomiting
<b>Helmreich 2006 (182)</b>	meta-analysis	18 Pregnancy, childbirth or the puerperium	Pregnant women	Dundee 1998; Belluomini 1994; Habek 2004; Norheim 2001; Wentoft 2001	Early pregnancy (<20 wks)	prevention of nausea and vomiting
<b>Matthews 2015 (183)</b>	meta-analysis	18 Pregnancy, childbirth or the puerperium	Pregnant women	Belluomini 1994; Khavandizadeh 2010; Norheim 2001; O'Brien 1996; Werntoft 2001; Jamigorn 2007; Saberi 2014; Rad 2012	Early pregnancy (<20 wks)	treatment of nausea and vomiting
<b>O'Donnell 2016 (184)</b>	individual studies	18 Pregnancy, childbirth or the puerperium	Pregnant women	Saberi 2013; Bayreuther 1994; Belluomini 1994; Can Gurkan 2008; Jheazell 2006; Hsu 2003; Steele 2001; Werntoff 2001; Jamigorn 2007; Naeimi Rad 2012	Early pregnancy (<20 wks)	treatment of nausea and vomiting
<b>Ozgoli 2018 (185)</b>	individual studies	18 Pregnancy, childbirth or the puerperium	Pregnant women	Forouhari 2014; Tadion 2000; Aga-miri 2008; Saberi 2012; Nurani 2011; Ozgoli 2008	Early pregnancy (<20 wks)	treatment of nausea and vomiting
<b>Robinson 2011 (22)</b>	Umbrella review: narrative	18 Pregnancy, childbirth or the puerperium	Pregnant women	Chung 2003; Lee 2004	Active labour	pain management
		18 Pregnancy, childbirth or the puerperium	Pregnant women	Markose 2004; Shin 2007	early pregnancy (<20 wks)	treatment of nausea and vomiting

REVIEW ID	DESIGN FEATURE	ICD-11 Category	POPULATION	Eligible Study IDs	Population of eligible studies	Outcomes reported
<b>Tan 2015 (136)</b>	Umbrella review: individual studies	18 Pregnancy, childbirth or the puerperium	Pregnant women	Sehhatie-Shafaie 2013; Hamidzadeh 2012; Kashaninan 2010; Hjelmstedt 2010; Lee 2004	Active labour	pain management, labour duration and mode
		18 Pregnancy, childbirth or the puerperium	Pregnant women	Rad 2012; Belluomini 1994; Sinha 2011; O'Brien 1996; Bayreuther 199; Norheim 2001; Steele 2001; Woods 1999; Duggal 1998; Lewis 1991; Shin 2007	Early pregnancy (<20 wks)	treatment of nausea and vomiting, including Hyperemesis Gravidarum
<b>Zakarija-Grkovic 2020 (186)</b>	individual studies	18 Pregnancy, childbirth or the puerperium	Breastfeeding mothers	Kamali Moradzade		lactation, breast engorgement
<b>Abou-Setta 2011 (187, 188)</b>	individual studies	22 Injury, poisoning or certain other consequences of external causes	Fracture, hip	Baker 2006	Hip fracture	Pain management
<b>Chen 2014 (176)</b>	individual studies	22 Injury, poisoning or certain other consequences of external causes	Acute injury (minor trauma, fracture)	Kober 2002; Lang 2007	prehospital minor trauma/contusions, fracture	Pain (VAS), Anxiety (VAS), HR, BP
<b>Chou 2020 (189)</b>	Umbrella review: individual studies	22 Injury, poisoning or certain other consequences of external causes	Acute injury (ankle sprain)	Zhao 2018	ankle sprain	Pain (VAS), SF-36 physical, SF-36 mental
<b>Kim 2014 (190)</b>	meta-analysis	22 Injury, poisoning or certain other consequences of external causes	Acute injury (ankle sprain)	Chen 2012		
<b>Lee 2011c (131)</b>	Umbrella review: individual studies	22 Injury, poisoning or certain other consequences of external causes	Acute injury (minor trauma, fracture)	Lang 2007; Kober 2002		
<b>Robinson 2011 (22)</b>	Umbrella review: narrative	22 Injury, poisoning or certain other consequences of external causes	Acute injury (minor trauma, fracture)	Lang 2007; Kober 2002		
<b>Tan 2015 (136)</b>	Umbrella review: individual studies	22 Injury, poisoning or certain other consequences of external causes	Acute injury (minor trauma, fracture)	Kober 2002; Lang 2007	prehospital minor trauma/contusions, fracture	

REVIEW ID	DESIGN FEATURE	ICD-11 Category	POPULATION	Eligible Study IDs	Population of eligible studies	Outcomes reported
		22 Injury, poisoning or certain other consequences of external causes	Acute injury (with motion sickness)	Bertalanffy 2004	prehospital trauma, geriatric	Sympathetic activity, nausea
		22 Injury, poisoning or certain other consequences of external causes	Traumatic Brain Injury	McFadden 2011		Cognitive impairment and state of being
<b>Fernandez-Puerta 2021 (191)</b>	individual studies	24 Factors influencing health status or contact with health services	Caregivers, family and/or informal	Cheung 2020		Sleep quality
<b>Pan 2000 (192)</b>	narrative	24 Factors influencing health status or contact with health services	Palliative care	Brown 1992; Maa 1997	end of life, palliative care	Pain, dyspnoea, nausea and vomiting
<b>Chengwei 2020 (193)</b>	meta-analysis	24 Factors influencing health status or contact with health services	Recovery after surgery	Harmon 1999; Alkaissi 1999; Agarwal 2000; Alkaissi 2002; Turgut 2007; White 2002	abdominal, post-operative (0-24hr)	nausea and vomiting
<b>Cheong 2013 (194)</b>	meta-analysis	24 Factors influencing health status or contact with health services	Recovery after surgery	Dundee 1986; Lv 2012; Ouyang 2009; Al-Sadi 1997; Allen 1994; Boehler 2002; Harmon 2000; Klein 2004; Majholm 2011; Turgut 2004	mixed surgery types, post-operative (0-24hr)	nausea and vomiting
<b>Chou 2020 (195)</b>	individual studies	24 Factors influencing health status or contact with health services	Recovery after surgery	Felhendler 1996	knee arthroscopy, post-operative (0-24hr)	pain
<b>Cooke 2020 (196)</b>	individual studies	24 Factors influencing health status or contact with health services	Recovery after surgery	Yaghoubi 2017	Surgical ICU (CAPB)	St Mary's hospital sleep questionnaire, actigraphy
<b>Doran 2010 (197)</b>	individual studies	24 Factors influencing health status or contact with health services	Recovery after surgery	Lee 2004; Lee 1999; Samad 2003; White 2002; Coloma 2002; Schultz 2003	Mixed, post-operative (0-24hr)	nausea and vomiting
<b>Dune 2006 (198)</b>	meta-analysis	24 Factors influencing health status or contact with health services	Recovery after surgery	Chu 1998; Schlager 2000; Lewis 1991	Eye surgery (children), post-operative (0-24hr)	nausea and vomiting

REVIEW ID	DESIGN FEATURE	ICD-11 Category	POPULATION	Eligible Study IDs	Population of eligible studies	Outcomes reported
<b>Lee 2015 (199)</b>	meta-analysis	24 Factors influencing health status or contact with health services	Recovery after surgery	Adib-Hajbaghery 2013; Agarwal 2000; Alkaissi 1999; Alkaissi 2002; Allen 1994; Barsoum 1990; Direkvand-Moghadam 2013; Duggal 1998; Ebrahim Soltani 2010; Ferrara-Love 1996; Gieron 1993; Harmon 1999; Harmon 2000; Ho 1996; Iqbal 2012; Klein 2004; Lewis 1991; Majholm 2011; Nilsson 2015; Sadighha 2008; Samad 2003; Schultz 2003; Turgut 2007; White 2012	mixed surgery types, post-operative (0-24hr)	nausea and vomiting
<b>Lee 1999 (200)</b>	individual studies	24 Factors influencing health status or contact with health services	Recovery after surgery	Barsoum 1990; Lewis 1991; Gieron 1993; Allen 1994; Ho 1996; Fan 1997	mixed surgery types, post-operative (0-24hr)	nausea and vomiting
<b>Lee 2011c (131)</b>	Umbrella review: individual studies	24 Factors influencing health status or contact with health services	Recovery after surgery	Harmon 2000; Agarwal 2000; Alkaissi 2002; Ming 2002; Agarwal 2002; Schultz 2003; Samad 2003; Klein 2004; Ho 2006; Turgut 2007; Sadighha 2008; Sakurai 2003	mixed surgery types, post-operative (0-24hr)	nausea and vomiting
<b>Liu 2015 (201)</b>	meta-analysis	24 Factors influencing health status or contact with health services	Recovery after surgery	Chen 2015; Sakurai 2003; Felhendler 1996; Adib-Hajbaghery 2013	mixed surgery types, post-operative (0-24hr)	pain, anxiety, nausea and vomiting
<b>Liu 2017a (202)</b>	meta-analysis	24 Factors influencing health status or contact with health services	Recovery after surgery,	Duggal 1998; Boehler 2V002; Turgut 2007; Peng 2011; White 2012; Direkvand-Moghadam 2013	abdominal surgery, post-operative	Gastrointestinal motility
<b>Robinson 2011 (22)</b>	Umbrella review: narrative	24 Factors influencing health status or contact with health services	Recovery after surgery	Chen 2003	after hysterectomy	Gastrointestinal motility
<b>Shiao 2006 (203)</b>	Umbrella review: individual studies	24 Factors influencing health status or contact with health services	Recovery after surgery	Harmon 2000; Allen 1994; Harmon 1999; Alkaissi 2002; Kim 2002; Boehler 2002; Schultz 2003; Dundee 1986; Yang 1993; Barsoum 1990; Ferrara-Love 1996; Fan 1997; Agarwal 2002; Ming 2002; Sakurai 2003; Samad 2003; Agarwal 2000; Klein 2004	mixed surgery types, post-operative (0-24hr)	nausea and vomiting
<b>Sun 2008 (204)</b>	individual studies	24 Factors influencing health status or contact with health services	Recovery after surgery	Felhendler 1996	knee arthroscopy Preoperative (0-24hr)	Pain

REVIEW ID	DESIGN FEATURE	ICD-11 Category	POPULATION	Eligible Study IDs	Population of eligible studies	Outcomes reported
<b>Tan 2015 (136)</b>	Umbrella review: individual studies	24 Factors influencing health status or contact with health services	Recovery after surgery	Chen 2003; Adib-Hajbaghery 2013; Soltani 2011; Majholm 2011; Turgut 2007; Samad 2003; Alkaissi 2002; Agarwal 2000; Harmon 2000; Harmon 1999; Alkaissi 1999; Felhendler 1996; Nilsson 2015; Noroozinia 2013; Soltanzadeh 2012; White 2012; Ho 2006; Klein 2004; Schultz 2003; Chao 2013	mixed surgery types, post-operative (0-24hr)	nausea & vomiting, gastrointestinal motility
<b>Zimpel 2020 (205)</b>	meta-analysis	24 Factors influencing health status or contact with health services	Recovery after Caesarean section	Ahn 2017; Bonabi 2018; Ramezani 2016	Post-operative (0-24hr)	Pain
<b>Allen 2008 (206)</b>	individual studies	25 Prevention	Females undergoing Caesarean section	Ho 1996; Stein 1997; Duggal 1998; Harmon 2000; Ho 2006	Intra- and post-operative (0-24hr)	nausea and vomiting
<b>Griffiths 2012 (207)</b>	meta-analysis	25 Prevention	Females undergoing Caesarean section	Birnbach 1993; Duggal 1998; Habib 2006; Harmon 2000; Ho 1996; Stein 1997	Post-operative (0-24hr)	nausea and vomiting
<b>Kwon 2018 (208)</b>	individual studies	25 Prevention	People undergoing surgery	Huang 2009	With preoperative anxiety	anxiety
<b>Lee 2011c (131)</b>	Umbrella review: individual studies	25 Prevention	Women at risk of post-operative nausea and vomiting	Alkaissi 2005	simulated motion sickness	nausea and vomiting
<b>Sanliarp Zeyrek 2019 (209)</b>	narrative	25 Prevention	Acute pain (associated with IM injection)	Alavi 2007		
<b>Shiao 2006 (203)</b>	Umbrella review: individual studies	25 Prevention	Females undergoing Caesarean section	Ho 1996; Stein 1997; Duggal 1998; Harmon 2000	Intra- and post-operative (0-24hr)	nausea and vomiting
<b>Sun 2019 (210)</b>	individual studies	25 Prevention	Females undergoing breast surgery	Alcaraz 2014; Majholm 2011	Post-operative (0-24hr)	nausea and vomiting
<b>Tan 2015 (136)</b>	Umbrella review: individual studies	25 Prevention	Females undergoing Caesarean section	Ho 2006	Intraoperative	nausea and vomiting
		25 Prevention	Women at risk of post-operative nausea and vomiting	Alkaissi 2005	simulated motion sickness	nausea and vomiting

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The Research Protocol was written and developed by **HTANALYSTS** in conjunction with the NHMRC. Expert advice was provided by NTREAP and NTWC, especially in relation to intervention, study design and eligibility criteria. A methodological review of the draft protocol was conducted by Cochrane Australia.

## Contributions of authors

The Evidence Evaluation Report was written and developed by **HTANALYSTS**, with evidence synthesis (statistical analysis and GRADE) conducted by the following reviewers: Margaret Jorgensen (oversight), Aiya Taylor (lead) or Ella Connor. Expert advice was provided by NTREAP and NTWC, especially in relation to intervention, study design and eligibility criteria.

A methodological review of the draft evaluation report was conducted by Cochrane Australia.

## Declarations of interest

All named authors declare they have no financial, personal or professional interests that could be construed to have influenced the conduct or results of this systematic review.

In line with the process to establish any NHMRC committee, each committee member was asked to disclose their interests. Potential conflicts of interest among NHMRC NTWC members are lodged with the NHMRC and are available [online](#).

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