TAI CHI FOR PREVENTING AND TREATING HEALTH CONDITIONS

TECHNICAL REPORT
APPENDICES A TO C

prepared by
HTANALYSTS

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

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History

NHMRC were engaged by the Department of Health and Aged Care (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, Health Technology Analysts (**HT**ANALYSTS) was engaged to conduct a systematic review of the evidence of clinical effectiveness of Tai Chi. 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 was developed by **HT**ANALYSTS in conjunction with NHMRC, NTWC and NTREAP. It provides the appendices and supplementary data related to an evidence evaluation of the effect of Tai Chi 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).

Contents

Report information **2**

List of tables **6**

List of figures **8**

List of frameworks **9**

List of abbreviations **10**

Appendix A Searching, selection criteria and screening **11**

A1 Search methods 11

A1.1 Electronic searches 11

A1.2 Other resources 11

A1.3 Publication date 12

A1.4 Studies published in languages other than English 12

A2 Search strategy 13

A3 Search results 15

A3.1 Ovid 15

A3.2 EBSCO*Host* 17

A3.3 PEDro 17

A3.4 Cochrane 18

A3.5 PAHO Virtual Health Library 18

A3.6 PubMed 19

A4 Study selection criteria 21

A4.1 Types of studies 21

A4.2 Types of participants 21

A4.3 Types of interventions 22

A4.4 Types of outcome measures 23

A5 Selection of studies (inclusion decisions) 25

A5.1 Studies identified in the literature searches 25

A5.2 Evidence provided through the Department's public call for evidence 26

A5.3 Studies published in languages other than English 26

A5.4 Collation of studies 26

A6 Refining the research questions 34

A6.1 Population prioritisation process 34

A6.2 Outcome prioritisation process 40

A7 Summary of screening results 42

A7.1 Search of published literature 42

A7.2 Evidence provided through the Department's public call for evidence 44

Appendix B Methods of data appraisal, collection, analysis and reporting (included studies) 46

B1 Risk of bias 46

B1.1 Tools used 46

B1.2 Assessment process 47

B2 Data extraction process 48

B2.1 Data items 48

B2.2 Requests for data 49

B2.3 Transformations of data 49

B2.4 Missing outcome data 49

B3 Data analysis 50

B3.1 Measures of treatment effect 50

B3.2 Unit-of-analysis issues 51

B3.3 Risk of reporting bias across studies 51

B3.4 Data synthesis 51

B4 Evidence statements 54

B4.1 Summary of findings and certainty of the evidence 54

B4.2 Development of evidence statements 56

Appendix C Details of studies assessed at full text but not included 57

C1 Details of studies from search results excluded (not eligible) 57

C2 Details of studies provided through the Department's public call for evidence 59

C3 Citation details of studies from low and non-priority populations 60

C4 Citation details of studies awaiting classification 67

C4.1 Studies with incomplete information about the study PICO or design 68

C4.2 Studies published in languages other than English 74

C4.3 Studies not able to be retrieved 86

C4.4 Studies unable to be translated or interpreted at the title/abstract stage 87

C4.5 Studies published after the literature search date 88

C5 Citation details of ongoing studies 89

C6 Implications of missing data 100

C7 Description of studies from low and non-priority populations (not included in the synthesis) 113

C7.1 Certain infectious and parasitic diseases 113

C7.2 Disease of the immune system 113

C7.3 Endocrine, nutritional or metabolic diseases 113

C7.4 Mental, behavioural or neurodevelopmental disorders 115

C7.5 Sleep-wake disorders 116

C7.6 Disease of the nervous system 117

C7.7 Disease of the visual system 117

C7.8 Diseases of the ear or mastoid process 118
C7.9 Diseases of the digestive system 118
C7.10 Diseases of the musculoskeletal system or connective tissue 118
C7.11 Diseases of the genitourinary system 120
C7.12 Injury, poisoning or certain other consequences of external causes 121
C7.13 Factors influencing health status or contact with health services 121
C7.14 Prevention 122
C8 Studies with mixed eligible and non-eligible participants 125
C8.1 Falls prevention (excluded subset) 125
Acknowledgments 126
Contributions of authors 127
Declarations of interest 128
References 129

List of tables

Table A.1 Search results: Ovid 16

Table A.2 Search results: EBSCO*Host* 17

Table A.3 Search results: PEDro 18

Table A.4 Search results: Cochrane Central Register of Controlled Trials 18

Table A.5 Search results: PAHO 19

Table A.6 Search results: PubMed 20

Table A.7 Sample Preliminary data extraction (for prioritisation and progress checks) 27

Table A.8 Preliminary data extraction (for prioritisation and progress checks) (SAMPLE ONLY) 28

Table A.9 List of conditions (populations) (for prioritisation) 34

Table A.10 Final list of prioritised conditions (populations) 39

Table A.11 Sample outcome spreadsheet (for prioritisation) 40

Table A.12 Screening result: studies identified in the literature search and additional evidence provided through the Department's public call for evidence 43

Table A.13 Screening results: evidence provided through the Department's public call for evidence 45

Table B.1 List of informative statements to communicate results of systematic reviews . 56

Table C.1 Details of studies screened and excluded at full text (by reason for exclusion): Tai Chi 57

Table C.2 Studies with mixed populations that were excluded (both eligible and ineligible populations not reported separately): Tai Chi 57

Table C.3 Citation details of studies provided through the Department's public call for evidence with reasons: Tai Chi 59

Table C.4 Characteristics of studies not included in the data synthesis (ordered by ICD-11 Category): Tai Chi – low priority populations 60

Table C.5 Characteristics of studies not included in the data synthesis (ordered by ICD-11 Category): Tai Chi – nonpriority populations 63

Table C.6 Overview of studies awaiting classification (by ICD-11 disease category): Tai Chi 67

Table C.7 Characteristics of studies awaiting classification (by ICD-11 disease category): Tai Chi - conference abstracts, posters etc. 68

Table C.8 Characteristics of studies awaiting classification (by ICD-11 disease category): Tai Chi – studies published in languages other than English 74

Table C.9 Characteristics of studies awaiting classification (by ICD-11 disease category): Tai Chi – studies not able to be retrieved 86

Table C.10 List of studies unable to be translated or interpreted at the title/abstract stage (ordered by ICD-11 disease category): Tai Chi 87

Table C.11 List of studies published after the literature search date: Tai Chi 88

Table C.12 Overview of ongoing studies (by ICD-11 disease category): Tai Chi 89

Table C.13 Characteristics of ongoing studies (by ICD-11 Category): Tai Chi 90

Table C.14 Studies in priority populations that are eligible for the main comparison (Tai Chi vs control): studies awaiting classification and ongoing studies (with results not available or published) 100

List of figures

Figure A-1 GRADE rating scale 41

Figure A-2 Sample outcome domain and outcome measures: Tai Chi 42

List of frameworks

Framework 1 Framework for screening studies at abstract / title stage 30

Framework 2 Framework for screening studies at full text 31

Framework 3 Framework for confirming and reviewing eligible studies 32

Framework 4 Framework for refining the research questions and conducting the evidence review: Tai Chi 37

Framework 5 Framework for prioritising eligible populations for inclusion in the evidence review: Tai Chi 38

List of abbreviations

ADHD	Attention Deficit Hyperactivity Disorder
AHI	Apnoea-hypopnoea index
AS	Ankylosing spondylitis
BMI	Body mass index
BP	Blood pressure
BRISA	Regional Base of Health Technology Assessment Reports of the Americas
CBT	Cognitive Behavioural therapy
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CKD	Chronic kidney disease
COMET	Core Outcome Measures in Effectiveness Trials
COPD	Chronic Obstructive Pulmonary Disease
CVD	Cardiovascular disease
FEV_1	Forced expiratory volume in the first second
GRADE	Grading of Recommendations Assessment, Development and Evaluation
GTP	Green tea polyphenols
HRQoL	Health-related quality of life
HRV	Heart rate variability
ITT	Intent-to-treat
MCID	Minimal clinically important difference
MD	Mean difference
MDC	Minimal detectable change
NEC	Not elsewhere classified
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
NYHA	New York Heart Association
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
SD	Standard deviation
SMD	Standardised mean difference
SR	Systematic review
STEP	Simplified Tai Chi Program
TCM	Traditional Chinese medicine
TIDIER	Template for Intervention Description and Replication
WBV	Whole body vibration

Appendix A Searching, selection criteria and screening

A1 Search methods

This appendix documents the search strategy used to inform the systematic review on the effect of Tai Chi for preventing and treating any health condition.

A1.1 Electronic searches

The literature search strategy was developed in Ovid (for Embase, MEDLINE, and Emcare) based on the key element of the 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 randomised control trials (RCTs) used, as well as filters for excluding certain publication types (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 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)

Details of the search strategy and the number of hits for each database are provided in **Appendix A2**.

A1.2 Other resources

Reference lists of studies identified in priority populations 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. Grey literature was not eligible for inclusion.

A1.3 Publication date

The literature was searched up to 6 August 2020. There were no limitations on publication date, however, studies published after the systematic review literature search date were not eligible for inclusion. 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 the relevant sections of the review (e.g. '*Overall completeness and applicability of evidence*').

No studies were submitted to the Department after the literature search date.

Three ongoing studies (4 citations), conducted in people with type 2 diabetes (T2D) (7, 8), chronic insomnia (9) or chronic obstructive pulmonary disease (COPD) (10) had results published after the literature search date (see **Section C4.5**). Only one study was conducted in a priority population (people with COPD). The study examined the effectiveness of Tai Chi compared with an active intervention (wellness education program), therefore the impact of this missing data on the overall conclusions of the evidence review is negligible (see **Evidence evaluation report, Section 4.4**).

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 in **Appendix A5.3** and were listed within the '*Studies Awaiting Classification*' table (see **Appendix C4.2**).

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).

Concept: Study design limits (RCTs, not animals)

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 randomised 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.
2. case report/
3. (editorial or letter or comment or historical article).pt.
4. (animals/ or nonhuman/) not humans/
5. 2 or 3 or 4

Concept: Tai Chi

6. exp Tai Ji/ (Emtree term to be used for Embase and Emcare)
7. (tai ji or tai-ji or taiji or tai?ji).ti,ab.
8. (Tai Chi or t'ai chi or thai chi or t?ai chi).ti,ab.
9. (tai ji quan or taijiquan).ti,ab
10. (tai zi zhang or taijizhang).ti,ab.
11. (Tai Chi chuan or taichichuan).ti,ab.
12. Ai Chi.ti,ab.
13. or/6-12

Concept: evidence hierarchy for screening

14. (1 AND 13) NOT 5

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)

adj*n* 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] added to the last line of search string

The PubMed 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). The search comprises free-text terms only and replicates the free-text sets in the Embase search (converted from the Ovid syntax).

A3 Search results

This appendix documents the results of the literature search and screening for a systematic review on the effect of Tai Chi for preventing and treating any health condition. The literature search strategy was developed and conducted as described in **Appendix A1**.

A3.1 Ovid

The search for RCTs was conducted on 6 August 2020.

Databases searched were as follows:

- Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Daily and Versions(R) 1946 to August 04, 2020
- Embase Classic+Embase 1947 to 2020 August 04
- Ovid Emcare 1995 to 2020 Week 31
- APA PsycInfo 1806 to July Week 4 2020
- AMED (Allied and Complementary Medicine) 1985 to August 2020

Table A.1 Search results: Ovid

#	Searches	Medline	EMBASE	Emcare	PsycINFO	AMED
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.	3 793 669	4 637 131	1 061 759	269 120	30 579
2	case report/	2 114 182	2 608 377	448 629	22 951	8215
3	(editorial or letter or comment or historical article).pt.	2 211 417	1 792 357	605 128	0	15 144
4	(animals/ or nonhuman/) not humans/	4 689 999	6 648 460	613 009	7253	9575
5	2 or 3 or 4	8 689 062	10 702 210	1 601 476	30 200	32 719
6	exp Tai Ji/	1097	2960	1857	0	0
7	(tai ji or tai-ji or taiji or tai?ji).ti,ab.	121	177	77	24	22
8	(Tai Chi or t'ai chi or thai chi or t?ai chi).ti,ab.	1752	2473	1437	576	396
9	(tai ji quan or taijiquan).ti,ab.	44	100	42	13	19
10	(tai zi zhang or taijizhang).ti,ab.	0	0	0	0	0
11	(Tai Chi chuan or taichichuan).ti,ab.	205	245	167	66	67
12	Ai Chi.ti,ab.	26	38	17	6	8
13	6 or 7 or 8 or 9 or 10 or 11 or 12	1978	3495	2041	612	434
14	(1 and 13) not 5	1002	1617	897	214	130

A3.2 EBSCO*Host*

The search for RCTs via EBSCO*Host* was conducted on 6 August 2020.

Databases searched were as follows:

- SPORTDiscus with Full Text (inception to 6 August 2020)
- CINAHL Complete (inception to 6 August 2020)

Table A.2 Search results: EBSCO*Host*

#	Searches	SPORTDiscus	CINAHL
S1	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	267 431	2 370 365
S2	PT editorial OR PT letter OR PT comment OR PT historical article OR PT case study	39 565	1 046 384
S3	TI (tai ji OR tai-ji OR taiji OR tai?ji) OR AB (tai ji OR tai-ji OR taiji OR tai?ji)	196	64
S4	TI (tai chi OR t'ai chi OR thai chi OR t?ai chi) OR AB (tai chi OR t'ai chi OR thai chi OR t?ai chi)	1390	1834
S5	MH "Tai Chi+"	0	2114
S6	TI (tai ji quan OR taijiquan) OR AB (tai ji quan OR taijiquan)	274	31
S7	TI (tai zi zhang OR taijizhang) OR AB (tai zi zhang OR taijizhang)	0	0
S8	TI (tai chi chuan OR taichichuan) OR AB (tai chi chuan OR taichichuan)	266	135
S9	TI Ai Chi OR AB Ai Chi	142	177
S10	S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9	1768	2521
S11	S1 AND S10	367	1263
S12	S11 NOT S2	364	1218

Expanders – Apply equivalent subjects; Search modes – Boolean/Phrase

A3.3 PEDro

The search for RCTs via the Physiotherapy Evidence Database (PEDro) was conducted on 6 August 2020.

Table A.3 Search results: PEDro

#	Query	Limit	Results
1	Tai zi	Method: Clinical trial	0
2	Tai ji	Method: Clinical trial	13
3	Taijiquan	Method: Clinical trial	20
4	Tai-ji	Method: Clinical trial	13
5	Taijizhang	Method: Clinical trial	0
6	Ai chi	Method: Clinical trial	14
7	Taiji	Method: Clinical trial	8
8	Taichi	Method: Clinical trial	2
9	Taichichuan	Method: Clinical trial	0
10	Tai Chi	Method: Clinical trial	365

A3.4 Cochrane

The search for controlled clinical trials via the Cochrane Central Register of Controlled Trials (via Cochrane Library) was conducted on 7 August 2020.

Table A.4 Search results: Cochrane Central Register of Controlled Trials

#	Query	Results
1	MeSH descriptor: [Tai Ji] explode all trees	348
2	(tai ji):ti,ab,kw	373
3	(tai-ji):ti,ab,kw	365
4	(taiji):ti,ab,kw	37
5	(tai chi):ti,ab,kw	1234
6	(t'ai chi):ti,ab,kw	43
7	(tai?ji):ti,ab,kw	37
8	(t?ai chi):ti,ab,kw	1291
9	(tai ji quan):ti,ab,kw	24
10	(taijiquan):ti,ab,kw	86
11	(tai zi zhang):ti,ab,kw	0
12	(taijizhang):ti,ab,kw	0
13	(tai chi chuan):ti,ab,kw	115
14	(taichichuan):ti,ab,kw	1
15	(ai chi):ti,ab,kw	129
16	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15	1508
	Narrow by Content Type: - In Trials	1480

A3.5 PAHO Virtual Health Library

The search for RCTs via the PAHO Virtual Health Library was conducted on 6 August 2020.

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: PAHO

#	Query	Limiters/Expanders	Results
1	tai chi OR tai ji OR taiji OR tai ji quan OR taijiquan OR tai zi zhang OR taijizhang OR taichichuan OR ai chi	Title, abstract, subject	
10	AND NOT db:("Medline")	Unique identifier	168

A3.6 PubMed

The PubMed search was restricted to records not indexed for MEDLINE and to records recently added to PubMed (i.e. in-process citations and citations from journals (or parts of journals) that are not currently MEDLINE-indexed). The search comprised free-text terms only and replicates the free-text sets in the Embase search (converted from the Ovid syntax).

The search for RCTs was conducted on 6 August 2020.

Table A.6 Search results: PubMed

#	Query	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]	1 562 313
2	case report[Mesh:NoExp]	216
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]	2 366 101
4	"animals"[MeSH Terms:noexp] NOT "humans"[MeSH Terms:noexp]	4 691 061
5	#2 OR #3 OR #4	6 976 122
6	(Tai Ji[Mesh])	1099
7	("t'ai"[All Fields] AND "ji"[Title/Abstract]) OR (("tai-ji"[Title/Abstract] OR "tai-ji"[Title/Abstract]) OR "taiji"[Title/Abstract])	135
8	“tai-chi"[Title/Abstract] OR "tai-chi"[Title/Abstract] OR "t ai chi"[Title/Abstract] OR "thai chi"[Title/Abstract]	1771
9	"tai ji quan"[Title/Abstract] OR "taijiquan"[Title/Abstract]	48
10	(("tai"[All Fields] AND "zi"[All Fields]) AND "zhang"[Title/Abstract]) OR ("tai"[All Fields] AND "ji zhang"[Title/Abstract])	0
11	"tai chi chuan"[Title/Abstract] OR "taichichuan"[Title/Abstract]	188
12	"ai chi"[Title/Abstract]	144
13	#6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12	1,990
15	(#1 AND #13) NOT #5	846
16	#15 AND pubmednotmedline[sb]	116

A4 Study selection criteria

This appendix documents the criteria used to identify studies eligible for inclusion in the systematic review on the effect of Tai Chi for preventing and treating any health condition, prior to the prioritisation process.

A4.1 Types of studies

A4.1.1 Eligible studies

Eligible studies were RCTs that examined the effectiveness of Tai Chi compared to control or another intervention.

The primary study design of interest was an RCT. 'Pseudo' or 'quasi' randomised studies[1] 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. Data were analysed using methods appropriate to the study design (see **Unit-of-analysis**) (11).

NRSIs were eligible for inclusion for certain populations, settings or outcomes that may be more appropriately- or more feasibly- evaluated using NRSIs, if they also met certain criteria such as having a contemporaneous control group. Despite eligibility, no NRSIs were included in this review because the available RCT evidence was judged to suitably cover the priority populations.

A4.1.2 Ineligible studies

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 (12, 13).

A4.2 Types of participants

Studies involving people of any age with any injury, disease, medical condition or preclinical condition were eligible for inclusion; including studies of disease prevention in at-risk individuals (but not general at-risk healthy populations). 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. For the purposes of this review, 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 included a person's lifestyle choices (e.g. alcohol consumption, diet, exercise, tobacco and other drug use, etc.).

To be considered at-risk, individuals needed to be assessed by the trialists at study entry to have met a minimal threshold for being at-risk (i.e. as part of the trial eligibility criteria): 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. a study that enrolled women in the community aged over 60 years was not included in fall preventions unless the enrolment criteria specified that they had balance impairment or other risk at enrolment).

[1] 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)

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. Here, the review team sent the NHMRC an email seeking advice about the studies in question, providing details on the Population and Outcomes assessed in the study with the query attached. The NHMRC then provided advice whilst also raising the query with NTWC and ensuring there was consensus on the advice given (to be overturned if needed).

There were 3 queries raised:

- Participants have distal symmetric polyneuropathy, recruited from diabetes clinics. The outcomes assessed are balance, gait and mobility. We are querying if distal symmetric polyneuropathy is sufficient criteria to be considered at-risk of falls? *(Yes, include)*
- Participants have history of dizziness. The focus is fall-related outcomes. Would dizziness be considered sufficient criteria to be considered at-risk of falls? *(Yes, include)*
- We have several studies where participants have been enrolled based on age or are residing in a nursing home or assisted living facility. The focus is fall-related outcomes. There do not appear to be any additional enrolment criteria relating to increased falls-risk, except baseline characteristic suggest a proportion of the participants have balance impairment or mobility issues etc. Can you confirm these studies do not meet the eligibility criteria for falls prevention (mixed eligible and ineligible population) and are to be excluded? *(Yes, exclude – unless there is separate data available for the eligible population)*

Healthy participants seeking health improvement, such as general wellbeing, fitness, aesthetic improvements, resilience and cognitive or emotional intelligence were not eligible for inclusion; however, a study with eligible and ineligible populations was to be included if separate data were available for the eligible population/s.

A4.3 Types of interventions

A4.3.1 Intervention

All styles and forms of Tai Chi were eligible for inclusion and there were no limits on intensity, duration of practise or mode of delivery. This meant that any activity in the name of Tai Chi instruction that was delivered by an instructor or through other media (e.g. instructional videos) to an individual or a group of individuals, or Tai Chi that was self-practised was eligible. To allow for potential subgroup analysis (and to inform decision-making), studies were to be stratified based on whether the participants receive instructor-led Tai Chi in a group or individual setting (see **Section B3.4.3**).

There were no limits on intensity, duration of practice, or mode of delivery. Studies were included irrespective of whether the intervention was practised for ten minutes or 2 hours, or if 8- or 108- forms were practised.

Studies that include Tai Chi delivered in combination with Qigong were included, however, studies in which the sole focus was Qigong were not eligible for inclusion. Studies that include Tai Chi in combination with other forms of exercise were excluded unless the effect of Tai Chi alone could be discerned. For example, a study that Tai Chi delivered in combination with education and music therapy and compared with no intervention would be excluded, but a study of Tai Chi delivered as an adjunct to education and music therapy (i.e. both groups received education and music therapy) would be included.

A4.3.2 Comparators

There were no restrictions on comparators, noting that the evidence synthesis was focused to the main comparison of Tai Chi versus 'inactive' control (inclusive of no intervention, wait list or usual care [if considered inactive]). Studies comparing Tai Chi with other 'active' comparator (inclusive of usual care or other control if considered active) were included in an evidence inventory but no data synthesis was performed. Studies comparing different styles, forms or components of Tai Chi with one another were excluded.

To ensure judgements were consistent as to whether a comparator would be categorised as 'active' or 'inactive', the following criteria were prespecified in the protocol:

- Where usual care was poorly described or where usual care was delivered as an adjunct to Tai Chi (i.e. Tai Chi plus usual care versus usual care alone), it was considered an inactive intervention.
- Other 'active' comparators could include (but were not limited to) pharmacologic treatments, manual therapies, exercise programs or other forms of physical activity designed to improve health.
- Co-interventions (e.g. diet, education programs, lifestyle modification, or medication) could be administered to the intervention and comparison group. Studies with co-interventions were included if all arms of a study receive the same co-interventions (i.e. the effectiveness of Tai Chi is not confounded).

During the initial population prioritisation process (prior to data synthesis (see Appendix A6.1), the following definitions were outlined to ensure consistency in decision-making:

- Inactive interventions:
    - No intervention
    - Usual care not further described
    - Educational advice = simple health advice, lecture or leaflet (does not mimic the intervention in durations or number of sessions)
- Active interventions:
    - Standard medical care = any pharmacological treatment (add in relevant details)
    - Low-impact exercise = any exercise intervention that does not aim to increase heart rate (e.g. stretching, balance training)
    - Aerobic exercise = any exercise intervention that likely increases heart rate (e.g. jogging)
    - Conventional physical exercise = intervention that includes a mix of jogging, walking, stretching, strength, balance training etc.
    - Physical therapy = intervention typically involves allied health and various interventions (TENS, hotpacks etc.)
    - Non-exercise activity = any activity other than exercise to be labelled as such (e.g. music therapy, mahjong, massage, aromatherapy etc.)
    - Wellness education program = health advice (may or may not be tailored to the condition) delivered in a manner that is designed to mimic the intervention (in duration, social contact, number of visits etc.)

A4.4 Types of outcome measures

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 blood pressure for cardiovascular diseases, FEV_1 for respiratory diseases, body mass index for weight gain or loss), 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 and economic outcomes.

As there was a broad range of populations eligible for inclusion, it was not possible to prespecify eligible outcome domains (or measures). Therefore, all prespecified outcome domains (and measures) reported in each eligible RCT were listed in the '*Characteristics of included studies*' tables (See Appendix F1). Later, for each included population, outcomes were selected using a prespecified approach, with the data and results extracted for those outcome domains (or measures) identified as critical or important to the review (see **Appendix A6.2**). Prioritised outcome domains are highlighted in Appendix F1 in blue.

To avoid introducing bias, outcomes were prioritised by NTWC, who remained blinded to the characteristics (e.g. study design) or results of eligible studies to prevent any influence on decision-making.

A4.4.3 Outcome measures and timepoints of interest

There were no limits on time points (e.g. short- or long-term) or outcome measure. This meant both objective (such as clinical and laboratory assessments) and subjective measures (such as patient-reported outcome measures [PROMS]) were eligible, preferably (although not mandatory) measured using a validated tool. Outcomes reported at different timepoints 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, NTWC and Core Outcome Measures in Effectiveness Trials (COMET).

To avoid unit-of-analysis issues associated with repeated observations (see **Section B3.2**), data from a single time point was to be selected for each outcome, as determined by 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.

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 Tai Chi for preventing and treating any health condition, prior to prioritisation.

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 to Covidence (www.covidence.org), an online tool that streamlines the screening and data extraction stages of a systematic review.

Each citation (title/ abstract) was screened by a single evidence reviewer (either MI, IO, AL, RM, AM, IR, SA, 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 is provided below (Framework 2).

Full text articles identified for possible inclusion in the evidence synthesis were retrieved and assessed for inclusion by a single reviewer (either AL, IO, MI or MJ). A prespecified, hierarchical approach was used to annotate reasons for exclusion, with the results of the study selection process illustrated in a PRISMA flow. Where there was uncertainty regarding inclusion, a decision was made through discussion with the lead reviewer (MJ). The lead reviewer also reinspected approximately 40% of articles marked as excluded to ensure adherence to the *a priori* exclusion criteria, with any differences resolved by discussion. If additional expertise or advice regarding the application of the PICO criteria was required, excerpts from the publication relevant to the query (e.g. the description of intervention) were provided to NTWC for advice. NTWC remained blinded to other identifying details such as the study citation, study design or 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. One study identified for possible inclusion (14) had been retracted for fraud and plagiarism and was subsequently removed from the evidence review[2]. Eligible studies that are not available in English were noted and managed as described in the section below (see *Studies published in languages other than English)*.

[2] https://retractionwatch.com/2010/10/06/rheumatology-journal-retracts-tai-chi-arthritis-paper-over-fraud-concerns/

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 satisfy 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**). There were no eligible studies provided which were not already identified in the literature search. Studies were noted as included or excluded with a rationale for exclusion provided (See **Appendix C2**).

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 C4.2**), 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 A2). 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 C4.4**).

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 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 into specified columns (illustrated in Table A.7). 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 NTWC.

Table A.7 Sample Preliminary data extraction (for prioritisation and progress checks)

STUDY ID	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	ACTIVE CONTROL 3	CO-INTERVENTION	OUTCOME 1	OUTCOME 2	OUTCOME 3

Each Study ID was assigned an ICD-11 Category (by a member of the review team) based on the population enrolled in the study (see Figure A.2). Extracted preliminary data was assessed or checked by the project lead (MJ). The focus was to ensure the study had been assigned to the most appropriate population (P); being that which was considered the primary underlying clinical or preclinical condition, rather than the presenting symptoms or potential outcome and to ensure each study would only contribute to the synthesis for one population group.

For example, a study that assessed the effect of Tai Chi on sleep quality was assigned to ICD-11 Category 07 (Sleep-Wake Disorders) if the participants had been formally diagnosed with insomnia; but the study could be assigned to ICD-11 Category 21 (Menopausal symptom or complaint) if the participants were women in peri- or post-menopause. ICD-11 category 24 (Factors influencing health status or contact with health services) was often found useful in categorising studies among populations that didn't specifically fit a 'disease' or 'condition' (e.g. prison populations, employment conditions). Studies focused on prevention (e.g. age-related physical or cognitive decline) were grouped into a separate category labelled ICD-11 25 Prevention (noting this is not a true ICD-11 category).

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 intervention (being Tai Chi with or without Qigong), the description of the comparator (being 'inactive' or 'active') or whether there was a cointervention delivered to both treatment groups). Where Tai Chi was delivered as an adjunct to usual care (i.e. Tai Chi plus usual care versus usual care), the usual care was listed as a co-intervention and the comparator listed as Control (no intervention, waitlist, usual activities). Where Tai Chi was compared to an intervention described as usual care (i.e. Tai Chi versus usual care), a judgement was made as to whether the usual care was 'inactive' (described as Control [usual care]) or 'active'. Active 'usual care' interventions were then further described (e.g. Tai Chi versus physiotherapy [TENS, massage, stretching]).

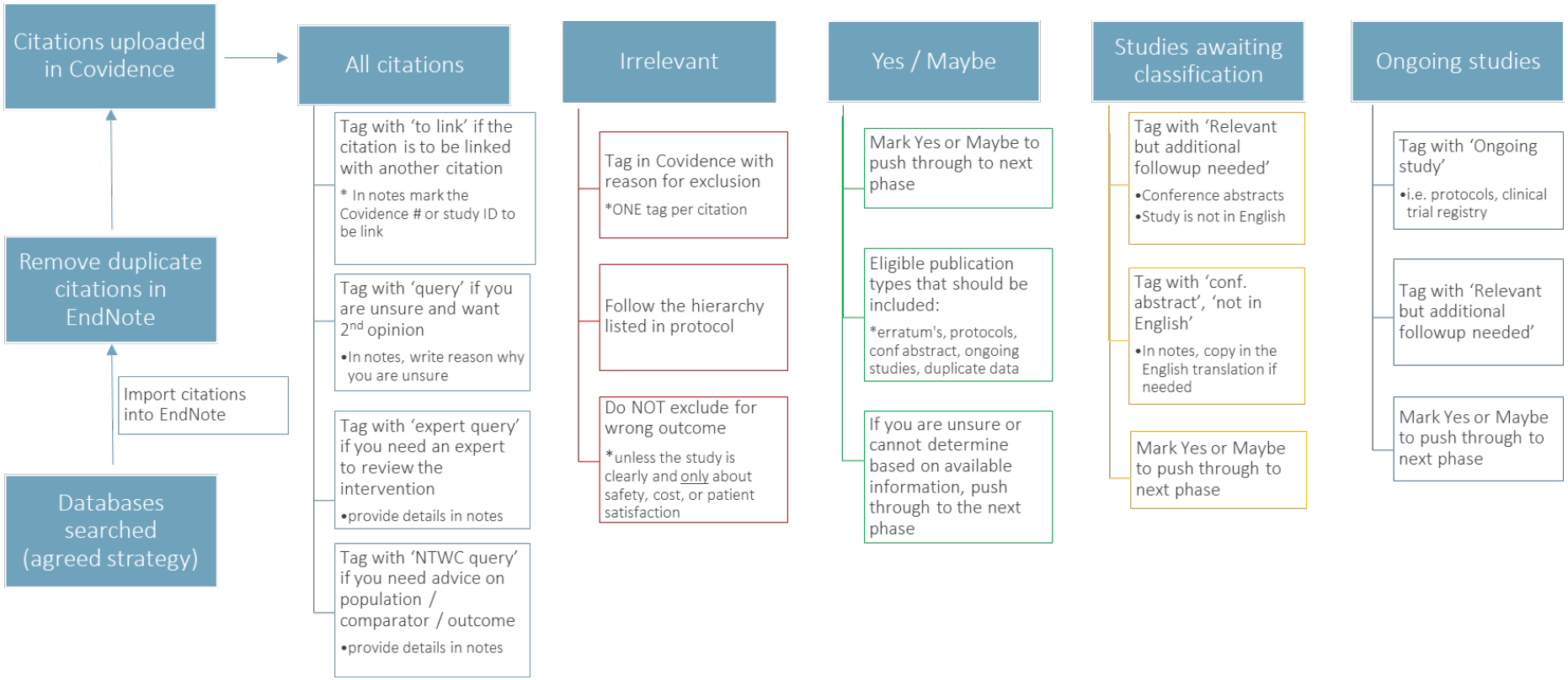
Table A.8 Preliminary data extraction (for prioritisation and progress checks) (SAMPLE ONLY)

STUDY ID	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	ACTIVE CONTROL 3	COINTERVENTION
Abbott 2007	08 Diseases of the nervous system	Headache disorders, tension type (20-65 yrs)	Tai Chi (Yang style short-form)	Control (waitlist)	--	--	--	--
Alp 2009	15 Diseases of the musculoskeletal system or connective tissue	Osteopathies, Osteoporosis (women >65 yrs)	Tai Chi (long form)	Control (no intervention)	--	--	--	Osteoporosis medications
Amano 2013	08 Diseases of the nervous system	Parkinson's disease	Tai Chi (Yang style short-form)	Control (no intervention)	Qi Gong meditation	--	--	--
Au-Yeung 2007	08 Diseases of the nervous system	Stroke recovery (chronic, with hemiplegia)	Tai Chi (Sun style short-form)	--	Low-impact exercise (breathing and stretching)	--	--	--
Aviles 2019	25 Prevention	Falls, older adults (t-score greater than -2.0, with balance impairment) at risk of...	Tai Chi (Yang style short-form)	--	Reactive balance training (treadmill-based)	--	--	--
Azimzadeh 2013	08 Diseases of the nervous system	Multiple sclerosis (women)	Tai Chi (Yang style short-form)	Control (no intervention)	--	--	--	--
Barrow 2007	11 Diseases of the circulatory system	Heart failure, chronic (NYHA class II–III)	Tai Chi (Wu Chan) & Chi Kung	Control (usual care)	--	--	--	--
Beebe 2012	05 Endocrine, nutritional and metabolic diseases	Obesity (women 55+ yrs., BMI 30+)	Tai Chi (Yang style)	Control (no intervention)	--	--	--	Wellness education program
Bongi 2016	21 Symptoms, signs or clinical findings, NEC	Chronic widespread pain, Fibromyalgia	Tai Chi Chuan	--	Attention control (wellness education program)	--	--	--

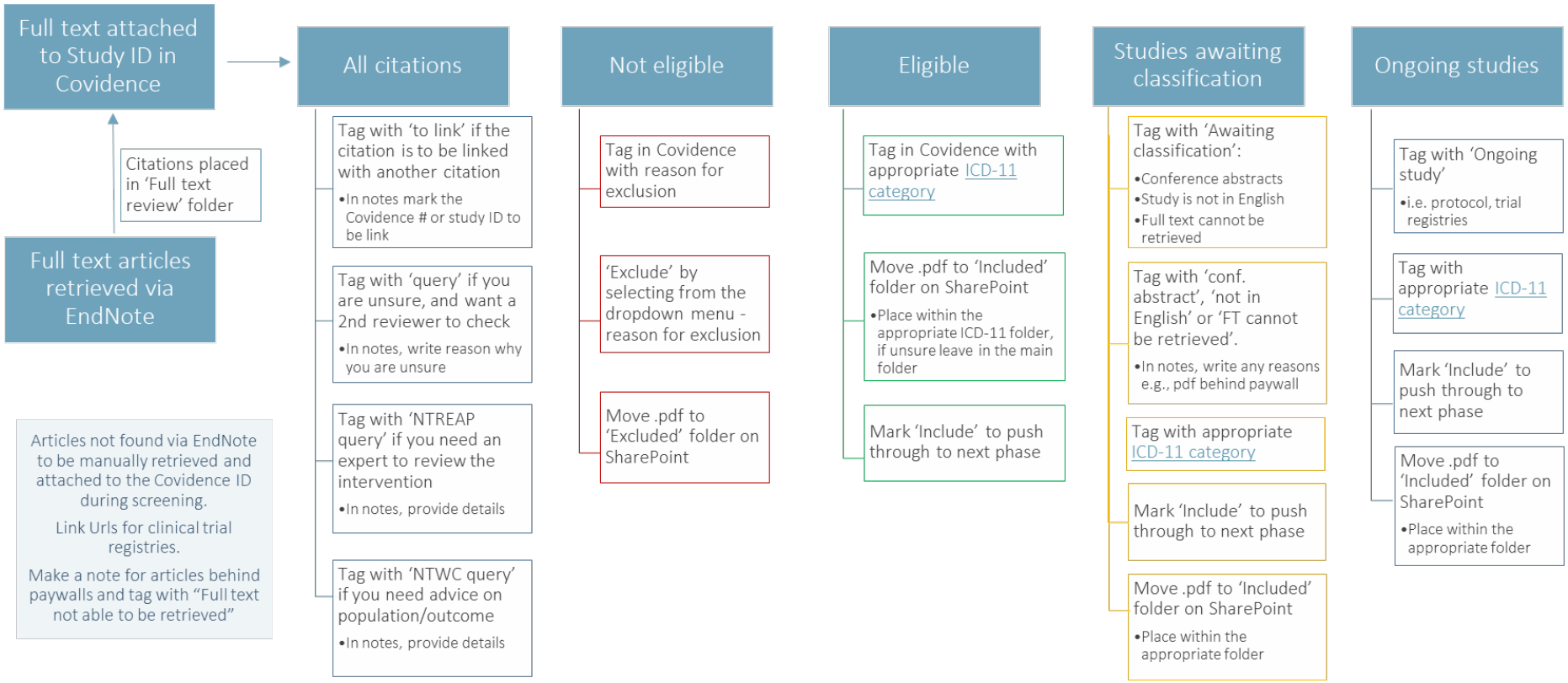
STUDY ID	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	ACTIVE CONTROL 3	COINTERVENTION
Brismee 2007	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Osteoarthritis (knee, 50+ yrs)	Tai Chi	--	Attention control (wellness education program)	--	--	
Buyukturan 2019	22 Injury, poisoning or certain other consequences of external causes	Anterior cruciate ligament injury (partial)	Tai Chi (Yang style, modified)	Control (waitlist)	--	--	--	--
Okuyan 2017	25 Prevention	Falls, older adults (in nursing home) at risk of...	Tai Chi (Yang style)	Control (usual activities)	--	--	--	--

Abbreviation: BMI, body mass index; NEC, not elsewhere classified; NYHA, New York Heart Association

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

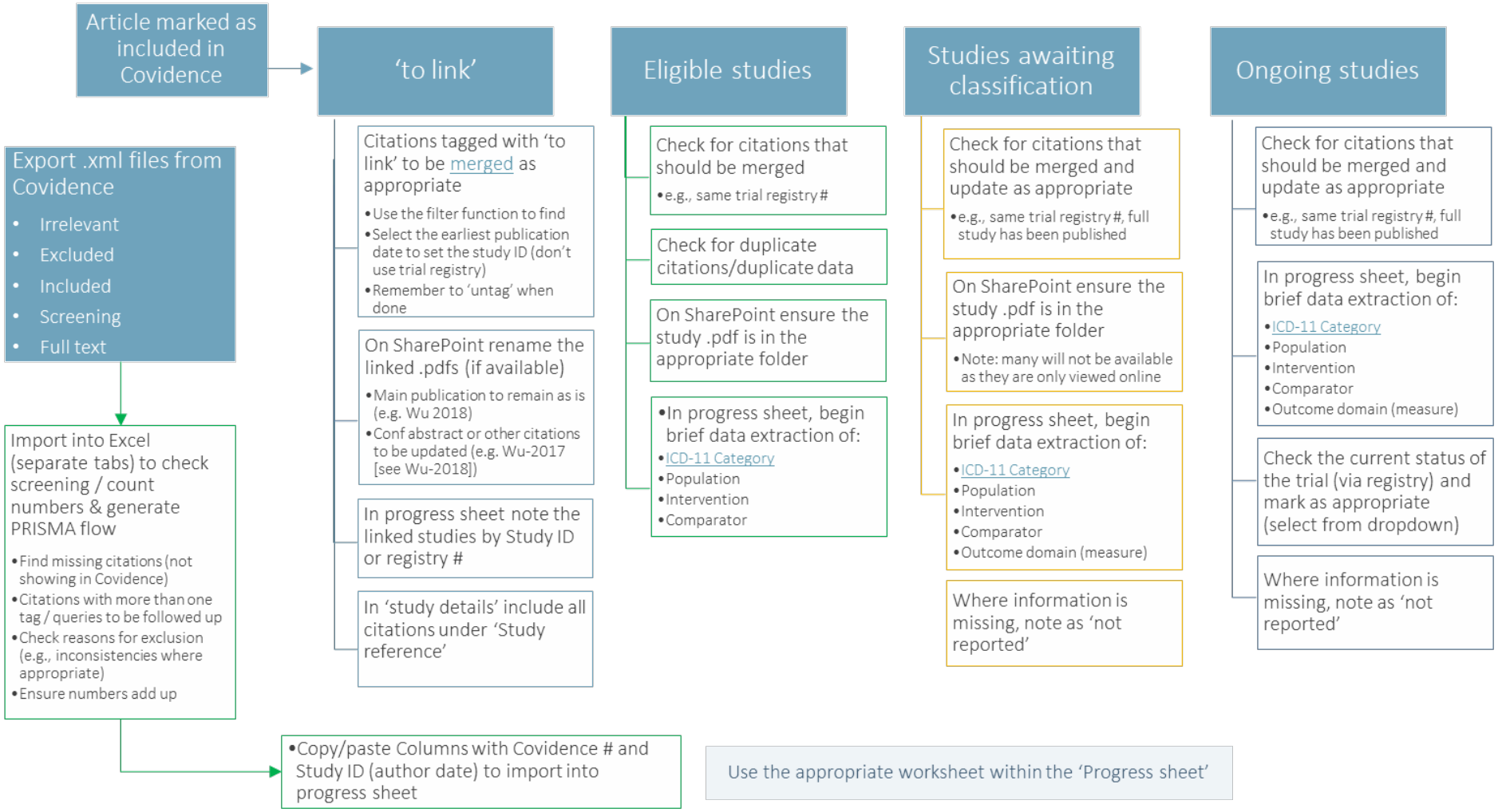


Figure A.2 Overview of potential ICD-11 categories

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

These categories were used to guide decisions on appropriate grouping of studies for meta-analysis. Subgrouping were to be applied where appropriate.

The intent was 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 Diseases of the 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 were included in the review was 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 Tai Chi for preventing and treating any health condition.

Throughout the population and outcome prioritisation exercise, NTWC remained blinded to the screening results (i.e. number of studies identified) or characteristics of included studies (e.g. study design, size, risk of bias) to prevent any influence on decision-making.

Framework 4 outlines the process for refining the research questions and conducting the evidence review.

Framework 5 outlines the process for prioritising eligible populations for inclusion in the evidence review.

A6.1 Population prioritisation process

A spreadsheet listing each identified condition (grouped using ICD-11 category codes) was provided to NTWC to prioritise and determine the list of populations and conditions to be included in the evidence synthesis (see **Table A.9**). The populations included in the spreadsheet were extracted from the eligible studies identified by the evidence reviewers at screening.

To ensure populations were ranked in order of priority to the types of conditions and populations seen by Tai Chi practitioners in Australia, Australian or demographically equivalent survey data (15-17) were sourced from Tai chi representatives on NTREAP (or externally consulted via NTREAP and NTWC). Information from the Tai Chi Association of Australia was also considered. Populations reported in each survey were ranked according to the most reported populations, to the least reported populations. The most reported populations in each survey were then cross matched against the populations identified by the evidence reviewer at screening. This list was then circulated to NTREAP for initial feedback and prioritisation. NTWC utilised NTREAP's advice to inform the final list of populations considered most important for data analysis and synthesis in the review.

It is noted that the mechanism of action of Tai Chi was considered when ranking populations, with the practise of Tai Chi often not intended to act as disease modifier, rather its practise is intended to manage symptoms associated with a condition. For example, studies in stroke recovery were ranked high priority as the practise of Tai Chi is specifically related to supporting rehabilitation, rather than directly acting to prevent a cerebrovascular event. Conversely, studies in osteopenia that focused on bone mineral density were ranked low priority as the practise of Tai Chi is related to balance and mobility rather than directly increasing bone mineral density.

The final list of populations (ranked in priority order) was then circulated back to the evidence reviewers to begin development of the outcome prioritisation spreadsheet (see **Table A.10**). Due to time and resource constraints, studies in conditions ranked 1 to 13 were included in the main analysis, with studies identified in populations ranked 14 and below considered low priority (not included in the main analysis).

Table A.9 List of conditions (populations) (for prioritisation)

ICD-11 category	Population description	NTWC priority
	People living with HIV	X

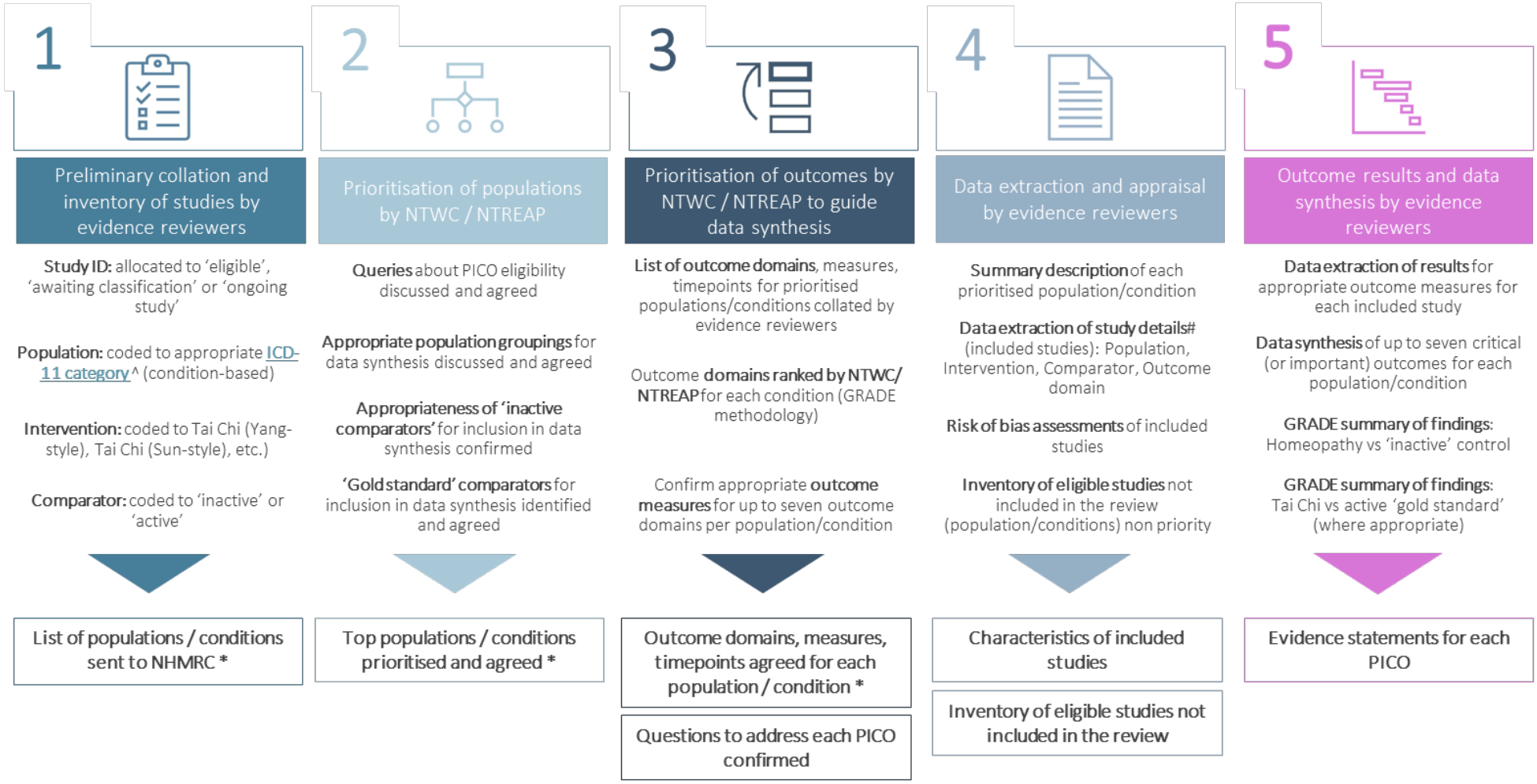
ICD-11 category	Population description	NTWC priority
01 Certain infectious or parasitic diseases	Shingles	X
02 Neoplasms	Breast cancer (survivors, undergoing treatment)	✓
	Cancer, any (survivors)	✓
	Nasopharyngeal carcinoma (undergoing chemotherapy)	✓
	Non-small cell lung cancer (survivors, undergoing treatment)	✓
	Solid tumours* (survivors with physical function limitations) *83% of patients had breast cancer, other types included colorectal, ovarian, cervical, thyroid, bladder and nasopharyngeal.	✓
04 Diseases of the immune system	Systemic sclerosis	X
05 Endocrine, nutritional and metabolic diseases	Diabetes (type 1, type 2, postpartum, with obesity)	✓
	Hyperlipidaemia	X
	Metabolic syndrome	X
	Obesity (adolescents, older women, with depression, with secondary hyperlipidaemia)	X
06 Mental and behavioural disorders	Anxiety or fear-related, Generalised Anxiety Disorder	✓
	Mood disorders (Depression, dysthymia)	✓
	Neurocognitive (Dementia, Mild cognitive impairment)	✓
	Neurodevelopmental (intellectual development)	✓
	Schizophrenia and related	✓
	Substance abuse, rehabilitation (alcohol, opioids, amphetamines)	✓
	21 Symptoms of depression and/or anxiety	✓
07 Sleep-wake disorders	Insomnia (perimenopausal, chronic and primary)	X
	21 Daytime sleepiness	X
08 Diseases of the nervous system	Cerebrovascular disorders (intracerebral haemorrhage, subarachnoid haemorrhage or cerebral infarction)	X
	Headache disorders (tension type)	✓
	Multiple sclerosis	✓
	Parkinson's Disease	✓
	Polyneuropathy, distal symmetric	X
	Stroke recovery (with/without hemiplegia)	✓
	21 Dizziness men (60+ years)	X
09 Disease of the visual system	Impaired vision	X
10 Diseases of the ear or mastoid process	Vestibulopathy	X
11 Diseases of the circulatory system	Cardiac rehabilitation after acute event (myocardial infarction, PCI)	✓
	Coronary heart disease	✓
	Heart failure, chronic	✓
	Hypertension	✓
12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	✓

ICD-11 category	Population description	NTWC priority
15 Diseases of the musculoskeletal system or connective tissue	Arthropathies (any, Rheumatoid, recurrent instability of joint)	✓
	Arthropathies, Osteoarthritis (hip, knee or other lower extremity)	✓
	Inflammatory spondylarthritis (ankylosing, axial)	✓
	Soft tissue disorders (Sarcopenia)	✓
	Osteopathies (Osteopenia, Osteoporosis)	✓
16 Diseases of the genitourinary system	Benign prostate hypertrophy (> 60 years)	X
	Chronic kidney disease (with cardiovascular disease)	X
21 Symptoms, signs or clinical findings, NEC	Chronic widespread pain (Fibromyalgia)	✓
	Low back pain (acute, chronic nonspecific)	✓
	Neck pain (chronic nonspecific)	✓
22 Injury, poisoning or certain other consequences of external causes	Anterior cruciate ligament injury (partial)	✓
	Spinal cord injury	X
	Traumatic brain injury	X
24 Factors influencing health status or contact with health services	Employment conditions, at risk of musculoskeletal injury (Nurses)	✓
25 Prevention	Falls/Balance/Mobility	✓

✓•= yes, ranked; X = not ranked

ICD-11, International Statistical Classification of Diseases and Related Health Problems 11th Revision; NTREAP, Natural Therapies Review Expert Advisory Panel

Framework 4 Framework for refining the research questions and conducting the evidence review: Tai Chi



Notes:
^ ICD-11, International Classification of Diseases for Mortality and Morbidity Statistics (ICD-11 MMS) 11th 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 3 to inform outcome domains.

Framework 5 Framework for prioritising eligible populations for inclusion in the evidence review: Tai Chi

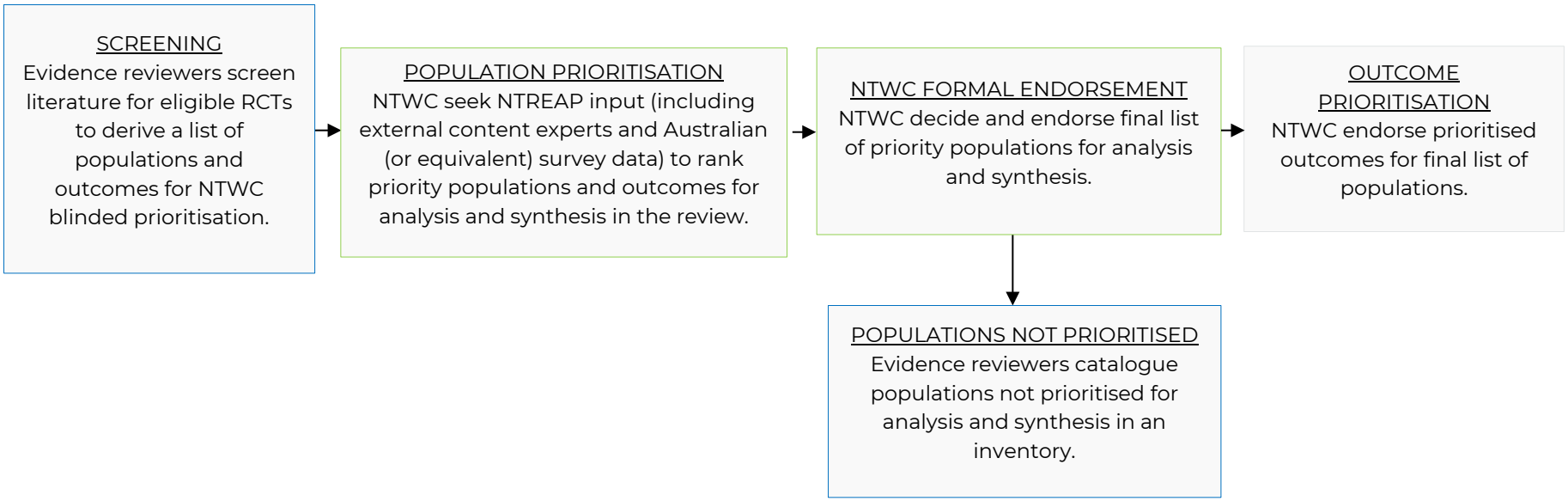


Table A.10 Final list of prioritised conditions (populations)

Priority Order #	ICD-11 Category	Prioritised Populations	NTWC Comments
1	11	Rehabilitation after acute event, including: cardiac event i.e. myocardial infarction, Percutaneous Coronary Intervention (stent).	Diseases of the circulatory system considered high priority specifically relating to rehabilitation.
	8	Rehabilitation after acute event, including: Stroke/ cerebrovascular event (with/without hemiplegia), including; intracerebral haemorrhage, subarachnoid haemorrhage or cerebral infarction	Stroke / cerebrovascular disease included under this population, as purpose of intervention (tai chi) likely to support rehabilitation not direct treatment/ avoidance of event
	12	including mobility (and QoL) in Chronic obstructive pulmonary disease (COPD)	
2	25	Falls prevention, balance and mobility (link to coordination motor control), including mobility (and QoL) in Chronic obstructive pulmonary disease (COPD)	Grouped here as purpose of intervention likely to focus on gaining mobility, increasing quality of life rather than direct treatment of COPD
3	11	Hypertension	
4	15	Pain - including: (1) joint pain (including Osteoarthritis and Rheumatoid arthritis),	For now working group has agreed to group pain populations (noting that pain populations could be split out if applicable at outcome prioritisation)
	21	Pain - including: (2) low back pain (acute, chronic non-specific)	
	21	Pain - including: (3) neck pain (chronic non-specific)	
	21	Pain - including (4) Chronic widespread pain (incl. fibromyalgia)	
5	8	Parkinson's disease (link to coordination, balance, tremors etc.)	Working group agreed that frailty populations of high priority i.e. populations utilise tai chi frequently
6	2	Cancer (all types e.g. breast cancer), including cancer related outcomes: (1) pain, (2) sleep disturbance/disorder, (3) fatigue, (4) joint stiffness	Cancer could be grouped with individual cancer related symptoms listed as outcomes
7	6	Depression	Includes subclinical (symptoms of)
8	6	Anxiety	
9	8	Multiple sclerosis (balance, coordination)	
10	8	Headache disorders (tension type, migraine)	
11	6	Neurocognitive (Dementia, Mild cognitive impairment)	
12	11	Coronary heart disease	
13	11	Heart failure, chronic	
14	5	Diabetes	
15	6	Mood disorders (other including phobia, dysthymia etc.)	
16	15	Inflammatory spondylarthritis (ankylosing, axial)	
17	15	Soft tissue disorders (Sarcopenia)	
18	15	Osteopathies (Osteopenia, Osteoporosis)	Rank low unless related to falls
19	22	Anterior cruciate ligament (ACL) injury (partial)	
20	6	Schizophrenia	

Priority Order #	ICD-11 Category	Prioritised Populations	NTWC Comments
21	6	Substance abuse, rehabilitation (alcohol, opioids, amphetamines)	
22	6	Neurodevelopmental (intellectual development)	
23	24	Prevention of musculoskeletal injury for at risk employment (e.g. nurses)	Rank low unless related to falls prevention

ICD-11, International Statistical Classification of Diseases and Related Health Problems 11th Revision; NTREAP, Natural Therapies Review Expert Advisory Panel

Studies identified in populations ranked 14 and below were not included in the main analysis due to time and resource constraints.

A6.2 Outcome prioritisation process

A spreadsheet listing each population and 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 developing a list of the outcome domains for populations and conditions prioritised for analysis (see sample in **Table A.11**).
    - To minimise potential bias within the review, the list of outcome domains from included studies 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 sets, outcomes reported in relevant Cochrane reviews for that condition were also listed (if available).
    - In determining the critical and important outcomes, NTWC sought NTREAP advice on priority outcome domains for each population and condition and used the GRADE rating scale (see **Figure A-1**) 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.

Table A.11 Sample outcome spreadsheet (for prioritisation)

Condition	Outcome domain	Working group Consensus rating (1-9)	Outcome measure/s (reported in studies)	Eligible measure? (Y/N)	NTWC Priority rank	Comments
Hypertension [a]	Cardiovascular health*##	8	Blood pressure, systolic/diastolic ##	Y	1	
	Adverse events^^	5	CVD-related mortality ^	Y	1	
			All-cause mortality ^	Y	2	

Condition	Outcome domain	Working group Consensus rating (1-9)	Outcome measure/s (reported in studies)	Eligible measure? (Y/N)	NTWC Priority rank	Comments
	Anthropometrics	Not important	BMI (weight/height) #	Y	Not ranked	
			Waist circumference	Y	Not ranked	
	Fitness / exercise capacity#^	5	2-minute step test	Y	1	
			VO_2 max #^	Y	2	
			Stanford 7-day Physical Activity Recall	Y	3	Qualitative measures considered more reliable
			Yale Physical Activity Survey	Y	3	
	Disease risk	6	Glycated haemoglobin	Y	1	Preferred outcome, as per core outcome set for T2DM
			Fasting blood sugar	Y	2	
	Disease progression^	6	Glomerular filtration	Y	2	
			Incidence of stroke ^	Y	1	Both outcomes included as primary measures
			Incidence of acute myocardial infarction ^	Y	1	
	HRQoL*#^	7	SF-36 #	Y	1	We will use SMD analysis to combine data from different instruments measuring the same domain. WG prefer SF36 to SF12
			SF-12	Y	2	
	Psychosocial wellbeing	6	PSS-10	Y	1	Preferred outcome, as per Yoga
			CES-D	Y	2	
			State and Trait Anxiety Inventory	Y	3	
			Social support rating scale (SSRS)	Y	4	

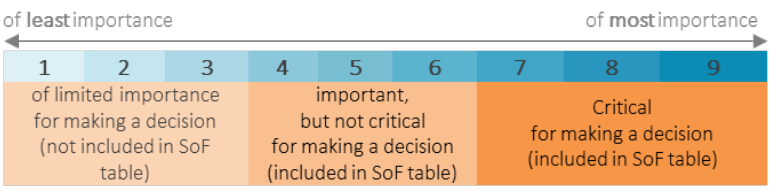
BMI, body mass index; CES-D, Center for epidemiologic studies depression scale; CVD, cardiovascular disease; HRQoL, health-related quality of life; PSS-10, 10-item perceived stress scale; SF-12, 12-item short-form; SF-36; 36-item short-form; SMD, standardised mean difference

a. No core outcome sets found.

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

Identified as secondary outcomes in a relevant / related Cochrane review.

Figure A-1 GRADE rating scale



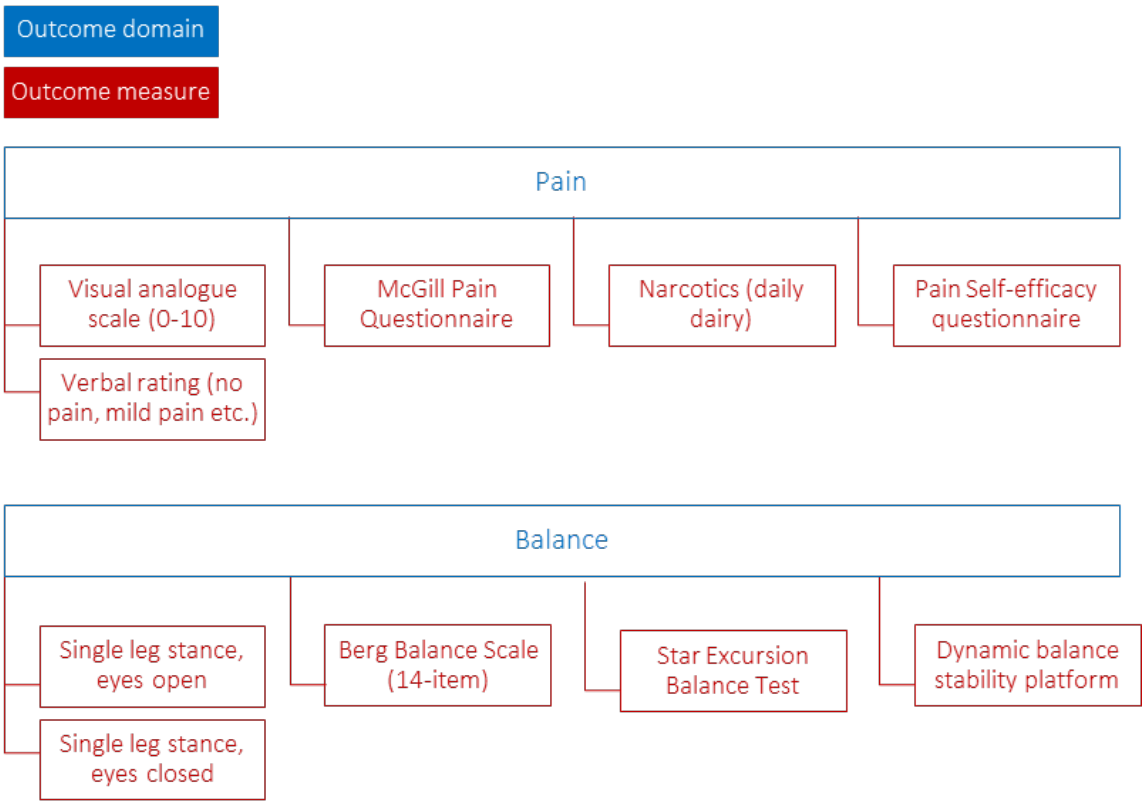
Source: (5)

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 and validated in peer-reviewed journals were included. We anticipated that included studies would use different measures to assess outcomes relevant to this review; 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-2**).

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

Figure A-2 Sample outcome domain and outcome measures: Tai Chi



A7 Summary of screening results

A7.1 Search of published literature

Results of the literature search and application of the study selection criteria are summarised in **Table A.12**.

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.

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.12 Screening result: studies identified in the literature search and additional evidence provided through the Department's public call for evidence

Database (number of hits)	RCTs	Submitted literature	Totals
MEDLINE 1946 to June 19, 2020	1002	--	1002
Embase 1974 to June 19, 2020	1617		1617
Emcare to 2020 week 25	897		897
PyscINFO to June week 3 2020	214		214
AMED	130		130
SPORTDiscus	364		364
CINAHL	1218		1218
Cochrane (CCRCT)	1480		1480
PubMed (not MEDLINE)	116		116
PEDro	435		435
PAHO	168		168
Submitted literature	--	87	87
TOTAL	**7641**	**87**	**7728**
Duplicates removed in EndNote	4246	--	4246
Duplicates removed by Covidence	23		23
Duplicate citation (found at title/abstract)	36		36
Duplicate citation (found at full text)	69		69
Duplicate citation submitted to the Department (RCT already identified in this SR)	--	66	66
TOTAL DUPLICATES	**4377**	**66**	**4440**
Number of citations screened TITLE/ABSTRACT	**3267**	**21**	**3288**
nonhuman study	8	0	8
intervention out of scope	562	0	562
comparator out of scope	18	0	18
population out of scope	44	0	44
outcome out of scope	11	0	11
publication type out of scope			
opinion piece, editorials, books, etc.	275	1	276
not an interventional study examining effectiveness	50	0	50
grey literature	5	0	5
study design out of scope			
Nonsystematic reviews	210	11	221
Systematic review of RCTs and/or NRSIs	452	8	460
Nonrandomised comparative studies	167	1	168
Case series, case reports, noncomparative studies etc.	214	0	214
TOTAL irrelevant	**2016**	**21**	**2037**

Unable to be translated or interpreted at the title/abstract stage	**8**	**0**	**8**
Number of citations screened FULL TEXT	**1243**	**0**	**1243**
intervention out of scope	147	0	147
comparator out of scope	29	0	29
population out of scope	112	0	112
outcome out of scope	5	0	5
publication type out of scope		0	
opinion piece, editorials, books, etc.	82	0	82
not an interventional study examining effectiveness	6	0	6
grey literature	34	0	34
study design out of scope		0	
HTA/Guideline	0	0	0
Systematic review of RCTs and/or NRSIs	6	0	6
NRSI	80	0	80
Case series, case reports, noncomparative studies etc.	19	0	19
Duplicate data (multiple reports of same study data)	1	0	1
Withdrawn/retracted	1	0	1
TOTAL EXCLUDED	**522**	**0**	**522**
RELEVANT CITATIONS	**720**	**0**	**720**
Additional follow-up needed			
Ongoing study	102	0	**102**
Publication not available in English	104	0	**104**
Conference proceeding, poster or abstract	62	0	**62**
Article not able to be retrieved	9	0	**9**
Study published after the literature search date	4	0	**4**
TOTAL INCLUDED CITATIONS	**440**	**0**	**440**
CORRESPONDING NUMBER OF STUDIES	**204**	**0**	**204**

A7.2 Evidence provided through the Department's public call for evidence

A total of 87 citations were received through the Department's public call for evidence. Of these, 66 citations were already identified through our literature search and either had been excluded from the review (56 citations) or already identified and included (10 citations). The remaining 21 citations not identified in our search were not eligible for inclusion.

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.13**.

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.13 Screening results: evidence provided through the Department's public call for evidence

	Submitted literature	Duplicate citations	Totals
Total submitted	**87**		
Duplicate citation (already identified in the search)		66	
Number of new citations to screen	**21**		
intervention out of scope	0	1	
comparator out of scope	0	1	
population out of scope	0	2	
outcome out of scope	0	0	
publication type out of scope			
opinion piece, editorials, books, etc.	1	0	
not an interventional study examining effectiveness	0	0	
grey literature	0	0	
study design out of scope			
Nonsystematic reviews	11	10	
Systematic review of RCTs and/or NRSIs	8	42	
NRSIs	1	0	
TOTAL EXCLUDED	**21**	**56**	
RELEVANT CITATIONS	**0**	**10 (already identified)**	**0**
Relevant but additional follow-up needed			
Ongoing study	0	0	**0**
Publication not available in English	0	0	**0**
Conference proceeding, poster or abstract	0	0	**0**
Article not able to be retrieved	0	0	**0**
TOTAL ONGOING/AWAITING CLASSIFICATION	0	0	**0**
INCLUDED ADDITIOANL CITATIONS (evidence synthesis)	**0**	**0**	**0**

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

This appendix documents the methods used to critically appraise, data extract, synthesise and develop evidence statements about the effect of Tai Chi on priority populations and outcomes.

B1 Risk of bias

B1.1 Tools used

The risk of bias of RCTs was assessed using the revised Cochrane Risk of Bias (RoB) tool v2.0 (18, 19). For each included RCT, potential sources of bias were assessed, and a judgement recorded against each domain specific to the RoB tool (i.e. 'high', 'low', or 'some concerns'). Concerns of bias were raised when it was considered plausible (i.e. likely, probable, possible or conceivable) that bias was present, with the algorithm provided for the RoB v2.0 tools (available online at https://www.riskofbias.info) used to guide decision-making.

Supporting information and a rationale for each judgement is provided in **Appendix E**.

Consistent with the order of preference for analysis of intervention studies to inform health policy decisions (see **Section B2.1**) as recommended by the Australian Government (20, 21) (when claiming superiority), The Cochrane Collaboration (18, 22) 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 to intervention group (which was often not possible due to the nature of the intervention), 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 have affected the outcome (as per guidance for RoB v2.0 (18)). 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 an exercise intervention (can range between 5% and 50%) (23-25) (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 (based on the specified primary outcome for that study or the key reported outcome) was then described in the '*Characteristics of included studies*' table (**Appendix F**).

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

Risk of bias assessment of NRSIs was to be guided by the ROBINS-I tool (26), however, the search for NRSIs was not performed (see **Appendix G**).

B1.2 Assessment process

The risk of bias for each included study was first assessed by a single evidence reviewer (IO, MI, RM, AT). The lead reviewer for each population (KP, SM, MJ) then checked and confirmed all assessments made. Disagreements were resolved by discussion, with advice sought from the project lead (MJ) where needed.

Initial assessments were done 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(s) of interest for that study. 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 E.

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 included in a priority population that do not report a critical or important outcome went through a brief check by the second reviewer, but the assessment is not outcome specific.

When considering treatment effects for an outcome in the GRADE 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**).

B2 Data extraction process

The characteristics of all included studies was extracted by one reviewer (IO, MI, RM, AT) using a standardised data collection form (see **Appendix F1 and F2**). 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 (KP, SM, 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

A standardised data collection form was used to collect all data items relating to the study features (see Appendix F1). 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)
- 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)

Outcome results reported by the study authors at the end of treatment were subsequently extracted into a different form (see Appendix F2) after agreement was reached with NTWC regarding critical and important outcomes to be considered in the evidence synthesis (see Appendix A3).

The extracted data included (but was not limited to) the following:

- Condition (e.g. Low back pain)
- Comparison (Tai Chi vs control or Tai Chi 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. Oswestry Disability Index (0-100))
- Measure interpretation (e.g. higher score means more disability in activities of daily living)
- 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 (18):

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 by the study authors 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.

B2.2 Requests for data

No attempts were made to obtain or clarify data reported in published peer-reviewed studies. There was also no attempt made to obtain additional data from eligible primary studies 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 figures or graphs). If the reported information allowed for direct calculation of effect estimates or imputation of missing statistics (e.g. standard deviations), calculations were performed within the computer program (usually transformed from published confidence intervals or standard errors of the mean) (28).

B2.4 Missing outcome data

All outcomes measured in the included studies were extracted into the study details sheet (see Appendix F1). 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 within a study was conducted. Studies with missing data 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 through a review of the clinical trial protocol or registry entry if available) was considered and noted when assessing the risk of bias for that study.

Implications of the missing results were considered when interpreting the evidence (see Section B3.3).

B3 Data analysis

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

B3.1 Measures of treatment effect

B3.1.1 Effect measures

For each study, continuous data were reported as a mean and standard deviation (SD) along with the number of participants for each group. Effect estimates were reported as either mean difference (MD) (results on the same scale) or a standardised mean difference (SMD) (when different scales were used to measure the same conceptual outcome; e.g. health-related quality of life) with a 95% confidence interval (CI). To ensure that all the scales point in the same direction of effect in the forest plots, data were adjusted by multiplying the mean value by –1 if needed (i.e. where a higher score is better, the MD appears as a negative value so an effect favouring the intervention sits on the left-hand side of the forest plot).

Dichotomous data were presented as risk ratios (RR) with 95% confidence intervals and *p*-values. There was one outcome in people at risk of falls that reported rate of fall injury per 1,000 person days). Time-to-event data were to be presented as hazard ratios, however no time-to event data were encountered.

Any variables that the trialists adjusted for were recorded.

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 evidence synthesis, the MCID (or other scoring information) was sourced from published reports (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 estimates were 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 was not it possible to use the scale[3]), 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.

[3] i.e. measure that do not have an upper and lower range (e.g. BMI, BP, distance)

B3.2 Unit-of-analysis issues

No correction for unit-of-analysis issues were performed. That is, no adjustments were made for intervention-related clustering using a statistical method. Eight RCTs (Cheng 2012, Cheng 2014, Choi 2005, Lam 2011, Talebi 2017, Tao 2015, Tsai 2013, Wolf 2001) with a cluster design were identified across 5 ICD-11 categories. For crossover trials, only data from the first period was to be included in the analysis. No crossover studies reporting paired analyses were found.

Only data from a single timepoint (i.e. 'end-of-treatment') was presented in the analysis (see **Appendix G**).

Only single pairwise comparisons of the intervention with a comparator (i.e. 'control') were considered. Where appropriate, we combined groups to create a single pairwise comparison (as described in the Cochrane Handbook (28)); otherwise a footnote was made in the forest plot to record which group was included in the evidence synthesis (and any impact this may have had on the result considered).

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 C6**). 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. 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 to be made based on the likelihood that missing results 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 (5).

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 B4.1). 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).

B3.4 Data synthesis

Given the size and breadth of this review, with limited time and resources, a restricted 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). The reporting of SMDs when different measures were used for the same conceptual outcome 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 Tai Chi with 'control' (no intervention, wait list, or usual [inactive] activities).

For each comparison and outcome, data synthesis was performed using RevMan 5.4 and forest plots presented (see Evaluation Report). Effect estimates were combined across studies using a random effects model (accounting for the 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^2 test (using a significance level of α=0.1), and quantifying heterogeneity using the I^2 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) and in the forest plot (see main report).

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

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

B3.4.2 Non-quantitative synthesis

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.

Results from each study were reported, with the range and magnitude of observed effects noted. If the results of a study were not completely reported (i.e. only the direction of effect of 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 within the GRADE summary of findings tables (for studies comparing Tai Chi with control only and available data), we used a simple vote count based on direction of effect (e.g. X/Y studies reported an effect favouring the intervention for the outcome Z).

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, where available, were based on the smallest difference that patients perceive as beneficial (or detrimental) for that outcome.

B3.4.3 Subgroup analyses and investigations of heterogeneity

We did not undertake any subgroup analyses of subsets of participants within or across studies. 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 and G2 for changes from protocol and methods not implemented.

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

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

To examine the robustness of outcome results specifically related to the inclusion of studies judged to be at high risk 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 (see Appendix D).

Sensitivity analyses relating to study bias were conducted and reported (see Appendix D) for 2 conditions across 3 outcomes: depression (symptoms of depression); Parkinson's disease (motor function, quality of life).

B3.4.5 Sensitivity analysis

No additional sensitivity analyses were undertaken.

B4 Evidence statements

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). Only evidence comparing Tai Chi with 'control' was presented and all critical and important outcomes were reported, regardless of whether the findings demonstrate a clinically meaningful change.

GRADE certainty of evidence is categorised as follows:

- High (⨁⨁⨁⨁): we are very confident that the true effect lies close to that of the estimate of the effect
- Moderate (⨁⨁⨁⊖): 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 (⨁⨁⊖⊖): our confidence in the effect estimate is limited: the true effect may be substantially different from the estimate of the effect.
- Very low (⨁⊖⊖⊖): we have very little confidence in the effect estimate: the true effect is likely to be substantially different from the estimate of effect.

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 a summary assessment (i.e. the overall risk of bias) across studies for each outcome reported (32). For example, 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) (see Section B3.4.5). Serious concerns were also raised if it was considered plausible (i.e. likely, probable or conceivable) that missing outcome data made a difference to the estimated effect (when sensitivity analysis not able to be conducted).
- *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 of the pooled result 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 clinically important threshold a rough guide was used for continuous outcomes based on the threshold defined for a small effect (the mean difference being less than 10% of the scale). For dichotomous outcomes a 25% relative risk reduction or increase was used (see Section B3.1.2).
- *Indirectness.* Based on important differences between the review questions and the characteristics of included studies (population or intervention) that may lead to important differences in the intervention effects (35). For example, a judgement on whether evidence in older women is also generalisable to young men (sensible to apply) or if Tai Chi was delivered as typically practised in Australia.

- *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. Footnotes were used to record judgements made about downgrading the evidence. 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).

Each GRADE summary of findings table was drafted by an evidence reviewer (KP, SM, EC, MJ) using the GRADEpro GDT software (www.gradepro.org). Estimates of treatment effects for each outcome are reported as absolute and relative risks (or standardised means). In the absence of quantitative data, a narrative synthesis was provided (see **Section B3.4.2**).

B4.2 Development of evidence statements

As part of the summary of findings table, an evidence statement pertaining to each outcome was included. The evidence statement used standard wording provided in GRADEPro (38), 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 *
HIGH Certainty of the evidence	
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
MODERATE Certainty of the evidence	
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
LOW Certainty of the evidence	
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
VERY LOW Certainty of the evidence	
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 Details of studies from search results excluded (not eligible)

This appendix documents the studies that were screened in full text for a systematic review on the effect of Tai Chi for preventing and treating any health condition but were not included in the evidence synthesis as they did not meet the eligibility criteria (Table C.1). Table C.2 lists those studies that included both eligible and ineligible populations but were excluded because they did not report separate data for the eligible population/s.

Table C.1 Details of studies screened and excluded at full text (by reason for exclusion): Tai Chi

(See separate file) The table is ordered by reason for exclusion and then alphabetically by author.

Table C.2 Studies with mixed populations that were excluded (both eligible and ineligible populations not reported separately): Tai Chi

Study ID	Included in review [a]	Study design	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	Cointervention
Faber 2006 (39)	No - mixed population	RCT (cluster)	25 Prevention	Falls, older adults (mixed assisted living) at risk of...	Modified Tai Chi ('in balance')	Control (usual activities)	Low-impact exercise (functional walking program)	--	--
Hosseini 2018 (40, 41)	No - mixed population	RCT	25 Prevention	Falls, older adults (mixed assisted living) at risk of ...	Tai Chi (Yang style short-form)	Control (no intervention)	--	--	--
Huang 2010 (42, 43)	No - mixed population	RCT (cluster)	25 Prevention	Falls, older adults (mixed community) at risk of...	Tai Chi (13-form)	Control (no intervention)	Attention control (wellness education program)	Tai Chi Chuan + Wellness education program	--
Huang 2011 (44)	No - mixed population	RCT	25 Prevention	Falls, older adults (mixed community) at risk of...	Tai Chi (Yang style short-form)	Control (no intervention)	--	--	Cognitive behaviour therapy
Li 2004a (45-47)	No - mixed population	RCT	25 Prevention	Falls, older adults (mixed community) at risk of...	Tai Chi (Yang style)	--	Low-impact exercise (stretching)	--	--

Study ID	Included in review [a]	Study design	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	Cointervention
Manor 2014 (48-51)	No - mixed population	RCT	25 Prevention	Falls, older adults (assisted living) at risk of...	Tai Chi (Yang style 5-form)	--	Attention control (wellness education program)	--	--
Mortazavi 2018 (52, 53)	No - mixed population	RCT	25 Prevention	Falls, older adults (mixed community) at risk of...	Tai Chi (Yang style)	Control (usual activities)	--	--	--
Nowalk 2001 (54)	No - mixed population	RCT	25 Prevention	Falls, older adults (mixed assisted living) at risk of...	Tai Chi	Control (no intervention)	Low-impact exercise (progressive strength & conditioning program)	--	Wellness education program (falls prevention)
Okuyan 2017 (55)	No - mixed population	RCT	25 Prevention	Falls, older adults (in nursing home) at risk of...	Tai Chi (Yang style)	Control (usual activities)	--	--	--
Saravanakumar 2014 (56, 57)	No - mixed population	RCT	25 Prevention	Falls, older adults (mixed assisted living) at risk of...	Tai Chi Qigong (18-form)	Control (usual activities)	Yoga	--	--
Voukelatos 2002 (58-60)	No - mixed population	RCT	25 Prevention	Falls, older adults (mixed community) at risk of...	Tai Chi (Sun, Yang or mixed)	Control (waitlist)	--	--	--
Wallsten 2006 (61)	No - mixed population	RCT	25 Prevention	Falls, older adults (mixed assisted living) at risk of...	Tai Chi (Yang style short-form)	Control (waitlist)	--	--	--
Wolf 1993 (62-66)	No - mixed population	RCT	25 Prevention	Falls, older adults (mixed assisted living) at risk of...	Tai Chi (Yang style short-form)	--	Attention control (wellness education program)	Computerised balance training	--
Woo 2007 (67)	No - mixed population	RCT	25 Prevention	Falls, older adults (mixed community) at risk of...	Tai Chi (Yang style 24-form)	Control (no intervention)	Resistance training (TheraBand)	--	--

a. Studies included a mixed proportion of participants who met/did not meet our eligibility criteria (enrolment based on individual risk factor as opposed to broader community-based factor). These studies were reviewed for availability of data relevant to the eligible population.

C2 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 Tai Chi for preventing and treating any health condition.

Studies that were already identified through the search of published literature were noted as duplicate citations, with inclusion or the reason for exclusion 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. There were 66 studies provided that had previously been identified in the search. The other 21 citations were not RCTs and therefore not eligible for inclusion in the review. The table is sorted first by whether the studies were included or excluded (with reasons), then by reason for exclusion and then alphabetically by author. 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: Tai Chi

(See separate file)

C3 Citation details of studies from low and non-priority populations

This appendix documents the studies that met the prespecified inclusion criteria for a systematic review on the effect of Tai Chi for preventing and treating any health condition but were not included in the evidence synthesis. Studies listed as low priority were not included in the evidence synthesis due to resource constraints.

These studies (ordered by ICD-11 Category and condition) are listed in Table C.4 (low priority populations) and Table C.5 (non-priority populations).

Table C.4 Characteristics of studies not included in the data synthesis (ordered by ICD-11 Category): Tai Chi – low priority populations.

Study ID	Priority	Study design	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	COINTERVENTION
Chen 2010 (68)	low priority	RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (40+ yrs, BMI 30–35)	Tai Chi (Chen style short-form)	--	Conventional physical exercise	--	--
Liu 2012b (69, 70)	low priority	RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (pre, elevated blood glucose levels) (not medicated)	Tai Chi/Qi Gong (style unclear)	Control (usual care)	--	--	--
Lam 2008 (71, 72)	low priority	RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2	Tai Chi (Yang and Sun style)	Control (waitlist)	--	--	--
Orr 2006 (73)	low priority	Quasi-RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2	Tai Chi for Diabetes (modified Sun & Yang style)	--	Low-impact exercise (seated calisthenics, stretching)	--	--
Pardasany 2010 (74)	low priority	Quasi-RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (40–60 yrs)	Tai Chi (Yang style short-form)	Control (usual care)	Yoga (hatha)		Standard medical care (oral hypoglycemics)
Rafii 2018 (75)	low priority	RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2	Tai Chi (Chen and Yang style)	Control (no intervention)	Low-impact exercise (walking)	--	--
Tsang 2007 (76-78)	low priority	RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (50+ yrs)	Tai Chi for Diabetes (modified Sun & Yang style)	--	Low-impact exercise (calisthenics and gentle stretching)	--	--

Study ID	Priority	Study design	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	COINTERVENTION
Xiao 2015b (79)	low priority	Quasi-RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (60+ yrs)	Tai Chi Ball	Control (no intervention)	--	--	--
Youngwanichsetha 2013 (80)	low priority	RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (postpartum)	Tai Chi Qigong	Control (usual care)	--	--	
Zhang 2008 (81)	low priority	quasi-RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (women)	Tai Chi (Yang style short-form)	--	Non-exercise activity	--	
Kong 2019 (82)	low priority	quasi-RCT	06 Mental and behavioural disorders	Neurodevelopmental, intellectual disability (IQ <70, children 10–18 yrs)	Tai Chi (8-form short)	--	Aerobic exercise	Non-exercise activity (arts, crafts)	--
Ho 2012 (83)	low priority	quasi-RCT	06 Mental and behavioural disorders	Schizophrenia and related (chronic)	Tai Chi (Wu style Cheng-form)	Control (Waitlist)	--	--	Standard medical care
Ho 2014 (84, 85)	low priority	quasi-RCT	06 Mental and behavioural disorders	Schizophrenia and related (chronic)	Tai Chi (Wu style Cheng-form)	Control (Waitlist)	Conventional physical exercise	--	Standard medical care
Li 2013 (86)	low priority	RCT	06 Mental and behavioural disorders	Substance abuse, opioids (women)	Tai Chi	Control (usual activities)	--	--	--
Oh 2016 (87)	low priority	RCT	06 Mental and behavioural disorders	Substance abuse, alcohol (hospitalised)	Tai Chi (Yang style)	Control (no intervention)	--	--	Conventional rehabilitation program
Zhu 2016 (88)	low priority	RCT	06 Mental and behavioural disorders	Substance abuse, amphetamines (men)	Tai Chi (Yang style short-form)	--	Standard care (Guang bo ti cao, gesture language exercises and self-education)	--	--
Zhu 2018 (89-91)	low priority	RCT	06 Mental and behavioural disorders	Substance abuse, amphetamines (women)	Tai Chi (Yang style short-form)	--	Standard care (Guang bo ti cao, gesture language exercises and self-education)	--	--
Alp 2009 (92)	low priority	RCT	15 Diseases of the musculoskeletal system or connective tissue	Osteopathies, Osteoporosis (women >65 yrs)	Tai Chi (long form)	Control (no intervention)	--	--	Standard medical care (antiosteoporosis)

Study ID	Priority	Study design	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	COINTERVENTION
Chyu 2010 (93)	low priority	RCT	15 Diseases of the musculoskeletal system or connective tissue	Osteopathies, Osteopenia (women, 65+ yrs)	Tai Chi (Yang style short-form)	Control (no intervention)	--	--	Calcium and vitamin D
Maciaszek 2007 (94)	low priority	quasi-RCT	15 Diseases of the musculoskeletal system or connective tissue	Osteopathies, Osteopenia or osteoporosis (men 60+ yrs)	Tai Chi (Yang style short-form)	Control (usual activities)	--	--	--
Shen 2009 (95-101)	low priority	RCT	15 Diseases of the musculoskeletal system or connective tissue	Osteopathies, Osteopenia (postmenopausal, 50+ yrs)	Tai Chi (Yang style short-form)	Control (no intervention)	Tai Chi (Yang style short-form) + Green Tea Polyphenols	Green Tea Polyphenols (500 mg)	Placebo (medicinal starch, 500 mg)
Zhu 2016b (102, 103)	low priority	RCT	15 Diseases of the musculoskeletal system or connective tissue	Soft tissue disorders, Sarcopenia (men, 85+ yrs)	Tai Chi (Yang style 8-form)	Control (no intervention)	Whole body vibration		Health education + regular medications
Lee 2008 (104)	low priority	quasi-RCT	15 Diseases of the musculoskeletal system or connective tissue	Spinal conditions, Inflammatory spondyloarthritis (ankylosing)	Tai Chi	Control (waitlist)	--	--	Standard medical care
Ma 2020a (105)	low priority	quasi-RCT	15 Diseases of the musculoskeletal system or connective tissue	Spinal conditions, Inflammatory spondyloarthritis (axial)	Tai Chi	--	Conventional physical exercise	--	Standard medical care (Celecoxib)
Buyukturan 2019 (106)	low priority	quasi-RCT	22 Injury, poisoning or certain other consequences of external causes	Anterior cruciate ligament injury (partial)	Tai Chi (Yang style, modified)	Control (waitlist)	--	--	--
Palumbo 2012 (107)	low priority	quasi-RCT	24 Factors influencing health status or contact with health services	Employment conditions, Nurses (45+ yrs) at risk of reduced wellbeing, musculoskeletal injury	Tai Chi	Control (no intervention)	--	--	

?= unclear or not reported

Abbreviations: RCT, randomised controlled trial; yrs, years

Table C.5 Characteristics of studies not included in the data synthesis (ordered by ICD-11 Category): Tai Chi – nonpriority populations

Study ID	Priority	Study design	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	COINTERVENTION
Galantino 2005 (108)	No	RCT	01 Certain infectious and parasitic diseases	Adults living with AIDS (men)	Tai Chi	Control (no intervention)	Conventional physical exercise	--	--
McCain 2008 (109, 110)	No	RCT	01 Certain infectious and parasitic diseases	Adults living with HIV	Tai Chi (Yang style short-form)	--	Cognitive behavioural relaxation training	Spirit-10 intervention (spiritual exploration)	
Cetin 2020 (111)	No	RCT	04 Diseases of the immune system	Systemic Sclerosis (18–65 yrs)	Tai Chi (Yang style)	--	Conventional physical exercise (home exercise program)	--	--
Leung 2019 (112-114)	No	RCT	05 Endocrine, nutritional and metabolic diseases	Metabolic syndrome (18+ yrs)	Tai Chi (Yang style short-form)	--	Non-exercise activity (crafts, calligraphy)		
Beebe 2012 (115-117)	No	RCT	05 Endocrine, nutritional and metabolic diseases	Obesity, BMI 30+ (women 55+ yrs)	Tai Chi (Yang style)	Control (no intervention)	--	--	Wellness education program
Dechamps 2009a (118)	No	RCT	05 Endocrine, nutritional and metabolic diseases	Obesity, BMI 30+ (women)	Tai Chi (Yang style)	--	Conventional physical exercise	--	Weight management program
Liu 2015 (119-121)	No	RCT	05 Endocrine, nutritional and metabolic diseases	Obesity (with depression)	Tai Chi (KaiMai style)	Control (waitlist)	--	--	Standard medical care
Song 2015 (122)	No	RCT	05 Endocrine, nutritional and metabolic diseases	Obesity (with secondary hyperlipidaemia)	Tai Chi (Chen style)	--	Auricular plaster therapy	Tai Chi + Auricular plaster therapy	--
Tsang 2009 (123, 124)	No	RCT	05 Endocrine, nutritional and metabolic diseases	Obesity (adolescents 12–18 yrs)	Tai Chi (Yang style short-form)	--	Kung Fu (Choy Lee Fut Hung Gwoon style)	--	--
Irwin 2014b (125-129)	No	RCT	07 Sleep-wake disorders	Insomnia, chronic and primary (> 55 yrs)	Tai Chi Chih	--	Cognitive behavioural therapy	Wellness education program (sleep seminars)	--

Study ID	Priority	Study design	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	COINTERVENTION
Li 2014 (130)	No	quasi-RCT	07 Sleep-wake disorders	Insomnia, chronic (perimenopause)	Tai Chi (Yang style short-form)	Control (no intervention)	Auricular point sticking	--	--
Yue 2016 (131)	No	RCT	07 Sleep-wake disorders	Insomnia, chronic (60+ yrs)	Tai Chi (Yang style short-form)	Control (no intervention)	--	--	Acupoint massage
Hosseini 2011 (132)	No	quasi-RCT	07 Sleep-wake disorders	21 Sleep disturbance (65+ yrs) (PSQI >5)	Tai Chi (Yang style 10-form)	Control (no intervention)	--	--	Usual activities
Li 2004b (133)	No	RCT	07 Sleep-wake disorders	21 Insomnia and daytime sleepiness (60+ yrs)	Tai Chi (Yang style 8-form)	--	Low-impact exercise	--	--
Gokmen 2017 (134, 135)	No	RCT	07 Sleep-wake disorders	Obstructive sleep apnoea	Tai Chi Qigong	--	Home exercise program	--	--
Chen 2012 (136)	No	quasi-RCT	09 Disease of the visual system	Impaired vision (>70 yrs)	Tai Chi (Yang style, modified)	--	Non-exercise activity (percussion lessons)	--	--
McGibbon 2004 (137-140)	No	quasi-RCT	10 Diseases of the ear or mastoid process	Vestibulopathy	Tai Chi (Yang style short-form)	--	Vestibular rehabilitation exercises	--	--
Cruz-Diaz 2019 (141)	No	RCT	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Chronic ankle instability (>6 months)	Tai Chi (Yang style short-form)	Control (waitlist)	--	--	--
Jung 2012 (142)	No	quasi-RCT	16 Diseases of the genitourinary system	Benign prostate hyperplasia (>60 yrs)	Tai Chi	Control (no intervention)			
Shi 2014 (143)	No	quasi-RCT	16 Diseases of the genitourinary system	Chronic kidney disease (with cardiovascular disease)	Tai Chi (Yang style short-form)	Control (no intervention)			
Qi 2018 (144)	No	RCT	22 Injury, poisoning or certain other consequences of external causes	Spinal cord injury	Wheelchair Tai Chi (16-form)	Control (no intervention)			Conventional rehabilitation program
Hwang 2020 (145, 146)	No	RCT	22 Injury, poisoning or certain other consequences of external causes	Traumatic brain injury (>50 yrs, with cognitive impairment)	Tai Chi (Yang style short-form)	Control (no intervention)	Cognitive training (computerised)	--	--

Study ID	Priority	Study design	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	COINTERVENTION
Dinani 2019 (147)	No	RCT	24 Factors influencing health status or contact with health services	Employment conditions, Nurses at risk of stress, anxiety, depression	Tai Chi (Yang style)	Control (usual activities)	Aerobic exercise (at home)	--	--
Irwin 2003 (148, 149)	No	RCT	25 Prevention	01 Shingles (60-80 yrs) at risk of ...	Tai Chi	Control (waitlist)			--
Choi 2017 (150)	No	RCT	25 Prevention	04 Obesity-Metabolic syndrome, Office workers (men 40-60 yrs, with at least 2 risk factors for metabolic syndrome) at risk of...	Tai Chi (Sun and Yang style, modified)	Control (no intervention)	--	--	Wellness education program
Hui 2015 (151-153)	No	RCT (cluster)	25 Prevention	04 Obesity-Metabolic syndrome, sedentary adults (40+ yrs) at risk of...	Tai Chi	Control (no intervention)	Low-impact exercise (walking)	--	--
Robins 2015 (154-156)	No	quasi-RCT	25 Prevention	11 Cardiovascular disease, women (35-50 yrs with increased WC and family history of CVD)	Tai Chi (Yang style 12-form)	Control (waitlist)	--	--	--
Zheng 2015 (157-160)	No	RCT	25 Prevention	11 Stroke, adults (55-70 yrs at high risk of ischaemic stroke)	Tai Chi (Yang style short-form)	Control (usual activities)	--	--	--
Chan 2004 (161)	No	quasi-RCT	25 Prevention	15 Osteopenia, postmenopausal women at risk of ...	Tai Chi (Yang style)	Control (no intervention)	--	--	--
Shen 2007 (162)	No	RCT	25 Prevention	15 Osteopenia, adults (65+ yrs) at risk of...	Tai Chi (Yang style short-form)	--	Low-impact exercise (resistance training)	--	--
Wang 2015c (163, 164)	No	quasi-RCT	25 Prevention	15 Osteopenia, postmenopausal women at risk of...	Tai Chi (Yang style)	Control (no intervention)	Tai Chi Resistance training		--
Zhao 2007 (165)	No	RCT	25 Prevention	15 Osteopenia, postmenopausal women at risk of...	Tai Chi	Control (no intervention)	Calcium supplement	Tai Chi + Calcium supplement	--

Study ID	Priority	Study design	ICD-11 CATEGORY	POPULATION	INTERVENTION	CONTROL (INACTIVE)	ACTIVE CONTROL 1	ACTIVE CONTROL 2	COINTERVENTION
Dechamps 2009b (166)	No	RCT	25 Prevention	Age-related decline, frail older adults (65+ yrs) at risk of...	Tai Chi (Yang style, modified)	--	Cognitive action program	--	--
Dechamps 2010 (167)	No	RCT	25 Prevention	Age-related decline, frail older adults (65+ yrs) at risk of...	Tai Chi (Yang style, modified)	Control (usual care)	Cognitive action program		--
Mastel-Smith 2019 (168)	No	RCT	25 Prevention	Age-related decline, older adults (60+ yrs) in assisted living at risk of...	Wheelchair Tai Chi	--	Non-exercise activity (Internet and Electronic tablet use)	--	--
Hsu 2016 (169-171)	No	RCT	25 Prevention	Age-related decline, older adults (65+ yrs) using wheelchair at risk of...	Tai Chi (simplified seated STEP program)	Control (usual care)	--	--	Usual activities

?= unclear or not reported

Abbreviations: AIDS, Acquired Immune Deficiency Syndrome; CBT, cognitive behavioural therapy; NEC, not elsewhere classified; PSQI, Pittsburgh Sleep Quality Index; wk, week; yrs, years

C4 Citation details of studies awaiting classification

This appendix documents the studies that potentially met the prespecified inclusion criteria for a systematic review on the effect of Tai Chi 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 the results were published after the literature search date.

An overview of studies awaiting classification (by ICD-11 disease category) is provided in Table C.6.

Table C.6 Overview of studies awaiting classification (by ICD-11 disease category): Tai Chi

Disease category	# studies with incomplete information	# studies published in languages other than English	# studies not able to be retrieved	# Studies unable to be translated or interpreted at the title/abstract stage	# Studies published after the search date	TOTALS
02 Neoplasms	5	0	0	1	0	**6**
05 Endocrine, nutritional and metabolic diseases	4	7	2	0	1	**14**
06 Mental and behavioural disorders	5	6	2	0	0	**13**
07 Sleep-wake disorders	1	0	0	0	1	**2**
08 Diseases of the nervous system	4	11	0	0	0	**15**
11 Diseases of the circulatory system	9	22	0	1	0	**32**
12 Diseases of the respiratory system	1	7	0	1	1	**10**
13 Diseases of the digestive system	1	1	0	0	0	**2**
15 Diseases of the musculoskeletal system or connective tissue	7	4	0	0	0	**11**
16 Diseases of the genitourinary system	0	5	0	0	0	**5**
21 Symptoms, signs or clinical findings, NEC	0	2	1	0	0	**3**
22 Injury, poisoning or certain other consequences of external causes	1	3	0	0	0	**4**
25 Prevention	8	35	2	5	0	**50**
Grand Total	**46**	**103**	**7**	**8**	**3**	**167**

C4.1 Studies with incomplete information about the study PICO or design

Table C.7 Characteristics of studies awaiting classification (by ICD-11 disease category): Tai Chi - conference abstracts, posters etc.

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator 3 (active)	Co-interventions	Notes
Darling 2009 (172)	Yes	RCT?	02 Neoplasms	Breast cancer (survivors)	21	Tai Chi Chuan	12 wks, 3x 60min sessions per wk	Control (usual care)	--	--	--	Conf abstract
Fong 2017 (173, 174)	Yes	RCT	02 Neoplasms	Breast cancer (survivors)	54	Tai Chi Qigong	3 mos, 2x 60min sessions per wk	Control (no intervention)	--	--	--	Conf abstract
Larkey 2016 (175)	Yes	RCT	02 Neoplasms	Breast cancer (survivors)	26	Tai Chi Easy	8 wks, ?x ?min. sessions per wk	--	Aerobic activity (Latin Dance)	--	--	Conf abstract
Winters-Stone 2012 (176)	Yes	RCT	02 Neoplasms	Cancer, any (survivors; women 50–75 yrs)	444	Tai Chi (Moving for Better Balance Program)	6mos, 2x 60min sessions per wk	--	Low-impact exercise (strength training)	Low-impact exercise (stretching, seated)	--	Conf abstract
Liu 2011 (177)	Yes	RCT	02 Neoplasms	Non-small cell lung cancer	27	Tai Chi (Yang style 24-form)	4 mos, 3x 60 min. sessions per wk	Control (no intervention)	--	--	--	Conf abstract
Wang 2019 (178)	low priority	RCT?	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 1	24	Tai Chi (Yang style 24-form)	24 wks, 4x 50min sessions per wk	Control (usual care)	Aerobic activity (basketball)	--	--	Conf abstract
Xin 2010 (179)	low priority	?	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (pre, elevated blood glucose levels)	?	Tai Chi Qigong	?	?	--	--	--	Conf abstract
Siu 2017, NCT03107741 (180, 181)	No	RCT	05 Endocrine, nutritional and metabolic diseases	Metabolic syndrome (50+ yrs)	142	Tai Chi (Yang style)	12 wks, 3x 60min sessions per wk	Control (no intervention)	Conventional exercise program	--	--	Conf abstract

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator 3 (active)	Co-interventions	Notes
Zhang 2011a (182)	No	RCT?	05 Endocrine, nutritional and metabolic diseases	Obesity (BMI 30+, students)	40	Tai Chi	20 wks, 7x 30mins per wk	Control (no intervention)	--	--	--	Conf abstract
Zheng 2013 (183)	Yes	RCT	06 Mental and behavioural disorders	21 Symptoms of Anxiety, adults (18–60 yrs)	21	Tai Chi	12 wks, 5x 60min sessions per wk	Control (waitlist)	Conventional exercise program (gym)	--	--	Conf abstract
Xue 2019 (184)	Yes	RCT	06 Mental and behavioural disorders	21 Symptoms of depression (students)	60	Tai Chi	? wks, ?x ?min. sessions per wk	Control (usual activities)	Tai Chi + psychological adjustment	--	--	Conf abstract
Srinivasan 2014 (185)	Yes	quasi-RCT	06 Mental and behavioural disorders	Mood disorder, depression with comorbid arthritis pain (60+ yrs)	16	Tai Chi	8 wks, 2x 60min sessions per week	--	Mind-body Education	--	Standard medical care (antidepressants)	Conf abstract
Wong 2013 (186)	Yes	RCT?	06 Mental and behavioural disorders	Neurocognitive, Alzheimer's disease (mild-moderate)	16	Tai Chi (6 form apparatus)	12 wks, 2x 45min sessions per wk	--	Low-impact exercise (stretching program)	--	--	Conf abstract
Chau 2010 (187)	Yes	RCT?	06 Mental and behavioural disorders	Neurocognitive, Mild cognitive impairment	209	Tai Chi	12 wks, 2x ?min. sessions per wk	--	Low-impact exercise (stretching program)	--	--	Conf abstract
Ji 2019 (188)	No	Quasi-RCT?	07 Sleep-wake disorders	Insomnia (18–23 yrs)	40	Tai Chi	12 wks, 5x 45mins sessions per wk	Educational advice (daily)	--	--	--	Conf abstract
Xie 2018, NCT03015753 (189, 190)	Yes	RCT?	08 Diseases of the nervous system	Migraine, episodic (women)	82	Tai Chi (Yang style)	12 wks, 5x 60min sessions per wk	Control (waitlist)	--	--	--	Conf abstract
Hass 2011 (191)	Yes	RCT?	08 Diseases of the nervous system	Parkinson's disease, idiopathic	24	Tai Chi	16 wks, 3x 60min sessions per wk	Control (no intervention)	--	--	--	Conf abstract

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator 3 (active)	Co-interventions	Notes
Hart-Hughes 2010 (192)	Yes	?	08 Diseases of the nervous system	Peripheral neuropathy, distal (falls prevention)	100	Tai Chi	10 wks, 1x ?min. session per wk	Educational advice	Functional balance training	--	--	Conf abstract
Harkin 2016 (193)	Yes	RCT	08 Diseases of the nervous system	Stroke recovery	50	Tai Chi	12 wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	Standard care	Conf abstract
Liu 2020, ChiCTR1800015728, ChiCTR1800016096 (194-196)	Yes	RCT	11 Diseases of the circulatory system	Coronary heart disease	98	Tai Chi (Yang style 24-form)	18 wks, 1-4x 60mins sessions per wk (escalating)	Control (usual care)	--	--	--	Conf abstract
Wu 2018 (197)	Yes	RCT	11 Diseases of the circulatory system	Coronary heart disease and/or hypertension	120	Tai Chi	24 wks, ?x ?min. sessions per wk	Control (waitlist)	--	--	--	Conf abstract
Caminiti 2010 (a&b) (198, 199)	Yes	Quasi-RCT?	11 Diseases of the circulatory system	Heart failure, chronic (NYHA class II–III)	27	Tai Chi (Yang style)	12 wks, 3x ?min. sessions per wk	Control (no intervention)	--	--	Conventional physical exercise	Conf abstract
Redwine 2014a (200)	Yes	RCT?	11 Diseases of the circulatory system	Heart failure, chronic	30	Tai Chi	16 wks, ?x ?min. sessions per wk	Control (no intervention)	Low-impact exercise (resistance band training)	--	Standard medical care	Conf abstract
Redwine 2014 (b&c) (201, 202)	Yes	RCT?	11 Diseases of the circulatory system	Heart failure, chronic	40	Tai Chi	16 wks, ?x ?min. sessions per wk	Control (no intervention)	Low-impact exercise (resistance band training)	--	Standard medical care	Conf abstract
Li 2020a (203)	Yes	RCT?	11 Diseases of the circulatory system	Hypertension, pre or Stage 1	68	Tai Chi	12 wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Conf abstract
Wilson 2019 (204)	Yes	RCT	11 Diseases of the circulatory system	Hypertension	121	Tai Chi	12 wks, ?x ?min. sessions per wk	--	Attention control (wellness education program)	--	--	Conf abstract

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator 3 (active)	Co-interventions	Notes
Stein 2014 (205)	Yes	RCT	11 Diseases of the circulatory system	Rehabilitation after acute event, myocardial infarction		Tai Chi (Bejin style)	12 wks, 3x ?min. sessions per wk	--	Low-impact exercise (stretching program)	--		Conf abstract
Wojcieszczyk 2012 (206)	Yes	RCT?	11 Diseases of the circulatory system	Rehabilitation after acute event, myocardial infarct (women)	68	Tai Chi	12 wks, ?x ?min. sessions per wk	--	Cardiac rehabilitation program	Cardiac rehabilitation + CBT	--	Conf abstract
Min. 2017 (207)	Yes	RCT	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	100	Tai Chi	? wks, 3x 30min sessions per wk	Control (no intervention)	Total body recumbent stepper (TBRS)	Tai Chi + TBRS	Standard medical care	Conf abstract
Paredes 2014 (208)	No	RCT	13 Diseases of the digestive system	Non-alcoholic fatty liver disease	56	Tai Chi	8 wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Conf abstract
Zhang 2011e (209)	Yes	RCT?	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Osteoarthritis (knee)	31	Tai Chi	10 wks, ?x ?min. sessions per wk	--	Low-impact exercise (resistance training)	--	--	Conf abstract
Manlapaz 2020 (210)	Yes	quasi-RCT?	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Osteoarthritis (knee, 60+ yrs)	36	Tai Chi	6 wks, ?x ?min. sessions per wk	Control (no intervention)	WiiFit balance program	--	Physical therapy	Conf abstract
Ferrara 2019 (211)	low priority	RCT?	15 Diseases of the musculoskeletal system or connective tissue	Osteopathies, Osteoporosis (postmenopausal, 60+ yrs)	98	Tai Chi	6 mos, 2x ?min. sessions per wk	Control (usual care)	--	--	--	Conf abstract
Kuo 2014 (a&b) (212, 213)	low priority	quasi-RCT?	15 Diseases of the musculoskeletal system or connective tissue	Osteopathies, Osteopenia (postmenopausal, 50+ yrs)	75	Tai Chi	12 wks, 3x 60min sessions per wk	Control (no intervention)	Conventional exercise program (circuit training)	--	--	Conf abstract
Patru 2017 (214)	low priority	RCT?	15 Diseases of the musculoskeletal system or connective tissue	Osteopathies, Osteopenia (postmenopausal women)	30	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Conf abstract

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator 3 (active)	Co-interventions	Notes
Wayne 2010 & 2012 (215-217)	low priority	RCT	15 Diseases of the musculoskeletal system or connective tissue	Osteopathies, Osteopenia (postmenopausal, 45-70 yrs)	86	Tai Chi	9 mos, ?x ?min. sessions per wk	Control (no intervention)	--	--	Standard medical care	Conf abstract
Qian 2018 (218)	low priority	quasi-RCT?	15 Diseases of the musculoskeletal system or connective tissue	Spinal conditions, Spondylosis (cervical)	50	Tai Chi	12 wks, 2x 30min sessions per wk	Control (usual care)	--	--	--	Conf abstract
Thongsumrit 2011, Thumwaree 2011 (219, 220)	No	RCT?	22 Injury, poisoning or certain other consequences of external causes	Spinal cord injury (ASIA A-C)	30	Wheelchair Tai Chi	8 wks, ?x ?min. sessions per wk	Control (no intervention)	--	--		Conf abstract
Liu 2009a (221)	No	RCT?	25 Prevention	15 Osteopenia, older women (55+ yrs) at risk of ...	?	Tai Chi	? wks, ?x ?min. sessions per wk	--	Low-impact exercise (brisk walking)	--	--	Conf abstract
Wang 2015d (222)	No	RCT?	25 Prevention	Age-related decline, older adults at risk of...	60	Tai Chi	16 wks, ?x ?min. sessions per wk	Control (no intervention)	Proprioception exercise		--	Conf abstract
Gao 2013 (223)	No	RCT?	25 Prevention	Age-related decline, older women (?+ yrs) at risk of...	50	Tai Chi	3 mos, 5x 50-60min sessions per wk	Control (no intervention)	--	--	--	Conf abstract
Signorile 2011 (224)	No	RCT?	25 Prevention	Falls, healthy adults (ambulant) at risk of...	29	Tai Chi	8 wks, ?x ?min. sessions per wk	--	Low-impact exercise (balance program)	WiiFit balance program	--	Conf abstract
Lough 2012 (225)	Yes	quasi-RCT	25 Prevention	Falls, older adults (frail) (70+ yrs)	29	Tai Chi	12 wks, 2x 60min sessions per wk	--	Attention control (wellness education program)	--	--	Conf abstract
Binns 2011 (226)	Yes	quasi-RCT	25 Prevention	Falls, older adults (with an identified falls risk)	684	Tai Chi	20 wks, 1x ?min. sessions per wk	--	Low-impact exercise	Tai Chi (2x/week)	--	Conf abstract

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator 3 (active)	Co-interventions	Notes
O'Grady 1997 (227)	Yes	quasi-RCT	25 Prevention	Falls, older adults (preclinically disabled) at risk of...	72	Tai Chi	15 wks, 2x 60min sessions per wk	--	Attention control (wellness education program)	--	--	Conf abstract
Roberts 2010 (228)	Yes	RCT?	25 Prevention	Falls, older adults (with mobility difficulty) at risk of...	46	Tai Chi (Yang style 8-form)	16 wks, 3x 60min sessions per wk	Control (no intervention)	--	--	--	Conf abstract

Abbreviations: ?, unclear or not reported; CBT, cognitive behavioural therapy; min., minute; mos, months; NEC, not elsewhere classified; NR, not reported; wk, week; yrs, years

C4.2 Studies published in languages other than English

Table C.8 Characteristics of studies awaiting classification (by ICD-11 disease category): Tai Chi – studies published in languages other than English

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Li 2013 (229)	low priority	RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2	?	Tai Chi	?	?	--	--	--	Not in English, Full text not retrieved
Wang 2009 (a&b) (230, 231)	low priority	quasi-RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2	64	Tai Chi	6 mos, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Wei 2012 (232)	low priority	RCT?	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2	52	Tai Chi Ball	12 wks, 60 mins daily	--	Standard medical care (blood sugar lowering drug)	--	--	Not in English, Full text not retrieved
Wu 2010 (233)	low priority	RCT?	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2	40	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Xiao 2010 (234)	low priority	?	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2	?	Taijiquan	?	?	?	?	Puerarin	Not in English, Full text not retrieved
Yan 2006 (235)	low priority	quasi-RCT?	05 Endocrine, nutritional and metabolic diseases	Prediabetes (reduced glucose tolerance)	32	Tai Chi	? wks, ?x ?min. sessions per wk	Control (usual activities)	--	--	--	Not in English, Full text not retrieved
Yang 2013 (236)	low priority	RCT?	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (with insomnia)	62	Tai Chi Qigong	? wks, ?x ?min. sessions daily	--	Low-impact exercise (walking)	--	--	Not in English
Khesali 2015, 2018 (237)	Yes	quasi-RCT?	06 Mental and behavioural disorders	21 Symptoms of depression and anxiety (women 60+ yrs)	60	Tai Chi (Yang style)	8 wks, 3x 45-60min sessions per wk	Control (no intervention)	--	--	--	Not in English

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Zhang 2011d (238)	Yes	RCT?	06 Mental and behavioural disorders	Anxiety or fear-related, Generalised anxiety disorder	72	Tai Chi	8wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	Standard medical care	Not in English, Full text not retrieved
Cai 2010 (239)	Yes	RCT?	06 Mental and behavioural disorders	Mood disorders, Depression	100	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	Standard medical care	Not in English, Full text not retrieved
Liao 2012 (240)	Yes	quasi-RCT?	06 Mental and behavioural disorders	Mood disorder, Depression (adults 60+ yrs)	68	Tai Chi	6 mos, ?x ?min. sessions per wk	Control (usual activities)	--	--	--	Not in English, Full text not retrieved
Yumin 2016 (241)	low priority	RCT?	06 Mental and behavioural disorders	Neurodevelopmental, ADHD (children ?+ yrs)	36	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Pang 2010 (242)	Yes	?	06 Mental and behavioural disorders	Neurodevelopmental, intellectual development (adolescents 12+ yrs)	?	Tai Chi	?	?	?	?	?	Not in English, Full text not retrieved
Liu 2010 (243)	No	quasi-RCT?	08 Diseases of the nervous system	Chronic fatigue syndrome	90	Tai Chi	4 wks, ?x ?min. sessions per wk	--	Túina (massage)	Antidepressant, SSRI (Fluoxetine)	--	Not in English, Full text not retrieved
Mirzaei 2017, Irct201601 2422194N (244, 245)	Yes	RCT?	08 Diseases of the nervous system	Multiple sclerosis	72	Tai Chi	8 wks, ?x ?min. sessions per wk	Control (usual activities)	Low-impact exercise (core stability)	--	--	Not in English
Zhu 2011a (246)	Yes	RCT?	08 Diseases of the nervous system	Parkinson's disease	40	Tai Chi	4 wks, ?x ?min. sessions per wk	--	Low-impact exercise (walking)	--	--	Not in English, Full text not retrieved
Guan 2016 (247)	Yes	Quasi-RCT	08 Diseases of the nervous system	Parkinson's disease	62	Tai Chi	12 wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Li 2017 (248)	Yes	RCT?	08 Diseases of the nervous system	Parkinson's disease	60	Tai Chi	12 wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	Standard medical care	Not in English, Full text not retrieved
Fu 2016a (249)	Yes	RCT?	08 Diseases of the nervous system	Stroke recovery (with hemiplegia)	60	Tai Chi	8 wks, 6x 40mins sessions per wk	--	Conventional rehabilitation exercises	--	--	Not in English, Full text not retrieved
Li 2012 (250)	Yes	RCT?	08 Diseases of the nervous system	Stroke recovery (with depression)	68	Tai Chi (seated)	? wks, ?x ?min. sessions per wk	--	Conventional rehabilitation exercises	--	Standard medical care	Not in English, Full text not retrieved
Liu 2009b (251)	Yes	RCT?	08 Diseases of the nervous system	Stroke recovery	48	Tai Chi Boxing	3 mos, ?x ?min. sessions per wk	--	Conventional rehabilitation exercises	--	--	Not in English, Full text not retrieved
Norouzian 2017 (252)	Yes	quasi-RCT	08 Diseases of the nervous system	Stroke recovery (women, 60+ yrs)	20	Tai Chi (Yang style 24-form)	6 wks, 3x 60min sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Wang 2016 (253)	Yes	quasi-RCT	08 Diseases of the nervous system	Stroke recovery (with hemiplegia)	30	Tai Chi (Yunshou style)	12 wks, ?x ?min. sessions per wk	--	Conventional balance training		--	Not in English, Full text not retrieved
Yang 2016 (254)	Yes	RCT?	08 Diseases of the nervous system	Stroke recovery (with hemiplegia)	60	Tai Chi	? wks, 7x ?min. sessions per wk	--	Conventional physical therapy	--	--	Not in English, Full text not retrieved
Ning 2010 (255)	Yes	?	11 Diseases of the circulatory system	Coronary heart disease	?	Taijiquan	?	?	?	?	?	Not in English, Full text not retrieved
Wieczorrek 2016 (256)	Yes	RCT	11 Diseases of the circulatory system	Coronary heart disease	47	Tai Chi	12 mos, 1x 60mins session per wk	--	Cardiac rehabilitation program	--	--	Not in English

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Wu 2016 (257)	Yes	RCT	11 Diseases of the circulatory system	Coronary heart disease	120	Tai Chi (Yang style 24-form)	24 wks, ?x ?min. sessions per wk	Control (no intervention)	Qi Gong (8-segment jin)	Tai Chi + Qi Gong	--	Not in English, Full text not retrieved
Sha 2007 (258)	Yes	quasi-RCT?	11 Diseases of the circulatory system	Coronary heart disease (atherosclerosis)	40	Tai Chi	18 mos, 7x 60–120min sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Chen 2006 (259)	Yes	RCT?	11 Diseases of the circulatory system	Hypertension	40	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	Standard medical care	Not in English, Full text not retrieved
Bi 2005 (260)	Yes	quasi-RCT?	11 Diseases of the circulatory system	Hypertension, mild-moderate	83	Tai Chi	6 mos, ?x ?min. sessions per wk	Control (no intervention)	Conventional rehabilitation exercises	--	--	Not in English, Full text not retrieved
Chen 2013a (261)	Yes	RCT?	11 Diseases of the circulatory system	Hypertension	68	Tai Chi (Yang style short-form)	12 wks, 6x 60min sessions per wk	Control (usual activities)	--	--	--	Not in English, Full text not retrieved
Lee 2004 (262)	Yes	RCT?	11 Diseases of the circulatory system	Hypertension	28	Tai Chi	6 wks, ?x ?min. sesisons per wk	Control (no intervention)	--	--	--	Not in English
Livramento 2011 (263)	Yes	RCT?	11 Diseases of the circulatory system	Hypertension	22	Taiji Qigong (18 steps)	40 mins, 3x/wk, 8 wks	Control (usual activities)	--	--	--	Not in English
Luo 2006 (264)	Yes	?	11 Diseases of the circulatory system	Hypertension	?	Tai Chi	?	?	?	?	Standard medical care	Not in English, Full text not retrieved
Mao 2006 (265)	Yes	quasi-RCT	11 Diseases of the circulatory system	Hypertension	62	Tai Chi (Yang style 24-form)	8 wks, 6x ?min. sessions per wk	Control (usual activities)	--	--	--	Not in English, Full text not retrieved

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Ritter 2001 (266)	Yes	RCT	11 Diseases of the circulatory system	Hypertension, grade 1 to 3	71	Tai Chi Qigong Yangsheng (15-form)	8wks, 2x ?min. sessions per wk	--	Jacobson's progressive muscle relaxation	--	--	Not in English, Full text not retrieved
Shen 2000 (267)	Yes	quasi-RCT?	11 Diseases of the circulatory system	Hypertension	60	Tai Chi Qigong (18-form)	?wks, 1x 60min session daily	Control (usual activities)	--	--	Standard medical care (BP lowering tablets)	Not in English, Full text not retrieved
Tang 2009 (268)	Yes	RCT	11 Diseases of the circulatory system	Hypertension	48	Tai Chi	6 mos, ?x ?min. sessions per wk	Control (no intervention)	Qi Gong	--		Not in English, Full text not retrieved
Wang 2011b (269)	Yes	RCT?	11 Diseases of the circulatory system	Hypertension, with 'liver and kidney yin deficiency'	?	Tai Chi	16 wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Wen 2005 (270)	Yes	?	11 Diseases of the circulatory system	Hypertension	?	Tai Chi	?	?	?	?		Not in English, Full text not retrieved
Zhang 2004 (271)	Yes	?	11 Diseases of the circulatory system	Hypertension	?	Tai Chi	?	--	Aerobic activity (jogging)	?	?	Not in English, Full text not retrieved
Zheng 2015 (272)	Yes	RCT?	11 Diseases of the circulatory system	Hypertension	98	Tai Chi	12 wks, ?x ?min. sessions per wk	--	Standard medical care (nifedipine treatment)	--	--	Not in English, Full text not retrieved
Zhou 2007 (273)	Yes	RCT?	11 Diseases of the circulatory system	Hypertension, stage I	120	Tai Chi	12 wks, 7x 60min sessions per wk	Control (no intervention)	--	--	Salt restricted diet	Not in English, Full text not retrieved
Ding 2013 (274)	Yes	?	11 Diseases of the circulatory system	Rehabilitation after acute event (after PCI)	?	Tai Chi	?	?	?	?	Aerobic activity (running)	Not in English, Full text not retrieved
Liu 2017 (275)	Yes	quasi-RCT?	11 Diseases of the circulatory system	Rehabilitation after acute event, myocardial infarction (undergoing PCI)	80	Tai Chi	12 wks, ?x ?min. sessions per wk	--	Conventional rehabilitation exercises	--	--	Not in English, Full text not retrieved

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Zhang 2011c (276)	Yes	RCT?	11 Diseases of the circulatory system	Rehabilitation after acute event, myocardial infarction	150	Tai Chi	12 mos, ?x ?min. sessions per wk	Control (no intervention)	--	--	Standard medical care	Not in English, Full text not retrieved
Du 2013a (277)	Yes	Quasi-RCT?	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	?	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Du 2013b (278)	Yes	Quasi-RCT?	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	112	Tai Chi (Yang style short-form)	12 wks, 7x 60min sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Du 2014a (279)	Yes	Quasi-RCT?	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	74	Tai Chi (Yang style)	12 wks, ?x ?min. sessions per wk	Control (usual activities)	--	--	--	Not in English, Full text not retrieved
Du 2014b (280)	Yes	Quasi-RCT?	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	?	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Yao 2004 (281)	Yes	?	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	?	Tai Chi	?	?	?	?	?	Not in English, Full text not retrieved
Zhang 2012 (282)	Yes	RCT?	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	90	Tai Chi (Yang style short-form)	12 wks, ?x ?min. sessions per wk	Control (no intervention)	Standard medical care (no RMT)	--	Respiratory muscle training (RMT)	Not in English, Full text not retrieved
Wang 2014 (283)	Yes	RCT?	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease (moderate-severe)	24	Tai Chi	8 wks, 7x 60min session per wk	--	Standard medical care (salmeterol/ fluticasone)	--	--	Not in English, Full text not retrieved
Li 2008 (284)	No	quasi-RCT?	13 Diseases of the digestive system	Irritable bowel syndrome	94	Tai Chi Quan	8 wks, 7x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Song 2009 (285)	Yes	?	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Osteoarthritis (women)	82	Tai Chi	6 mos, ?x ?min. sessions per wk	--	Self-help program	--	--	Not in English
Duan 2012 (286)	Yes	?	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Periarthritis of shoulder	202	Tai Chi	2 mos, ?x ?min. sessions per wk	Control (no intervention)	--	--	Standard medical care	Not in English, Full text not retrieved
Song 2008 (287)	low priority	Quasi-RCT?	15 Diseases of the musculoskeletal system or connective tissue	Spinal conditions, Lumbar disc protrusion	68	Tai Chi (Yang style short-form)	6 mos, 1x ?min. session per wk	--	Conventional physical therapy	--	--	Not in English, Full text not retrieved
Tian 2004 (288)	low priority	Quasi-RCT?	15 Diseases of the musculoskeletal system or connective tissue	Spinal conditions, Spondylosis (lumbar)	40	Tai Chi	24 mos, ?x ?min. sessions per wk	Control (no intervention)	--	--	Standard care (medical, acupuncture, massage, EMT, traction)	Not in English, Full text not retrieved
Lin 2012 (289)	No	quasi-RCT?	16 Diseases of the genitourinary system	Chronic kidney disease, early (diabetic nephropathy)	90	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	Irbesartan	Not in English, Full text not retrieved
Shi 2012 (290)	No	RCT	16 Diseases of the genitourinary system	Chronic nephritis	32	Tai Chi	12 wks, 7x 30min sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Zhang 2011 (291)	No	?	16 Diseases of the genitourinary system	Prostatitis, chronic non-bacterial	?	Tai Chi	?	?	?	?	?	Not in English, Full text not retrieved
Li 2010 (292)	No	RCT?	16 Diseases of the genitourinary system	21 Menopausal symptom or complaint (perimenopausal women with osteoporosis)	60	Tai Chi	12 mos, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Zhao 2020 (293)	No	RCT?	16 Diseases of the genitourinary system	21 Menopausal symptom or complaint (perimenopausal women 45–55 yrs)	74	Tai Chi	48 wks, 3x 60min session per wk	Control (usual activities)	--	--	--	Not in English, Full text not retrieved
Kleinert 2010 (294)	Yes	RCT?	21 Symptoms, signs or clinical findings, NEC	Low back pain	24	Tai Chi Quan	? wks, ?x ?min. sessions per wk	Control (no intervention)	Traditional Chinese Medicine thinking	--	--	Not in English
Xiao 2008 (295)	Yes	quasi-RCT?	21 Symptoms, signs or clinical findings, NEC	Soft tissue disorders, Lumbar muscle strain (acute)	?	Tai Chi	12 wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	Conventional physical therapy	Not in English, Full text not retrieved
Zhou 2002 (296)	No	quasi-RCT	22 Injury, poisoning or certain other consequences of external causes	Fracture, ankle	62	Tai Chi	? wks, ?x ?min. sessions per wk	--	Conventional rehabilitation exercises	--	--	Not in English, Full text not retrieved
Li 2007 (297)	No	RCT?	22 Injury, poisoning or certain other consequences of external causes	Fracture, carpal scaphoid (wrist bone)	63	Tai Chi (Yang style 24-form)	? wks, ?x ?min. sessions per wk	--	Conventional rehabilitation exercises	--	Fixed plaster	Not in English, Full text not retrieved
Costa 2013 (298)	No	quasi-RCT?	22 Injury, poisoning or certain other consequences of external causes	Spinal cord injury	16	Tai Chi Chuan	6 mos, ?x ?min. sessions per wk	Control (no intervention)	Low-impact exercise (walking)	--	Conventional physical therapy	Not in English
Biglari 2016 (299)	No	quasi-RCT?	25 Prevention	11 Cardiovascular disease, older adults (assisted living) at risk of	30	Tai Chi Chuan	? wks, ?x ?min. sessions per wk	--	Low-impact exercise (walking)	--	--	Not in English
Ma 2006 (300)	No	RCT?	25 Prevention	15 Osteopenia, older men (?+ yrs) at risk of...	70	Tai Chi	12 mos, ?x ?min. sessions per wk	Control (no intervention)	--	--	Calcium (oral)	Not in English, Full text not retrieved

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Chen 2011 (301)	No	Quasi-RCT?	25 Prevention	15 Osteopenia, postmenopausal women (?+ yrs) at risk of...	?	Tai Chi	? wks, ?x ?min. sessions per wk	--	Low-impact exercise (brisk walking)	--	--	Not in English, Full text not retrieved
Wang 2009c (302)	No	quasi-RCT?	25 Prevention	15 Osteopenia, postmenopausal women (?+ yrs) at risk of...	90	Tai Chi Quan	? wks, ?x ?min. sessions per wk	--	Aerobic activity (swimming)	Low-impact exercise (brisk walking)	--	Not in English, Full text not retrieved
Wang 2015e (303)	No	quasi-RCT?	25 Prevention	15 Osteopenia, postmenopausal women (?+ yrs) at risk of...	95	Tai Chi (Yang style 24-form)	? wks, 4x 60min sessions per wk	Control (no intervention)	Tai Chi (modified 'improved')	--	--	Not in English, Full text not retrieved
Xue 2017 (304)	No	RCT?	25 Prevention	15 Osteoporosis, postmenopausal women (?+ yrs) at risk of...	614	Tai Chi	24 mos, ?x ?min. sessions per wk	Control (no intervention)	Supplement (Vitamin C + Vitamin D)	--	--	Not in English, Full text not retrieved
Zhou 2004 (305)	No	RCT?	25 Prevention	15 Osteopenia, postmenopausal women (?+ yrs) at risk of...	60	Taijiquan	10 mos, ?x ?min. sessions	Control (no intervention)	Aerobic activity (skipping)	"Mulanquan Taiji Push hands"	--	Not in English, Full text not retrieved
de la Cruz Góngora 2004 (306)	No	quasi-RCT?	25 Prevention	Age-related decline, healthy adults (60+ yrs) at risk of...	60	Tai Chi Qigong	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	Acupuncture	Not in English, Full text not retrieved
Deng 2013 (307)	No	RCT	25 Prevention	Age-related decline, healthy adults (60+ yrs) at risk of...	100	Tai Chi	3 mos, 7x ?min. sessions per week	--	Low-impact exercise (walking)	--	Folk music	Not in English, Full text not retrieved
Jiang 1984 (308)	No	quasi-RCT?	25 Prevention	Age-related decline, healthy adults (60+ yrs) at risk of...	?	Tai Chi	4 wks, 14x 40min sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Kin 2006 (309)	No	quasi-RCT?	25 Prevention	Age-related decline, healthy women (60+ yrs) at risk of...	60	Tai Chi	5 mos, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Li 2003 (310)	No	quasi-RCT?	25 Prevention	Age-related decline, healthy women (55+ yrs) at risk of...	32	Tai Chi Boxing	6 mos, 7x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English
Liu 2001 (311)	No	quasi-RCT?	25 Prevention	Age-related decline, healthy adults (55+ yrs) at risk of...	33	Tai Chi Chuan	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Liu 2006 (312)	No	quasi-RCT?	25 Prevention	Age-related decline, healthy adults (55–56 yrs) at risk of...	20	Tai Chi (Yang style 24-form)	8 wks, 4x 60min sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Liu 2016 (313)	No	RCT	25 Prevention	Age-related decline, healthy adults (60–69 yrs)	?	Tai Chi	? wks, ?x ?min. sessions per wk	--	Aerobic activity (gp1 table tennis; gp2 swimming)	Aerobic activity (gp3 Square dance; gp 4 Yi Jin Jing)	--	Not in English, Full text not retrieved
Luo 2012 (314)	No	quasi-RCT?	25 Prevention	Age-related decline, healthy women (45+ yrs)	34	Tai Chi (Yang style 24- and 42-form)	32 wks, 3x 60mins sessions per wk	Control (usual activities)	--	--	--	Not in English, Full text not retrieved
Ma 2011 (315)	No	?	25 Prevention	Age-related decline, healthy adults (?+ yrs) at risk of...	?	Tai Chi	?	?	?	?	?	Not in English, Full text not retrieved
Mao 2007 (316)	No	RCT?	25 Prevention	Age-related decline, healthy women (55+ yrs) at risk of...	120	Tai Chi	48 wks, ?x ?min. sessions per wk	Control (no intervention)	Comprehensive exercise program	--	--	Not in English, Full text not retrieved
Matida 2013 (317)	No	RCT?	25 Prevention	Age-related decline, healthy women (60+ yrs) at risk of...	34	Tai Chi (Yang style)	12 wks, 2x 50mins sessions per wk	Control (no intervention)	--	--	--	Not in English
Shao 2002 (318)	No	?	25 Prevention	Age-related decline, healthy women (?+ yrs) at risk of...	?	Taijiquan	?	?	?	?	?	Not in English, Full text not retrieved

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Silveira Guimarães 2017 (319)	No	quasi-RCT?	25 Prevention	Age-related decline, healthy adults (60+ yrs) at risk of...	30	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)	Aerobic activity	--	--	Not in English
Sun 2013 (320)	No	quasi-RCT?	25 Prevention	Age-related decline, healthy adults (65+ yrs) at risk of...	104	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--		Not in English, Full text not retrieved
Wang 2003 (a&b) (321, 322)	No	Quasi-RCT?	25 Prevention	Age-related decline, healthy women at risk of...	16	Tai Chi	6 mos, ?x ?min. sessions per wk	Control (no intervention)	--	--	--	Not in English, Full text not retrieved
Wang 2010e (323)	No	RCT?	25 Prevention	Age-related decline, healthy adults (?+ yrs) at risk of...	90	Tai Chi	18 wks, ?x ?min. sessions per wk	Control (usual activities)	--	--	--	Not in English, Full text not retrieved
Wang 2011a (324)	No	RCT?	25 Prevention	Age-related decline, healthy adults (?+ yrs) at risk of...	74	Tai Chi	6 mos, ?x ?min. sessions per wk	Control (usual activities)	--	--	--	Not in English, Full text not retrieved
Wu 2018b (325)	No	RCT	25 Prevention	Age-related decline, healthy women (50+ yrs) at risk of...	96	Tai Chi	16 wks, ?x ?min. sessions per wk	Control (no intervention)	Square dance	--	--	Not in English, Full text not retrieved
Xia 1991 (326)	No	?	25 Prevention	Age-related decline, healthy adults (?+ yrs) at risk of...	?	Taijiquan	?	?	?	?	?	Not in English, Full text not retrieved
Xiuying 2007 (313)	No	RCT?	25 Prevention	Age-related decline, healthy adults (60+ yrs) at risk of...	54	Tai Chi	3 mos, 1x 60min session per wk	Control (no intervention)	--	--	--	Not in English
Yao 2003 (327)	No	?	25 Prevention	Age-related decline, healthy adults (?+ yrs) at risk of...	?	Tai Chi	?	?	?	?	?	Not in English, Full text not retrieved

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Comparator3 (active)	Co-interventions	Notes
Zhang 2011b (328)	No	RCT?	25 Prevention	Age-related decline, healthy adults (?+ yrs) at risk of...	100	Tai Chi	16 wks, 3x 30min sessions per wk	--	Conventional physical exercise	--	--	Not in English, Full text not retrieved
Duenas 2019 (329)	Yes	RCT	25 Prevention	Falls, older adults (with fear of falling and functional limitation)	125	Tai Chi (Yang style short-form)	? wks, ?x ?min. sessions per wk	--	Low-impact exercise (postural control)	Cognitive Behavioural Therapy	--	Not in English
Qiu 2008 (330)	Yes	?	25 Prevention	Falls, older adults (frail, senile) at risk of...	?	Taijiquan	?	?	?	?	?	Not in English, Full text not retrieved
Zeng 2009 (331)	Yes	?	25 Prevention	Falls, older adults (frail, senile) at risk of...	?	Taijiquan	?	?	?	?	?	Not in English, Full text not retrieved
Zhu 2016 (332)	Yes	RCT	25 Prevention	Falls, older adults (frail) at risk of...	60	Tai Chi (Yang style short-form)	18 mos, 5x 60min sessions per wk	--	Attention control (wellness education program)	--	--	Not in English, Full text not retrieved

Abbreviations: ?, unclear or not reported; ADHD, Attention deficit disorder with hyperactivity; min., minute; mos, months; NEC, not elsewhere classified; NR, not reported; PCI, percutaneous coronary intervention; wk, week; yrs, years

C4.3 Studies not able to be retrieved

Table C.9 Characteristics of studies awaiting classification (by ICD-11 disease category): Tai Chi – studies not able to be retrieved

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Co-interventions	Notes
Yeung 2017, NCT01619631 (333, 334)	Yes	RCT?	06 Mental and behavioural disorders	Mood disorders, Depression (18+ yrs))	67	Tai Chi	12 wks, 1x 60min session per wk	Control (waitlist)	Attention control (wellness education program)	--	Full text not able to be retrieved
Hai-Jun 2020 (335)	Yes	RCT?	06 Mental and behavioural disorders	Neurocognitive, Mild cognitive impairment	108	Tai Chi	4 mos, 4x 45min sessions per wk	Control (no intervention)	--	Educational advice	Full text not able to be retrieved
Zhu 2019, Zhu 2020 (336, 337)	Yes	RCT?	08 Diseases of the nervous system	Parkinson's disease (mild-moderate)	41	Tai Chi	12 wks, ?x ?min. sessions per wk	Control (no intervention)	--	Aerobic exercise	Full text not able to be retrieved
Chen 2018 (338)	Yes	RCT?	08 Diseases of the nervous system	Stroke recovery	16	Tai Chi	6 mos, ?x ?min. sessions per wk	--	Conventional rehabilitation therapy	--	Full text not able to be retrieved
Bhatti 1998 (339)	Yes	RCT	21 Symptoms, signs or clinical findings, NEC	Low back pain	50	Tai Chi Chih	? wks, ?x ?min. sessions per wk	No information	--	--	Full text not able to be retrieved
Cheng 2020 (340)	No	quasi-RCT?	25 Prevention	15 Osteopenia, healthy women (55+ yrs) at risk of ...	52	Tai Chi	48 wks, 5x 30 or 60min sessions per wk	Control (no intervention)	Attention control (wellness education program)	--	Full text not able to be retrieved
Macfarlane 2005 (341)	No	quasi-RCT?	25 Prevention	Age-related decline, healthy women (65+ yrs) at risk of...	38	Tai Chi	3 mos, ?x ?min. sessions per wk	Control (no intervention)	--	--	Full text not able to be retrieved

Abbreviations: ?, unclear or not reported; min., minute; mos, months; NEC, not elsewhere classified; NR, not reported; wk, week; yrs, years

C4.4 Studies unable to be translated or interpreted at the title/abstract stage

Table C.10 List of studies unable to be translated or interpreted at the title/abstract stage (ordered by ICD-11 disease category): Tai Chi

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Co-interventions	Notes
ChiCTR1800018601 2018 (342)	Yes	?	02 Neoplasms	Lung cancer (survivors)	?	Taijiquan	?	Standard medical care	?	?	Not able to be translated at title/abstract stage
Chen 2013b (343)	Yes	?	11 Diseases of the circulatory system	Heart disease (older adults)	?	Taijiquan	?	?	?	?	Not able to be translated at title/abstract stage
Li 2012 (344)	Yes	?	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	?	Taijiquan	?	?	?	?	Not able to be translated at title/abstract stage
Qin 2000 (345)	No	?	25 Prevention	15 Osteopenia, postmenopausal women (?+ yrs) at risk of...	?	Taijiquan	?	?	?	?	Not able to be translated at title/abstract stage
Lévano Tarazona 2007 (346)	No	?	25 Prevention	Age-related decline, older adults at risk of...	?	Tai Chi	?	?	?	?	Not able to be translated at title/abstract stage
Zhang 1997 (347)	No	?	25 Prevention	Age-related decline, older adults at risk of...	?	Tai Chi	?	?	?	?	Not able to be translated at title/abstract stage
Lehtola 2000 (348)	Yes	?	25 Prevention	Falls, older adults (70-75 yrs) at risk of	?	?	?	?	?	?	Not able to be translated at title/abstract stage
Yamaguchi 2004 (349)	No	?	25 Prevention	Falls, healthy women at risk of...	?	Tai Chi	?	?	?	?	Not able to be translated at title/abstract stage

Abbreviations: ?, unclear or not reported.

C4.5 Studies published after the literature search date

Table C.11 List of studies published after the literature search date: Tai Chi

STUDY ID	Priority	Study design	ICD 11 Category	CONDITION (population)	N	Intervention	Intervention details	Comparator1 (inactive)	Comparator2 (active)	Co-interventions	Notes
Li 2020b, ChiCTR1800020069 (7, 8)	low priority	RCT	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2	103	Tai Chi	12 wks, ?x ?min. sessions per wk	Control (no intervention)	Qigong	--	Study published after literature search date
NCT02260843 (9)	No	RCT	07 Sleep-wake disorders	Insomnia, chronic (60+ yrs)	320	Tai Chi	12 wks, 3x 60min sessions per wk	Control (no intervention)	Aerobic exercise	--	Study published after literature search date [a]
Yeh 2014 (10)	Yes	RCT	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	92	Tai Chi (Yang style short form)	12 wks, 3x 30min sessions per wk	--	Attention control (wellness education program)	--	Study published after literature search date [b]

Abbreviations: ?, unclear or not reported; min., minute; wk, week; yrs, years

a. Additional citation identified through handsearching (350).

b. Additional citations identified through handsearching (351, 352).

C5 Citation details of ongoing studies

This appendix documents the studies that met the prespecified inclusion criteria for a systematic review on the effect of Tai Chi 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. The characteristics of ongoing studies (by ICD-11 Category) is provided in Table C.13.

Table C.12 Overview of ongoing studies (by ICD-11 disease category): Tai Chi

Disease category	# studies Not yet recruiting	# studies Recruiting	# studies Active, not recruiting	# studies Recruitment complete	# studies Complete, results not available	# studies Complete, early results on registry	# studies Terminated	# studies Status unknown	TOTAL
02 Neoplasms	3	2	1	1	5	--	1	--	**13**
05 Endocrine, nutritional and metabolic diseases	1	2	1	--	--	--	--	1	**5**
06 Mental and behavioural disorders	3	6	--	--	1	--	--	--	**10**
07 Sleep-wake disorders	--	1		--	--	--	--	--	**1**
08 Diseases of the nervous system	3	1	2	--	4	--	--	--	**10**
11 Diseases of the circulatory system	4	3		--	1	--	--	3	**11**
12 Diseases of the respiratory system	--	1		--	3	--	--	--	**4**
13 Diseases of the digestive system	1			--		--	--	--	**1**
15 Diseases of the musculoskeletal system or connective tissue	--	--	--	--	--	--	--	1	**1**
15 Diseases of the musculoskeletal system or connective tissue	1	--	--	--	4	--	--	--	**5**
16 Diseases of the genitourinary system	3	--	--	1		--	1	--	**5**
21 Symptoms, signs or clinical findings, NEC	2	1			2	--	--	--	**5**
24 Factors influencing health status or contact with health services	--	2	--	--	--	--	--	1	**3**
25 Prevention	1	4	--	1	5	1	--	--	**12**
Grand Total	**22**	**23**	**4**	**3**	**25**	**1**	**2**	**7**	**86**

NEC, not elsewhere classified;
*Status as of October 2021

Table C.13 Characteristics of ongoing studies (by ICD-11 Category): Tai Chi

STUDY ID	Priority	Status*	ICD-11 Category	CONDITION (Population)	N (target)	INTERVENTION	Intervention details	Inactive comparator	Active comparator/s		Cointervention
Larkey 2016, NCT02690116 (353, 354)	Yes	Active, not recruiting	02 Neoplasms	Breast cancer (survivors with fatigue, 40+ yrs post menopause)	234	Qigong / Tai Chi Easy	8 wks, 60min weekly	Sham Qigong	Educational advice	--	--
NCT04190342 (355)	Yes	Complete, results not available	02 Neoplasms	Breast cancer (survivors, with fatigue-sleep disturbance-depression)	72	Tai Chi (Yang style)	8 wks, 2x 60 min. sessions per wk	Educational advice	--	--	--
NCT01980368 (356)	Yes	Terminated	02 Neoplasms	Breast cancer (survivors, with peripheral sensory neuropathy)	0	Tai Chi Easy	6 wks, 1x 60min sessions per wk	--	Golf instruction	--	--
Liu 2018, ACTRN12617000975392 (357, 358)	Yes	Not yet recruiting	02 Neoplasms	Breast cancer (undergoing treatment)	24	Tai Chi	24 wks, 2x 60min sessions per wk (12 wks instructor, 12 wks at home)	Control (usual care, cancer therapy)	--	--	--
NCT00246818 (359)	Yes	Complete, results not available	02 Neoplasms	Cancer solid tumours (survivors)	76	Tai Chi	12 wks, 3x 60min sessions per wk	Control (waitlist)	Conventional physical exercise	--	--
Ho 2017, HKCTR2198 (360)	Yes	Recruitment complete	02 Neoplasms	Colorectal cancer	189	Baduanjin Qigong	8 wks, 60 min. sessions per wk	Control (waitlist)	Mindfulness meditation	--	--
ISRCTN70448213 (361)	Yes	Complete, results not available	02 Neoplasms	Colorectal cancer	80	Tai Chi	? wks, ?x ?min. sessions per wk	Placebo	Traditional Chinese Medicine (tailored)	Low-impact exercise	--
NCT02274519 (362)	Yes	Complete, results not available	02 Neoplasms	Multiple myeloma (undergoing autologous stem cell transplantation)	29	Tai Chi	? wks, 7x 30min sessions per wk	--	Educational advice	--	--
ChiCTR1900020546 (363)	Yes	Not yet recruiting	02 Neoplasms	Non-small cell lung cancer	300	Tai Chi (modified 9-style)	? wks, ?x ?min. sessions per wk	Control (usual care)	--	--	--

STUDY ID	Priority	Status*	ICD-11 Category	CONDITION (Population)	N (target)	INTERVENTION	Intervention details	Inactive comparator	Active comparator/s		Cointervention
NCT03482323 (364)	Yes	Complete, results not available	02 Neoplasms	Non-small cell lung cancer (stage III-B or IV)	30	Tai Chi (Yang style)	12 wks, 2x 60min sessions per wk	Control (no intervention)	Aerobic exercise	--	--
NCT04119778 (365)	Yes	Recruiting	02 Neoplasms	Non-small cell lung cancer (stage IIIB or IV)	372	Tai Chi (16-form)	16 wks, 2x 60min sessions per wk	Educational advice	Aerobic exercise	--	--
Pan 2018, ChiCTR-IOR-15006548 (366)	Yes	Not yet recruiting	02 Neoplasms	Non-small cell lung cancer (Stage I–IIIA)	80	Tai Chi	12 wks, 1x 60 min. session per wk (+home practise)	Stretching program (placebo)	--	--	--
NCT03741335 (367)	Yes	Recruiting	02 Neoplasms	Prostate cancer (received or receiving androgen deprivation therapy, with history of falls)	360	Tai Chi (Yang style 8-form)	6 mos, 3x 60min sessions per wk	--	Low-impact exercise (strength training)	Low-impact exercise (stretching)	--
NCT03562078 (368)	low priority	Unknown	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (40+ yrs)	60	Tai Chi Chuan (Yang style 108 form)	12 wks, 2x 60min sessions per wk	--	Aerobic exercise (Shotokan-Karate)	--	--
ChiCTR1800018440 (369)	low priority	Not yet recruiting	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (45-75 yrs)	45	Tai Chi (Yang style short-form)	? wks, ?x ?min. sessions per wk	--	Low-impact exercise (walking)	Healthy control (not randomised)	--
NCT04416841 (370)	low priority	Recruiting	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (60+ yrs, with mild cognitive impairment)	327	Tai Chi (Yang style)	24 wks, 3x 60min sessions per wk	Educational advice	Educational advice	Conventional physical exercise (walking)	Standard medical care
ChiCTR-IOR-17010544 (371)	low priority	Recruiting	05 Endocrine, nutritional and metabolic diseases	Diabetes, type 2 (60-80 yrs)	192	Tai Chi Boxing (Yang style)	? wks, ?x ?min. sessions per wk	--	Low-impact exercise (walking)	Tai Chi (Yang style short-form, remote management)	--
Li 2018, NCT02608554 (372)	No	Active, not recruiting	05 Endocrine, nutritional and metabolic diseases	Polycystic Ovary Syndrome (18-35 yrs)	50	Tai Chi	12 wks, 3x 60min sessions per wk	--	Conventional physical exercise (self-monitored)	--	--

STUDY ID	Priority	Status*	ICD-11 Category	CONDITION (Population)	N (target)	INTERVENTION	Intervention details	Inactive comparator	Active comparator/s		Cointervention
NCT04450147 (373)	No	Recruiting	06 Mental and behavioural disorders	Mood disorders, Bipolar I or II (40+ yrs)	50	Tai Chi Qigong	12 wks, 1x 50min session per wk	--	Low-impact exercise (walking, stretching)	--	--
NCT02460666 (374)	Yes	Complete, results not available	06 Mental and behavioural disorders	Mood disorders, Depression (older adults on treatment)	220	Tai Chi Chih	12 wks, 1x 60min session per wk	--	Attention control (wellness education program)	--	--
ChiCTR1800019968 (375)	Yes	Not yet recruiting	06 Mental and behavioural disorders	Neurocognitive, Mild cognitive impairment	144	Tai Chi	12 wks, ?x ?min. sessions per wk	Control (no intervention)	Aerobic exercise		Educational advice
ChiCTR1800015629 (376)	Yes	Recruiting	06 Mental and behavioural disorders	Neurocognitive, Mild cognitive impairment	156	Tai Chi	? wks, ?x ?min. sessions per wk	Sham tDCS	Transcranial direct current stimulation (tDCS)	Low-impact exercise (walking)	Conventional physical exercise (walking) + sham tDCS
NCT04248400 (377)	Yes	Recruiting	06 Mental and behavioural disorders	Neurocognitive, Mild cognitive impairment (50+ yrs)	60	Tai Chi	24 wks, 3x 60min sessions per wk	--	Conventional physical exercise	Meditation training	--
NCT04070703 (378)	Yes	Recruiting	06 Mental and behavioural disorders	Neurocognitive, Mild cognitive impairment (CDR≤0.5)	320	Tai Chi (cognitive enhanced)	24 wks, ?x ?min. sessions per wk	--	Low-impact exercise (Stretching)	--	--
NCT02688959 (379)	low priority	Recruiting	06 Mental and behavioural disorders	Neurodevelopmental, ADHD (18-23 yrs)	145	Tai Chi (Yang style)	8 wks, 2x 50min sessions per wk	--	Aerobic exercise	--	--
NCT03598478 (380)	low priority	Recruiting	06 Mental and behavioural disorders	Neurodevelopmental, Developmental motor coordination disorder (children, 9-12 yrs)	156	Tai Chi (5-forms)	12 wks, 1x 90min session per wk	--	Conventional physical exercise (Muscle power training)	Tai Chi + Conventional physical exercise (Muscle power training)	--

STUDY ID	Priority	Status*	ICD-11 Category	CONDITION (Population)	N (target)	INTERVENTION	Intervention details	Inactive comparator	Active comparator/s		Cointervention
NCT04288830 (381)	No	Not yet recruiting	06 Mental and behavioural disorders	Post-traumatic stress disorder (police officers)	54	Tai Chi (Moving Mindfulness Meditation and Resilience Training)	8 wks, 1x ?min. session per week	--	Conventional physical exercise (aerobic)	--	--
ChiCTR1900022091 (382)	low priority	Not yet recruiting	06 Mental and behavioural disorders	Substance abuse, amphetamines (women)	40	Tai Chi	? wks, ?x ?min. sessions per wk	--	Aerobic exercise	--	--
NCT04384822 (383)	No	Recruiting	07 Sleep-wake disorders	Insomnia, chronic (50+ yrs)	160	Tai Chi (Yang style)	3 mos, 2x 60min sessions per wk	--	Cognitive Behavioural therapy (CBT-1)	--	--
ACTRN12617000327381 (384)	Yes	Not yet recruiting	08 Diseases of the nervous system	Cerebellar ataxia (at risk of falls)	40	Tai Chi (Yang style 8-form)	12 wks, 3x 60min sessions per wk	Control (usual care)	--	--	--
NCT00029809 (385)	Yes	Complete, results not available	08 Diseases of the nervous system	Parkinson's disease	40	Tai Chi	16 wks, ?x ?min. sessions per wk	--	Qi Gong	Low-impact exercise (walking)	--
NCT03443752 (386)	Yes	Not yet recruiting	08 Diseases of the nervous system	Parkinson's disease		Tai Chi	12 wks, 3x ?min. sessions per wk	--	Aerobic exercise (Shotokan-Karate)	--	--
NCT03563807 (387)	Yes	Complete, results not available	08 Diseases of the nervous system	Parkinson's disease	35	Tai Chi	10 wks, 2x 60min sessions per wk	--	Aerobic exercise (Shotokan-Karate)	--	--
Yang 2015, ChiCTR-TRC-14004549 (388, 389)	Yes	Active, not recruiting	08 Diseases of the nervous system	Parkinson's disease	142	Tai Chi (Yang style short-form)	8 wks, 3x 60min sessions per wk	--	Aerobic exercise	--	Standard medical care
UMIN000015846 (390)	Yes	Recruiting	08 Diseases of the nervous system	Parkinson's disease (stage 3-4)	500	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	Conventional rehabilitation program
NCT02868840 (391)	Yes	Complete, results not available	08 Diseases of the nervous system	Stroke recovery		Tai Chi	6 mos, 2x 60min sessions per wk	Control (usual care)	Aerobic exercise (Shotokan-Karate)	--	--

STUDY ID	Priority	Status*	ICD-11 Category	CONDITION (Population)	N (target)	INTERVENTION	Intervention details	Inactive comparator	Active comparator/s		Cointervention
NCT03252236 (392)	Yes	Complete, results not available	08 Diseases of the nervous system	Stroke recovery	56	Tai Chi (Yang style 12-form)	12 wks, 2x 60min sessions per wk	Control (no intervention)	Educational advice	--	--
NCT04138407 (393)	Yes	Not yet recruiting	08 Diseases of the nervous system	Stroke recovery (subacute, and caregiver)	160 dyads	Tai Chi (seated 12-form)	12 wks, 5x 30min session per wk	--	Conventional rehabilitation program	--	--
Zhang 2014, ChiCTR-TRC-13003661 (394, 395)	Yes	Active, not recruiting	08 Diseases of the nervous system	Stroke recovery (with hemiplegia)	50	Tai Chi Rehabilitation program	? wks, ?x ?min. sessions per wk	Control (no intervention)	--	--	Conventional rehabilitation program
ChiCTR-IIC-17013986 (396), ChiCTR-IPR-17013756 (397)	Yes	Complete, results not available	11 Diseases of the circulatory system	Coronary Heart Disease	20	Tai Chi (Yang style short-form)	12 wks, 1-4 60min sessions per wk (escalating)	Control (waitlist)	--	--	--
ChiCTR-IOR-17012684 (398)	Yes	Recruiting	11 Diseases of the circulatory system	Coronary Heart Disease	30	Tai Chi Boxing (Yang style)	? wks, ?x ?min. sessions per wk	Control (usual care)	--	--	--
NCT01592357 (399)	Yes	Unknown	11 Diseases of the circulatory system	Coronary Heart Disease	200	Tai Chi (Yang style 8-form)	12 wks, 2x 50min sessions per wk	--	Low-impact exercise (stretching)	--	--
Ma 2020, NCT03936504 (400, 401)	Yes	Recruiting	11 Diseases of the circulatory system	Coronary heart disease (NYHA class I-III)	100	Tai Chi Cardiac Rehabilitation Program	12 wks, 3x 60min sessions per wk	--	Conventional rehabilitation program	--	--
NCT04445753 (402)	Yes	Not yet recruiting	11 Diseases of the circulatory system	Heart failure, chronic (LVEF <40%)	46	Tai Chi (Yang style 10-form) (with Qigong)	12 wks, 2x 60min sessions per wk	--	Attention control (wellness education program)	--	--
Li 2021, NCT04267471 (403, 404)	Yes	Not yet recruiting	11 Diseases of the circulatory system	Hypertension (45-80 yrs)	234	Tai Chi	12 wks, 3x 60min sessions per wk	Control (waitlist)	Conventional rehabilitation program	--	--
NCT04384263 (405)	Yes	Not yet recruiting	11 Diseases of the circulatory system	Hypertension (55+ yrs)	20	Tai Chi (Yang style)	12 wks, 3x 50min sessions per wk	Control (usual activities)	--	--	--

STUDY ID	Priority	Status*	ICD-11 Category	CONDITION (Population)	N (target)	INTERVENTION	Intervention details	Inactive comparator	Active comparator/s		Cointervention
Lee 2020, KCT0003632 (406, 407)	Yes	Recruiting	11 Diseases of the circulatory system	Hypertension, grade 1	80	Tai Chi	8 wks, 2x 60mins sessions per wk,	Control (no intervention)	--	--	Educational advice (self-management)
ChiCTR1900024368 (408)	Yes	Not yet recruiting	11 Diseases of the circulatory system	Hypertension, pre	340	Tai Chi (Yang style short-form)	12 mos, 4x 60min sessions per wk	--	Aerobic exercise	--	--
NCT02761603 (409)	Yes	Unknown	11 Diseases of the circulatory system	Hypertension, pre & early (60+ yrs)	250	Tai Chi (Yang style 8-form)	12 wks, 2x 60min sessions per wk	--	Wellness education program (Healthy Ageing Practise-centred Instruction)	--	--
NCT02297737 (410)	Yes	Unknown	11 Diseases of the circulatory system	Rehabilitation after acute event, myocardial infarction	75	Tai Chi (Yang style 8-form)	12 wks, 2x 60min sessions per wk	--	Attention control (wellness education program)	--	--
Fu 2016b, ChiCTR-IOR-15006874 (411)	Yes	Recruiting	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	152	Tai Chi	8 wks, 3x 30min sessions per wk	Control (usual care)	Pulmonary rehabilitation (Total Body Recumbent Stepper [TBRS])	Tai Chi + TBRS	--
NCT02370654 (412)	Yes	Complete, results not available	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	44	Tai Chi (Chen style)	12 wks, 3x 90min sessions per wk	--	Aerobic exercise	--	--
ACTRN12617000242325 (413)	Yes	Complete, results not available	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease (55+ yrs)	66	Tai Chi (Sun style)	? wks, 2x 60min sessions per wk	Control (usual activities)	Aerobic exercise	--	--
Moy 2015, NCT01998724 (414, 415)	Yes	Complete, results not available	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease (GOLD I-IV)	90	Tai Chi (Yang style 5-form)	24 wks, 2x 60min sessions per wk first 12 wks then 1x 60min session next 12 wks	--	Low-impact exercise (walking)	--	--
Yang 2019a, ChiCTR1800019781 (416, 417)	No	Not yet recruiting	13 Diseases of the digestive system	Functional constipation	80	Tai Chi (Yang style short-form)	10 wks, 4x 60 min. sessions per wk	--	Aerobic exercise (Broadcast Gymnastics)	--	--

STUDY ID	Priority	Status*	ICD-11 Category	CONDITION (Population)	N (target)	INTERVENTION	Intervention details	Inactive comparator	Active comparator/s		Cointervention
Wang 2020, ChiCTR1800018028 (418, 419)	Yes	Unknown	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Osteoarthritis (knee, 38-80 yrs)	66	Tai Chi (Yang style short-form)	? wks, ?x ?min. sessions per wk	--	Attention control (wellness education program)	--	--
ChiCTR1900027253 (420)	No	Not yet recruiting	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Chronic ankle instability	44	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)			Kinesio taping
NCT03660254 (421)	Yes	Complete, results not available	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Osteoarthritis (65+ yrs)	100	Tai Chi	? wks, 2x 60min sesison per wk	Control (no intervention)	--	--	--
NCT03872869 (422)	Yes	Complete, results not available	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Osteoarthritis (hip)	89	Tai Chi for arthritis	12 wks, 2x 60min sessions first 4 wks then 1x 60min sessions next 8 wks	Control (no intervention)	Wellness education program (Hip school)	--	--
NCT00096759 (423)	Yes	Complete, results not available	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Rheumatoid	100	Tai Chi Chih	12 wks, ?x ?min. session per wk	--	Aerobic exercise	--	--
NCT03807180 (424)	Yes	Complete, results not available	15 Diseases of the musculoskeletal system or connective tissue	Spinal conditions, Inflammatory spondyloarthritis (ankylosing, receiving anti-TNF therapy)	36	Tai Chi	10 wks, 2x 60min sessions per wk	Control (no intervention)	--	--	--
Liu 2016, ChiCTR-IOR-16007698 (425)	No	Not yet recruiting	16 Diseases of the genitourinary system	Benign prostate hyperplasia (60-70 yrs)	150	Tai Chi	6 mos, 5x 30min sessions per wk	Control (no intervention)	Low-impact exercise (walking)	--	--
IRCT20161223031522N10 (426)	No	Recruitment complete	16 Diseases of the genitourinary system	Chronic kidney disease (on haemodialysis)	42	Tai Chi	6 wks, 3x 40-60min sessions per wk	Control (no intervention)	Low-impact exercise (stretching)	--	--
ChiCTR2000028992 (427)	No	Not yet recruiting	16 Diseases of the genitourinary system	Chronic kidney disease (receiving dialysis)	620	Tai Chi (He simplified style)	? wks, ?x ?min. sessions per wk	Control (no intervention)			

STUDY ID	Priority	Status*	ICD-11 Category	CONDITION (Population)	N (target)	INTERVENTION	Intervention details	Inactive comparator	Active comparator/s		Cointervention
ChiCTR1900024984 (428)	No	Not yet recruiting	16 Diseases of the genitourinary system	Chronic kidney disease, stage 5D (receiving dialysis)	260	Tai Chi	? wks, ?x ?min. sessions per wk	Control (no intervention)			
NCT00661050 (429)	No	Terminated	16 Diseases of the genitourinary system	Cystitis, Interstitial	12	Tai Chi	3 mos, 2x 90min sessions per wk	--	CD guided meditation + Low-impact exercise (walking)	--	--
NCT03705598 (430)	Yes	Not yet recruiting	21 Symptoms, signs or clinical findings, NEC	Chronic widespread pain (65+ yrs, with history of falls)	200	Tai Chi (Yang style 8-form)	24 wks, 2x 60min sessions per wk	--	Low-impact exercise	--	--
NCT02257034 (431)	Yes	Recruiting	21 Symptoms, signs or clinical findings, NEC	Chronic widespread pain, Fibromyalgia (40+ yrs)	120	Tai Chi	48 wks, ?x ?min. sessions per wk	--	Low-impact exercise (stretching)	--	--
ChiCTR-IOR-16009376 (432)	Yes	Not yet recruiting	21 Symptoms, signs or clinical findings, NEC	Low back pain, chronic (nonspecific)	108	Ta Chi Quan	? wks, ?x ?min. sessions per wk	Control (usual care, NSAIDs)	--	--	--
NCT00070915 (433)	Yes	Complete, results not available	21 Symptoms, signs or clinical findings, NEC	Low back pain, chronic (nonspecific)	120	Tai Chi	? wks, ?x ?min. sessions per wk	--	Therapeutic massage	Mindfulness-based Stress Reduction program	--
NCT03299192 (434)	Yes	Complete, results not available	21 Symptoms, signs or clinical findings, NEC	Low back pain, chronic (nonspecific, 65+ yrs)	57	Tai Chi (Yang style)	12 wks, 2x ?min. sessions per wk	Control (usual care)	Attention control (wellness education program)	--	--
Chan 2016, NCT02132039 (435, 436)	No	Unknown	24 Factors influencing health status or contact with health services	Caregivers (of persons with dementia) & care recipients	136 dyads	Tai Chi (seated 12-form)	12 wks, 8x 60min sessions per wk	--	Attention control (wellness education program)	--	--
Smidt 2018, NCT02661997 (437)	No	Recruiting	24 Factors influencing health status or contact with health services	Problems associated with harmful or traumatic events, exposure to disaster, war or other hostilities (Gulf War syndrome)	120	Tai Chi (Yang style)	12 wks, 2x 60min. sessions per wk	--	Attention control (wellness education program)	--	--

STUDY ID	Priority	Status*	ICD-11 Category	CONDITION (Population)	N (target)	INTERVENTION	Intervention details	Inactive comparator	Active comparator/s		Cointervention
NCT03624868 (438)	No	Recruiting	24 Factors influencing health status or contact with health services	Problems associated with harmful or traumatic events, exposure to disaster, war or other hostilities (veterans, 60+ yrs)	42	Tai Chi (Yang style)	12 wks, 2x ?min. sessions per wk	--	Attention control (wellness education program)	--	--
NCT03275038 (439)	No	Recruiting	25 Prevention	08 Leukoaraiosis (white matter lesions), sedentary adults with cardiovascular risks	120	Tai Chi	24 wks, 3x 60min sessions per wk	Control (no intervention)	Golf instruction	--	--
NCT01203657 (440)	No	Complete, results not available	25 Prevention	Age-related decline, healthy adults (60+ yrs) at risk of...	47	Tai Chi (Yang style short-form)	10 wks, 2x 60min. sessions per wk	Control (waitlist)	--	--	--
NCT01094509 (441)	No	Complete, results not available	25 Prevention	Age-related decline, older adults (70+ yrs)	175	Tai Chi	6 mos, ?x ?min. sessions per wk	Tai Chi + Guided autobiographical writing	Non-exercise activity (guided autobiographical writing)	Qi Gong	Wellness education program (Successful ageing)
ChiCTR1900028673 (442)	No	Complete, results not available	25 Prevention	Age-related decline, healthy adults (60+ yrs) at risk of...	110	Tai Chi Qigong	? wks, ?x ?min. sessions per wk	Control (waitlist)	--	--	--
Jia 2018, ChiCTR-IOR-17010769 (443, 444)	Yes	Recruiting	25 Prevention	Age-related decline, healthy adults (60+ yrs) at risk of...	250	Tai Chi (Yang style)	12 wks, 5x 60min. sessions per wk	Tai Chi + Conventional physical exercise (Core strength training)	Low-impact exercise (core strength training)	Qi Gong exercises (Wuqinxi) & Tai Chi + Wuqinxi	--
NCT00079664 (445)	No	Complete, results not available	25 Prevention	Age-related decline, healthy adults (60+ yrs) at risk of...	100	Tai Chi	60 mos, 3x 60min sessions per wk	--	Aerobic exercise	--	--
ChiCTR1800019930 (446)	No	Recruiting	25 Prevention	Age-related decline, healthy adults (60-89 yrs)	72	Tai Chi (Yang style short-form)	8 wks, 3x 60min sessions per wk	Control (no intervention)	--	--	--

STUDY ID	Priority	Status*	ICD-11 Category	CONDITION (Population)	N (target)	INTERVENTION	Intervention details	Inactive comparator	Active comparator/s		Cointervention
Leung 2020, ChiCTR1900026657 (447)	Yes	Not yet recruiting	25 Prevention	Age-related decline, older adults (60+ yrs)	315	Tai Chi (Yang style short-form)	16 wks, 2x 90min sessions per wk	Control (usual activities)	Aerobic activity (Light volleyball)	--	--
Kienle 2020, DRKS00016609, NCT04209738 (substudy) (448-450)	Yes	Recruiting	25 Prevention	Falls, older adults (with balance impairment)	550	Tai Chi	6 mos, 2x ?min. sessions per wk first 3 mos, then 1x ?min. session next 3 mos (with optional home practise)	Control (no intervention)	Eurythmy therapy	--	Educational advice
Zeeuwe 2006, ISRCTN98840266 (451, 452)	Yes	Complete, results not available	25 Prevention	Falls, older adults (with history of falls/fear of falling) at risk of...		Tai Chi (Yang style short-form)	? wks, ?x ?min. sessions per wk	Control (usual care)			--
NCT02374463 (453)	Yes	Complete, results available but not published	25 Prevention	Falls, older Veterans (with history of falls) at risk of...	41	Tai Chi	24 wks, 3x 60mins sessions per wk	--	Low-impact exercise (Multimodality Balance Intervention)	--	--
IRCT20180426039425N1 (454)	Yes	Recruitment complete	25 Prevention	Falls, older women (with history of falls)	60	Tai Chi Chuan	12 wks, 2x 60mins sessions per wk	Control (no intervention)	--	--	--

? = unclear or not reported

Abbreviations: ADHD, Attention deficit disorder with hyperactivity; min., minute; NEC, not elsewhere classified; NSAIDS, nonsteroidal anti-inflammatory drugs; wk, week; yrs, years

C6 Implications of missing data

Table C.14 Studies in priority populations that are eligible for the main comparison (Tai Chi vs control): studies awaiting classification and ongoing studies (with results not available or published)

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
Darling 2009	Conf abstract	02 Neoplasms	Breast cancer (survivors)	21	Tai Chi Chuan	Control (usual care)	--	--	Biomarkers, cytokine response (IL-2 and IL-8); HRQoL
Fong 2017, NCT02420249	Conf abstract	02 Neoplasms	Breast cancer (survivors)	54	Tai Chi Qigong	Control (no intervention)	--	--	Arterial resistance and blood flow velocity Biomarkers (blood oxygen saturation) HRQoL Upper limb circumference Flexibility, shoulder Strength, shoulder muscle Balance
NCT04190342	Complete, results not available	02 Neoplasms	Breast cancer (survivors, with fatigue-sleep disturbance-depression)	72	Tai Chi (Yang style)	Educational advice	--	--	Feasibility Fatigue (Brief Fatigue Inventory) Sleep quality (Pittsburgh Sleep Quality Index [PSQI]) Anxiety and depression (Hospital Anxiety and Depression Scale) QoL (Functional Assessment of Cancer Therapy-Breast) (FACT-B)
NCT00246818	Complete, results not available	02 Neoplasms	Cancer solid tumours (survivors)	76	Tai Chi	Control (waitlist)	Conventional physical exercise	--	Stress (Perceived Stress Scale)
ISRCTN70448213	Complete, results not available	02 Neoplasms	Colorectal cancer	80	Tai Chi	Placebo	Conventional physical exercise (Low-impact exercise) OR Traditional Chinese Medicine (tailored)	--	Feasibility QoL Fatigue Nausea and vomiting Anorexia Insomnia Anxiety and depression

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
NCT02274519	Complete, results not available	02 Neoplasms	Multiple myeloma (undergoing autologous stem cell transplantation)	29	Tai Chi	Educational advice	--	--	Pain (NIH PROMIS Short form) Depression (NIH PROMIS Short form) Anxiety (NIH PROMIS Short form) Social isolation (NIH PROMIS Short form) Sleep (NIH PROMIS Short form)
Liu 2011	Conf abstract	02 Neoplasms	Non-small cell lung cancer	27	Tai Chi (Yang style 24-form)	Control (no intervention)	--	--	Peripheral blood mononuclear cells proliferative capability Peripheral blood mononuclear cells cytolytic activity
NCT03482323	Complete, results not available	02 Neoplasms	Non-small cell lung cancer (stage IIIB or IV)	30	Tai Chi (Yang style)	Control (no intervention)	Conventional physical exercise (aerobic)	--	1-year survival Physical activity (accelerometer) Biomarkers (melatonin, cortisol) Aerobic capacity (6-min walk test) Functional mobility (timed up & go) Strength and endurance (timed sit to stand) Balance (single-leg stance) Perceived physical function (Get Active questionnaire) Immune function (cytotoxicity of NK cells, spontaneous or phytohemagglutinin (PHA)-stimulated T-lymphocyte proliferation) QoL, disease-specific (QLQ-LC13) Hospital Anxiety and Depression Scale Pittsburgh Sleep Quality Index [PSQI]
Xue 2019	Conf abstract	06 Mental and behavioural disorders	21 Symptoms of depression (university students)	60	Tai Chi	Control (usual activities)	Tai Chi + psychological adjustment	--	Depression (Self-Assessment Scale)
Khesali 2015, 2018	Not in English	06 Mental and behavioural disorders	21 Symptoms of depression and anxiety (women 60+ yrs)	60	Tai Chi (Yang style)	Control (no intervention)	--	--	Anxiety (State-Trait Anxiety Inventory) Depression (Geriatric Depression Scale)

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
Pang 2010 (Conf abstract)	Not in English, Full text not able to be retrieved	06 Mental and behavioural disorders	Mental illness (teenagers)	?	Tai Chi	?	Wellness education program (attention control)	?	No information
Liao 2012	Not in English, Full text not able to be retrieved	06 Mental and behavioural disorders	Mood disorder, Depression (adults 60+ yrs)	68	Tai Chi	Control (usual activities)	--	--	Depression (Geriatric Depression Scale) QoL (SF-36)
Cai 2010	Not in English, Full text not able to be retrieved	06 Mental and behavioural disorders	Mood disorders, Depression	100	Tai Chi	Control (no intervention)	--	Usual care	Depression (Self-Assessment Scale) Anxiety (Self-assessment scale)
Yeung 2017, NCT01619631	Full text not able to be retrieved	06 Mental and behavioural disorders	Mood disorders, Depression (18+ yrs))	67	Tai Chi	Control (waitlist)	Wellness education program (attention control)	--	Depression (Hamilton Depression Scale, HAM-D)
Zheng 2013	Conf abstract	06 Mental and behavioural disorders	21 Symptoms of Anxiety, adults (18-60 yrs)	21	Tai Chi	Control (waitlist)	Gym exercise	--	Anxiety (State-Trait Anxiety Inventory) Stress, perceived (PSS-14)
Zhang 2011d	Not in English, Full text not able to be retrieved	06 Mental and behavioural disorders	Anxiety or fear-related, Generalised anxiety disorder	72	Tai Chi	Control (no intervention)	--	Standard medical care	Anxiety (Hamilton Anxiety Scale, HAM-A)
Hai-Jun 2020	Full text not able to be retrieved	06 Mental and behavioural disorders	Neurocognitive, Mild cognitive impairment	108	Tai Chi	Control (no intervention)	Conventional rehabilitation therapy	Educational advice	No information
Xie 2018	Conf abstract	08 Diseases of the nervous system	Migraine, episodic (women)	82	Tai Chi (Yang style)	Control (waitlist)	--	--	Migraine attacks, frequency of Headache, duration of Headache intensity (VAS) Stress (Perceived Stress Scale, PSS) Sleep quality (Pittsburgh Sleep Quality Index [PSQI])

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
									Sleep quantity (Sleep log) Fatigue (Numeric Rating Scale) HRQoL (SF-36) Body composition (weight, height, waist circumference, hip circumference, fat %)
Mirzaei 2017, Irct2016012422194N	Not in English	08 Diseases of the nervous system	Multiple sclerosis	72	Tai Chi	Control (usual activities)	Core stability	--	Balance, static Balance, dynamic QoL
Guan 2016	Not in English, Full text not able to be retrieved	08 Diseases of the nervous system	Parkinson's disease	62	Tai Chi	Control (no intervention)	Conventional rehabilitation exercises	--	Gait Balance, confidence (activities-specific) Functional mobility (timed up & go) Balance (Berg Balance Scale)
Li 2017	Not in English, Full text not able to be retrieved	08 Diseases of the nervous system	Parkinson's disease	60	Tai Chi	Control (no intervention)	--	Standard medical care	Balance (Berg Balance Scale) Self-efficacy (Modified Falls Self-efficacy Scale) Motor recovery (Fugl-Meyer test)
Zhu 2019, Zhu 2020	Full text not able to be retrieved	08 Diseases of the nervous system	Parkinson's disease (mild-moderate)	41	Tai Chi	Control (no intervention)	--	Aerobic exercise	Symptoms of Parkinson's Disease (Unified PD Assessment Scale Section 3 Balance (Berg Balance Scale) Parkinson's Disease HRQoL (PDQ-39) Sleep disruption (Parkinson's Disease Sleep Scale [PDSS]) Hamilton Depression Scale [HAM-D] Hamilton Anxiety Scale [HAM-A] Montreal Cognitive Assessment [MOCA]
Hass 2011	Conf abstract	08 Diseases of the nervous system	Parkinson's disease, idiopathic	24	Tai Chi	Control (no intervention)	--	--	Cognitive function (Trail making test) Executive function (Stroop Color and Word Test) Cognitive function, working memory (Digits backwards) Balance (Tinetti scale) Parkinson's Disease HRQoL (PDQ-39)

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
Harkin 2016	Conf abstract	08 Diseases of the nervous system	Stroke recovery	50	Tai Chi	Control (no intervention)	Conventional rehabilitation exercises	Usual care	Berg Balance Scale Number of Falls HRQoL (SF-12) Geriatric Depression Scale Falls efficacy scale Feasibility
NCT02868840	Complete, results not available	08 Diseases of the nervous system	Stroke recovery	50	Tai Chi	Control (usual care)	--	--	Balance (postural stability) Activities of daily living (Modified Rankin scale) Strength, knee flexor and extensor Cognitive function (Montreal cognitive function assessment scale)
NCT03252236	Complete, results not available	08 Diseases of the nervous system	Stroke recovery	56	Tai Chi (Yang style 12-form)	Control (no intervention)	Conventional physical exercise	--	Cognitive function (Dual-task performance tests) Arterial compliance, large and small Functional ambulation (Single turning-while-walking test) Functional ambulation (Single stepping back test) Functional ambulation (Single stepping down test) Cognitive function, executive (Stroop Color and Word Test) Heart Rate Variability (HRV)
Norouzian 2017	Not in English, Full text not able to be retrieved	08 Diseases of the nervous system	Stroke recovery (women, 60+ yrs)	20	Tai chi (Yang style 24-form)	Control (no intervention)	--	--	Cognitive status (Mini Mental State Examination) QoL (SF-36) Functional mobility (timed up & go)
ChiCTR-IIC-17013986, ChiCTR-IPR-17013756	Complete, results not available	11 Diseases of the circulatory system	Coronary Heart Disease	20	Tai Chi (Yang style short form)	Control (waitlist)	--	--	Strength, leg Flexibility, leg Aerobic capacity and endurance Balance, dynamic and static Perceived stress

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
									Depression Social support Exercise self-efficacy QoL Blood glucose Blood pressure Lipid profile (LDL, HDL, triglycerides)
Liu 2020, ChiCTR1800015728, ChiCTR1800016096	Conf abstract	11 Diseases of the circulatory system	Coronary heart disease	98	Tai chi (Yang style 24-form)	Control (usual care)	--	--	Physical function (2 min step test, chair stand, chair sit & reach, 8ft up & go) Perceived stress Depression Social support Self efficacy QoL Cardiovascular risk factors
Ni 2010	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Coronary heart disease	?	Taijiquan	?	?	?	Modified albumin
Wu 2016	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Coronary heart disease	120	Tai Chi (Yang style 24-form)	Control (no intervention)	Qi Gong (8-segment jin) 'Tai Chi + Qi Gong	--	Anxiety (Anxiety Self-Assessment Scale, SAS) Depression (Self-Assessment Scale)
Wu 2018	Conf abstract	11 Diseases of the circulatory system	Coronary heart disease and/or hypertension	120	Tai Chi	Control (waitlist)	--	--	Anxiety (Anxiety Self-Assessment Scale, SAS) Depression (Self-Assessment Scale) Perceived Stress (Perceived Stress Scale) Aerobic capacity (6-min walk test) Blood pressure, diastolic QoL

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
Sha 2007	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Coronary heart disease, Atherosclerosis	40	Tai Chi	Control (no intervention)	--	--	Biomarkers (Nitric oxide) Lipid profile (LDL, HDL, Triglycerides)
Redwine 2014a	Conf abstract	11 Diseases of the circulatory system	Heart failure, chronic	30	Tai Chi	Control (no intervention)	Resistance Band training	Standard care	No information
Redwine 2014b, Redwine 2014c	Conf abstract	11 Diseases of the circulatory system	Heart failure, chronic	40	Tai Chi	Control (no intervention)	Resistance Band training	Standard care	No information
Caminiti 2010 (a&b)	Conf abstract	11 Diseases of the circulatory system	Heart failure, chronic (NYHA class II-III)	27	Tai Chi (Yang style)	Control (no intervention)	--	Conventional physical exercise	Aerobic capacity (6-min walk test) Heart electrical activity (Electrocardiogram) Heart rate variability (HRV) Strength, quadriceps (Maximal voluntary contraction [MVC] and peak torque [PT]) Blood pressure Heart rate QoL (not specified)
Lee 2004	Not in English	11 Diseases of the circulatory system	Hypertension	28	Tai Chi	Control (no intervention)	--	--	Blood pressure, systolic and diastolic Lipid profile (LDL, HDL, Triglycerides) Biomarkers (Cortisol)
Chen 2006	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Hypertension	40	Tai Chi	Control (no intervention)	--	Usual care (drug treatment)	Blood pressure Biomarkers (Nitric oxide) Erythrocyte membrane sodium transport Calcium pump activity
Chen 2013a	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Hypertension	68	Tai Chi (Yang style short form)	Control (usual activities)	Aerobic activity (walking)	--	Blood pressure, systolic and diastolic
Livramento 2011	Not in English	11 Diseases of the circulatory system	Hypertension	22	Taiji Qigong (18 steps)	Control (usual activities)	--	--	Blood pressure (systolic) Blood pressure (diastolic) QoL

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
									"mental aspects"
Luo 2006	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Hypertension	?	Tai Chi	?	Wellness education program (attention control)	Standard medical care	No information
Mao 2006	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Hypertension	62	Tai chi (Yang style 24-form)	Control (usual activities)	--	--	Blood pressure Biomarkers (Endothelin, Nitrogen monoxidium)
Shen 2000	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Hypertension	60	Tai Chi Qigong (18-form)	Control (usual activities)	Standard medical care (blood pressure lowering tablets)	--	Self-efficacy blood pressure?
Tang 2009	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Hypertension	48	Tai Chi	Control (no intervention)	Qi Gong		Blood pressure Efficacy?
Wen 2005 (Conf abstract)	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Hypertension	?	Tai Chi	?	?		No information
Bi 2005	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Hypertension (mild-moderate)	83	Tai Chi	Control (no intervention)	--	--	Blood fluidity/viscosity
Wang 2011b	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Hypertension (with 'liver and kidney yin deficiency')	?	Tai Chi	Control (no intervention)	--	--	Biomarkers (C-reactive protein [CRP]) Blood pressure, systolic and diastolic Balance Insomnia Dreaminess

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
									Dizziness Tinnitus Fatigue Irritability
Li 2020a	Conf abstract	11 Diseases of the circulatory system	Hypertension, pre or Stage 1	68	Tai Chi	Control (no intervention)	--	--	Blood pressure, systolic and diastolic Short-term mood state (Profile of Mood States [POMS])
Zhou 2007	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Hypertension, stage I	120	Tai Chi	Control (no intervention)	--	Salt restricted diet	Blood pressure Lipid profile (LDL, HDL, Triglycerides)
Ding 2013	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Rehabilitation after acute event (percutaneous coronary intervention)	?	Tai Chi	?	?	Running	No information
Zhang 2011c	Not in English, Full text not able to be retrieved	11 Diseases of the circulatory system	Rehabilitation after acute event, myocardial infarction	150	Tai Chi	Control (no intervention)	--	Standard medical care	QoL Aerobic capacity and endurance (6-min walk test) Left ventricular ejection fraction (LVEF)
Du 2013a	Not in English, Full text not able to be retrieved	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	?	Tai Chi	Control (no intervention)	--	--	Aerobic capacity and endurance (6-min walk test) COPD impacts (Chronic Obstructive Pulmonary Disease Assessment Test, CAT) Blood oxygen saturation Lung function
Du 2013b	Not in English, Full text not able to be retrieved	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	112	Tai Chi (Yang style short form)	Control (no intervention)	--	--	Body composition (BMI) Lung function (ppFEV1) Respiratory disturbance during sleep (Respiratory disturbance index) Aerobic capacity and endurance (6-min walk test) Predicted survival (BMI, airflow obstruction, dyspnoea, and exercise index, BODE index)

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
									COPD impacts (St George Respiratory Process Q score)
Du 2014a	Not in English, Full text not able to be retrieved	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	74	Tai Chi (Yang style)	Control (usual activities)	--	--	Biomarkers (serum IL-6, IL-8, TNF-alpha)
Du 2014b	Not in English, Full text not able to be retrieved	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	?	Tai Chi	Control (no intervention)	--	--	Biomarkers (blood gas)
Min 2017	Conf abstract	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	100	Tai Chi	Control (usual care)	Usual care with total body recumbent stepper (TBRS) Tai Chi + TBRS	--	COPD impacts (St George Respiratory Process Q score) Anxiety and depression (Hospital Anxiety and Depression Scale) Balance (Berg Balance Scale)
Yao 2004	Not in English, Full text not able to be retrieved	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	?	Tai Chi	?	?	?	No information
Zhang 2012	Not in English, Full text not able to be retrieved	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease	90	Tai Chi (Yang style short form)	Control (no intervention)	Nifedipine treatment	Respiratory muscle training (RMT)	Lung function Aerobic capacity and endurance (6-min walk test) COPD Social and Psychological Influence (St George Respiratory Process Q score, social and psychological influence)
ACTRN12617000242325	Complete, results not available	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease (55+ yrs)	66	Tai Chi (Sun style)	Control (usual activities)	Conventional physical exercise (aerobic)	--	Cognitive function (Trail making test, digit span test, calculation) Exercise capacity (ergometry) Cerebral oxygenation, during cognitive tests (Near infrared spectroscopy) Tissue oxygenation, during ergometry (Near infrared spectroscopy)

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
									Aerobic capacity and endurance (6-min walk test) Strength, quadriceps (dynamometer) Physical activity (accelerometer) QoL (St. George's Respiratory Questionnaire [SGRQ])
Wang 2014	Not in English, Full text not able to be retrieved	12 Diseases of the respiratory system	Chronic obstructive pulmonary disease (moderate-severe)	24	Tai Chi	Control (usual care)	--	Standard medical care (salmeterol/fluticasone)	Lung function Aerobic capacity and endurance (6-min walk test) QoL Predicted survival (BMI, airflow obstruction, dyspnoea, and exercise index, BODE index)
NCT03660254	Complete, results not available	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Osteoarthritis (65+ yrs)	100	Tai Chi	Control (no intervention)	--	--	Height Weight Strength, muscle Endurance Heart rate Flexibility (sit and reach) Balance (single-leg stance) Walking
NCT03872869	Complete, results not available	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Osteoarthritis (hip)	89	Tai Chi for arthritis	Control (no intervention)	Wellness education program (Hip school)		Symptoms (Hip osteoarthritis outcomes score [HOOS]) Body awareness and movement quality (Body Awareness Scale Movement Quality and Experience [BAS MQ-E]) Aerobic capacity and endurance (6-minute walk test) HRQoL (SF-36) Self-efficacy (Arthritis self-efficacy scale)
Manlapaz 2020	Conf abstract	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Osteoarthritis (knee, 60+ yrs)	36	Tai Chi	Control (no intervention)	WiiFit balance program	Physical therapy	Balance (Berg Balance Scale) Functional mobility (timed up & go) Physical activity enjoyment (Physical Activity Enjoyment Scale)

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
Duan 2012	Not in English, Full text not able to be retrieved	15 Diseases of the musculoskeletal system or connective tissue	Arthropathies, Periarthritis of shoulder	202	Tai Chi	Control (no intervention)	--	Usual care	Shoulder activity Shoulder efficiency Recurrence rate
Bhatti 1998	Full text not able to be retrieved	21 Symptoms, signs or clinical findings, not elsewhere classified	Low back pain	50	Tai Chi Chih	Control (no intervention)	--	--	Depression (Beck Depression Inventory)
Kleinert 2010	Not in English	21 Symptoms, signs or clinical findings, not elsewhere classified	Low back pain	24	Tai Chi Quan	Control (no intervention)	Traditional Chinese Medicine thinking	--	Mood Pain
NCT03299192	Complete, results not available	21 Symptoms, signs or clinical findings, not elsewhere classified	Low back pain, chronic (nonspecific, 65+ yrs)	57	Tai Chi (Yang style)	Control (usual care)	Health Education	--	Disability (RMDQ)
Xiao 2008	Not in English, Full text not able to be retrieved	21 Symptoms, signs or clinical findings, not elsewhere classified	Soft tissue disorders, Lumbar muscle strain (acute)	?	Tai Chi	Control (no intervention)	--	Conventional physical therapy	Flexibility, psoas muscle Strength, muscle Muscle electrical activity (Electromyography amplitude)
Hart-Hughes 2010	Conf abstract	25 Prevention	Peripheral neuropathy, distal (falls prevention)	100	Tai Chi	Educational advice	Functional balance training	--	Self-efficacy (Modified Falls Self-efficacy Scale) Functional mobility (timed up & go) Balance (Berg Balance Scale) Balance (selected NeuroCom system balance variables) Gait (Spatiotemporal gait parameters)

STUDY ID	Notes	ICD 11 Category	CONDITION (population)	N	Intervention	Comparator 1 (inactive)	Comparator 2 (other)	Co-interventions	Outcome measures
Qiu 2008	Not in English, Full text not able to be retrieved	25 Prevention	Falls, older adults (frail, senile) at risk of...	?	Taijiquan	?	?	?	No information
Zeng 2009	Not in English, Full text not able to be retrieved	25 Prevention	Falls, older adults (frail, senile) at risk of...	?	Taijiquan	?	Wellness education program (attention control)	?	No information
Valero Serrano 2010	Not in English	25 Prevention	Falls, older adults (in assisted living) at risk of...	94	Tai Chi	Control (no intervention)	--	--	Falls, number of Fractures Trips/losses of balance, number of
Zeeuwe 2006, ISRCTN98840266	Complete, results not available	25 Prevention	Falls, older adults (with history of falls/fear of falling) at risk of...	?	Tai Chi (Yang style short form)	Control (usual care)		--	Falls, number of Balance Falls, fear of Blood pressure Heart frequency Lung parameters Physical activity Self-efficacy QoL Mental health Falls, severity of Medication/medical services usage
Roberts 2010	Conf abstract	25 Prevention	Falls, older adults (with mobility difficulty) at risk of...	46	Tai Chi (Yang style 8-form)	Control (no intervention)	--	--	Function and disability (Late Life Function and Disability Instrument [Late-Life FDI]) Difficulty walking and climbing stairs (5-point Likert rating)

C7 Description of studies from low and non-priority populations (not included in the synthesis)

C7.1 Certain infectious and parasitic diseases

Three citations (108-110) corresponding to 2 RCTs (Galantino 2005, McCain 2008) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There were no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Both studies were carried out in the United States, with sample size ranging from 51 (Galantino 2005) to 252 (McCain 2008). Galantino 2005 enrolled men attending one of 2 outpatient clinics who were aged between 20 and 60 years and were living with advanced AIDs. McCain 2008 enrolled adults living with HIV who were being treated at a university-affiliated medical clinic. Both studies excluded participants with a cognitive impairment or other central nervous system involvements.

The studies compared a modified form of Tai Chi with control (no intervention or waitlist). Galantino 2005 also included an active comparator that consisted of aerobic exercises focused on strength and endurance. Tai Chi and aerobic exercise sessions were carried out twice weekly for 8 weeks; the duration of each session was not specified. McCain 2008 included 2 additional active intervention groups: cognitive behavioural relaxation training or spiritual growth. Sessions for each intervention were 90-minutes in duration and were practised once per week for 10 weeks.

C7.2 Disease of the immune system

One citation (111) corresponding to one RCT (Cetin 2020) was identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There were no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Cetin 2020 was carried out in a single centre setting in Turkey with a sample size of 34 participants. The study enrolled adults aged 18 to 65 years with systemic sclerosis who had been sedentary for the past 3 months. Participants with cardiac involvement, pulmonary hypertension, psychiatric disorder or metastatic cancer were excluded.

Cetin 2020 compared a Yang style form of Tai Chi against a home exercise program. Exercises were practised once per week for 10 weeks with each session being one hour in duration.

C7.3 Endocrine, nutritional or metabolic diseases

C7.3.1 Diabetes

Fifteen citations (68-81) corresponding to 10 RCTs (Chen 2010, Lam 2008, Liu 2012, Orr 2006, Pardasany 2010, Rafii 2018, Tsang 2007, Xiao 2015b, Youngwanichsetha 2013, Zhang 2008) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are 9 studies awaiting classification (see **Appendix C4**) and 4 ongoing studies (see **Appendix C5**).

One RCT (Liu 2012) enrolled people with elevated blood glucose or diabetes and who were not receiving any medication for glucose control. Nine RCTs were conducted in people with type 2 diabetes, with one study focused on adults aged between 40 and 60 years (Pardasany 2010), one study focused on adults aged over 40 with a BMI between 30 to 35 (Chen 2010), 2 studies focused on adults older than 50 or 60 years (Tsang 2007, Xiao 2015b), and 2 studies focused on women only (Youngwanichsetha 2013, Zhang 2008).

Six RCTs compared various types of Tai Chi (e.g. modified Yang, Chen or Sun style, Tai Chi Ball) with an inactive comparator (no intervention, usual care or waitlist) (Lam 2008, Liu 2012, Orr 2006, Pardasany 2010, Rafii 2018, Tsang 2007, Xiao 2015b, Youngwanichsetha 2013). With 2 RCTs also including an active comparator being either yoga (Pardasany 2010) or walking (Rafii 2018). The other 4 RCTs compared Tai Chi (modified Sun, Chen, or Yang style) with either conventional physical exercise (Chen 2010), a low-impact exercise including calisthenics and gentle stretching (Orr 2006, Tsang 2007) and a non-exercise activity (Zhang 2008).

C7.3.2 Overweight, obesity or specific nutrient excesses

Nine citations (115-124) corresponding to 5 RCTs (Beebe 2012, Dechamps 2009a, Liu 2015, Song 2015, Tsang 2009) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There is one study awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

All 5 studies were carried out in single centre setting in either the United States (Beebe 2012), France (Dechamps 2009a), China (Song 2015) or Australia (Liu 2015b, Tsang 2009a). Sample sizes ranged from 20 to 213 (total 331) and included participants who were overweight or obese (BMI over 30 kg/m^2). One study (Liu 2015b) enrolled adults aged 18 to 80 years with central obesity (defined by a waist circumference greater than 95 cm [men] or greater than 80 cm [women]) and 2 studies (Beebe 2012, Dechamps 2009a) recruited women only. One RCT (Song 2015) included obese adults aged between 55 and 65 years with secondary hyperlipidaemia. One study (Tsang 2009a) enrolled adolescents (school years 6 to 12) who were overweight/obese based on international BMI cut-off points for children.

Two studies compared Tai Chi (Yang style [Beebe 2012] or Kaimai style [Liu 2015b]) with an inactive control (no intervention or waitlist). Participants in Beebe 2012 also received dietary education sessions based on a modified DASH diet (Dietary Approaches to Stop Hypertension). Three studies compared a modified form of Tai Chi with a variety of active controls including a conventional structured exercise program (Dechamps 2009a), auricular plaster therapy (Song 2015) or Kungfu of the Coy Lee Hung Sing Gwoon style (Tsang 2009a). Participants in Dechamps 2009a also received a weight management program as a cointervention. Across all 5 RCTs, Tai Chi sessions typically lasted 45-60 minutes in duration but ranged in intensity from twice a day for 24 weeks (Song 2015), to 3 times a week for 16 (Beebe 2012) or 24 weeks (Liu 2015b, Tsang 2009a), down to once a week for 10 weeks (Dechamps 2009a).

C7.3.3 Metabolic syndrome

Three citations (112-114) corresponding to one RCT (Leung 2019) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There is one study awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Leung 2019 was carried out in a single centre setting in Hong Kong with a sample size of 54 participants. The trial enrolled adults with metabolic syndrome with criterium defined by the National Cholesterol Education-Adult Treatment Panel III. Participants with prior Tai Chi experience or with cardiovascular disorders, cognitive impairment or met depression criteria were excluded. Participants were older adults (average age of 64 years) and included both men and women.

Leung 2019 compared the 24-form Yang style Tai Chi with a non-exercise activity. The Tai Chi sessions lasted 60 minutes in duration and were delivered twice per week for 12 weeks. Participants were also encouraged to perform 30-minutes of self-practise at home 3 times per week for the trail duration. Participants in the control group attended weekly 60-minute recreational classes consisting of handcraft and Chinese calligraphy.

C7.3.4 Polycystic ovary syndrome

One ongoing study conducted in participants with polycystic ovary syndrome was identified in the literature (see **Appendix C5**). No additional studies were identified in the Department's public call for evidence (see **Appendix C2**) and there are no studies awaiting classification (see **Appendix C4**).

C7.4 Mental, behavioural or neurodevelopmental disorders

C7.4.1 Mood disorders

One ongoing study in people with bipolar disorder was identified in the literature (see **Appendix C5**). No additional studies were identified in the Department's public call for evidence (see **Appendix C2**) and there are no studies awaiting classification (see **Appendix C4**).

C7.4.2 Neurodevelopmental

One citation (82) corresponding to one RCT (Kong 2019) was identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There is one study awaiting classification (see **Appendix C4**) and 2 ongoing studies (see **Appendix C5**).

Kong 2019 enrolled 66 participants from 3 schools in China who had been diagnosed with an intellectual disability (IQ score below 70). Participants were aged between 10 and 18 years and were excluded if they had Downs Syndrome or had participated in an exercise program in the previous 6 months.

Kong 2019 compared the effects of Tai Chi (8-form short) with a non-exercise intervention (arts/craft activities). The study also included an active aerobic dance exercise group. The exercise sessions lasted 60 minutes in duration and were delivered twice per week for 12 weeks. Exercise intensity was measured using a heart rate monitoring system and step count.

C7.4.3 Schizophrenia and related

Three citations (83-85) corresponding to 2 RCTs (Ho 2012, Ho 2014) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Ho 2012 and Ho 2014 enrolled participants aged between 18 and 65 years who had been diagnosed with schizophrenia and were receiving care at a mental rehabilitation complex in Hong Kong. Ho 2012 was a pilot study enrolling 30 participants, with the 2014 study enrolling 153 participants.

Both RCTs compared the effects Tai Chi (Wu style Cheng-form) with a waitlist control, delivered as an adjunct to routine medical care. Ho 2014 also included an active low-impact exercise intervention that included walking, stepping and mild weight training. In Ho 2012, the Tai Chi group attended 60-minute group sessions twice weekly for 6 weeks, with an additional 30-minute practise session held once per week over 12 weeks. In Ho 2014, the exercise interventions were 60-minutes in duration and were practised once a week in a group setting (20 people), with 2 additional sessions per week practised under the guidance of a mental health professional. The interventions were delivered over 12 weeks, with participants then able to practice the intervention on a voluntary basis for an additional 12 weeks (maintenance).

C7.4.4 Stress disorders

One ongoing study in people with post-traumatic distress disorder was identified in the literature (see **Appendix C5**). No additional studies were identified in the Department's public call for evidence (see **Appendix C2**) and there are no studies awaiting classification (see **Appendix C4**).

C7.4.5 Substance abuse

Six citations (86-91) corresponding to 3 RCTs (Li 2013, Zhu 2016, Zhu 2018) and one quasi-RCT (Oh 2016) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are 4 studies awaiting classification (see **Appendix C4**) and one ongoing study (see **Appendix C5**).

Three studies (Li 2013, Zhu 2016, Zhu 2018) were conducted at single centres in China that specialised in detoxification and rehabilitation. One study (Oh 2016) was conducted at a single hospital setting in Korea. One study (Li 2013) enrolled 70 women with a diagnosis of opioid dependence who were beginning to undergo withdrawal. Two studies enrolled either 60 men (Zhu 2016) or 80 women (Zhu 2018) who had an amphetamine-type stimulant dependence. One study (Oh 2016) enrolled 50 patients who had been hospitalised due to alcohol-dependence.

Two studies (Li 2013, Oh 2016) compared the effect of Tai Chi with control (no intervention), with Tai Chi being delivered as an adjunct to the routine hospital rehabilitation program in one study (Oh 2016). In Li 2013, Tai Chi was practised for 60 minutes every other day over a six-month period. In Oh 2016, patients practiced the 24-posture Yang style Tai Chi for 50 minutes 3 times a week for 8 weeks. Two studies compared the effect of Tai Chi with the standard rehabilitation program that included a 5-minute recreational activity (Guang Bo Ti Cao), a 5-minute gesture language exercise and a self-directed education period (books, TV). In Zhu 2016, participants practised a 24-posture Yang style Tai Chi for 60 minutes 5 times a week for 12 weeks. In Zhu 2018, participants practised a 24-posture Yang style Tai Chi for 60 minutes 5 times a week for 12 weeks, then 3 times per week for a second 12 weeks.

C7.5 Sleep-wake disorders

C7.5.1 Insomnia

Eight citations (125-131) corresponding to 3 RCTs (Irwin 2014b, Li 2014, Yue 2016) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are 2 studies awaiting classification (see **Appendix C4**) and one ongoing study (see **Appendix C5**).

All 3 RCTs were carried out in a multicentre community setting in the United States (Irwin 2014b, Li 2014) or China (Yue 2016). The studies enrolled participants diagnosed with primary or chronic general insomnia; 2 studies (Irwin 2014b, Yue 2016) included older adults aged 55 to 60 years or over and one study (Li 2014) included women transitioning to menopause (mean age 50 to 51.5 years). Total participants ranged from 90 to 170 (total 383 participants).

Two studies (Li 2014, Yue 2016) compared a 24-posture Yang style Tai Chi with control (no intervention). In Yue 2016, the intervention was delivered as an adjunct to acupoint massage. In 2 studies (Irwin 2014b, Li 2014) Tai Chi was compared to an active control; being either a sleep education program (Irwin 2014b) or auricular point sticking (Li 2014). The sleep education program was held once a week for 16 weeks and consisted of a 60-minute video presentation followed by a 60-minute question-and-answer period. In all studies, Tai Chi sessions were typically 45 to 60 minutes in duration but ranged in intensity from twice a week for 16 weeks (Irwin 2014b), to 5 times a week for 8 weeks (Li 2014) up to twice daily for 24 weeks (Yue 2016).

C7.5.2 Sleep disturbance

Two citations (132, 133) corresponding to 2 RCTs (Hosseini 2011, Li 2004b) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

One study was conducted in a single residential home in Iran (Hosseini 2011) and one study enrolled participants from a community in the United States (Li 2004b). One study (Hosseini 2011) enrolled adults older than 65 years who had received a score of 5 or more on the PSQI and one study (Li 2004b) included adults older than 60 years who had reported moderate sleep complaints.

One study (Hosseini 2011) compared a modified short-form of Tai Chi (10-form) with control (no intervention) and one study (Li 2004b) compared a simplified 8-form Yang style Tai Chi with a low-impact exercise that consisted of controlled breathing, stretching and relaxation. In Li 2004b, exercise sessions lasted 60 minutes and continued 3 times a week for 24 weeks (Li 2004b). In Hosseini 2011, Tai Chi classes were performed 3 times a week for 12 weeks, with sessions starting at 5 minutes in duration, progressively increasing by 5 minutes each week.

C7.5.3 Obstructive sleep apnoea

Two citations (134, 135) corresponding to one RCT (Gokmen 2017) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Gokmen 2017 was a single centre study conducted at a sleep disorder facility in Turkey. The study enrolled 50 adult patients aged between 30 and 65 years who had been diagnosed with obstructive sleep apnoea defined by the apnoea-hypopnoea index (AHI) and assessed by all-night polysomnography to be either mild (AHI: 5 to 15) or moderate (AHI: 15-30).

Gokmen 2017 examined the effect of a modified Tai Chi Qigong program compared with a home exercise program that consisted of breathing and posture exercise. In the Tai Chi group, supervised sessions were 60 minutes in duration practised 3 times per week for 12 weeks, with participants also provided with leaflets to guide home-based practise 2 days per week. Tai Chi exercises were performed using Tan Tien breathing that involves the participant slowly inhaling and exhaling through the nose (from the Tan Tien that lies 3 cm below the naval and one-third into the body).

C7.6 Disease of the nervous system

C7.6.1 Chronic fatigue syndrome

One study awaiting classification was identified in the literature (see **Appendix C4**). No additional studies were identified in the Department's public call for evidence (see **Appendix C2**) and there were no ongoing studies (see **Appendix C5**).

C7.7 Disease of the visual system

One citation (136) corresponding to one quasi-RCT (Chen 2012) was identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There were no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Chen 2012 was conducted in a multicentre setting in Hong Kong. The trial included adults aged 70 years and older who were visually impaired; defined as low vision with visual acuity less than 6/18 but better than 3/60 in the better eye with the best possible correction. Participants with vestibular problems, symptomatic cardiovascular disease, acute orthopaedic problems that affect ambulation or metastatic cancer were excluded.

Chen 2012 examined the effectiveness of a modified Yang style (8-form) Tai Chi on balance control, muscle strength and falls prevention. The Tai Chi classes emphasised multidirectional weight shifting, head and trunk rotation and awareness of body alignment with verbal cuing and physical guidance provided. Participants in the comparator group joined in a non-exercise intervention that involved being taught how to play the Djembe (a percussion instrument). In both groups, sessions were 90 minutes in duration and delivered 3 times a week for 16 weeks.

C7.8 Diseases of the ear or mastoid process

Four citations (137-140) corresponding to one RCT (McGibbon 2004) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There were no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

McGibbon 2004 was carried out in a single centre setting in the United States and enrolled 53 adults (mean age 56.25 years) with gait and balance impairment secondary to vestibular hypofunction. Participants with previous experience in a Tai Chi program or who have participated in vestibular rehabilitation in the previous 6 months were excluded.

McGibbon 2004 compared the effectiveness of a 5-form Yang style Tai Chi with an exercise program that included vestibular adaptation exercises and specific balance training specifically designed for those with vestibular hypofunction and to promote gaze stability. In both groups, exercise sessions lasted 70 minutes and were delivered once per week for 10 weeks.

C7.9 Diseases of the digestive system

C7.9.1 Functional constipation

One ongoing study in people with functional constipation was identified in the literature (see **Appendix C5**). No additional studies were identified in the Department's public call for evidence (see **Appendix C2**) and there were no studies awaiting classification (see **Appendix C4**).

C7.9.2 Irritable bowel syndrome

One study awaiting classification was identified in the literature (see **Appendix C4**). No additional studies were identified in the Department's public call for evidence (see **Appendix C2**) and there were no ongoing studies (see **Appendix C5**).

C7.9.3 Non-alcoholic fatty liver disease

One study awaiting classification was identified in the literature (see **Appendix C4**). No additional studies were identified in the Department's public call for evidence (see **Appendix C2**) and there were no ongoing studies (see **Appendix C5**).

C7.10 Diseases of the musculoskeletal system or connective tissue

C7.10.1 Chronic ankle instability

One citation (141) corresponding to one RCT (Cruz-Diaz 2019) was identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There were no studies awaiting classification (see **Appendix C4**) and one ongoing study (see **Appendix C5**).

Cruz-Diaz 2019 was conducted at a university setting in Spain. The study enrolled 52 participants (mean age 35.8 years) who had sprained their ankle sprain in the 6 months prior to enrolment and presented with chronic ankle instability (including recurrent instability, chronic pain and swelling).

Cruz-Dias 2019 compared a 24-form Yang style Tai Chi with a waitlisted control. The Tai Chi sessions were 60 minutes in duration and were practised twice a week for 12 weeks. The control group were offered the opportunity to participate in the Tai Chi program after being released from the study.

C7.10.2 Osteopathies

Ten citations (92-101) corresponding to 4 RCTs (Alp 2009, Chyu 2010, Maciaszek 2007, Shen 2009) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are 4 studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

All 4 studies were conducted by a single centre and enrolled participants from community settings in either Turkey (Alp 2009), United States (Chyu 2010, Shen 2009) or Poland (Maciaszek 2007). One study (Alp 2009) enrolled women (mean age 70.2 years) with osteoporosis (bone mineral density T-scores –2.5 or less). Two studies enrolled women (Chyu 2010, Shen 2009) with osteopenia (T-score between –1 and –2.5) and one study (Maciaszek 2007) enrolled men aged between 60 and 82.1 years who had osteopenia or osteoporosis (T-scores –1 or less). Sample sizes ranged from 44 to 140 (total 494 participants).

Three studies (Alp 2009, Chyu 2010, Maciaszek 2007) compared Tai Chi with control (no intervention). Participants in Chyu 2010 also received 500 mg elemental calcium and 200 IU Vitamin D (as cholecalciferol) daily and participants in Alp 2009 were allowed to continue standard medical care (including antiresorptive and calcitonin). In 2 studies (Alp 2009, Chyu 2010), 24-form Yang style Tai Chi sessions were practised 3 times a week for 24 weeks and were 60 minutes in duration (including warm-up and cool-down). In one study (Maciaszek 2007), 5-sequences of the 24-form Yang style Tai Chi was practised twice a week for 18 weeks, with each session being 45 minutes in duration.

One study (Shen 2009) compared Tai Chi with a placebo control (1x 250 mg medicinal starch capsule taken twice daily). Shen also included 2 active intervention groups: green tea polyphenols (GTP) (1x 250 mg GTP capsule taken twice daily) and Tai Chi delivered in combination with GTP. All participants also received 500 mg elemental calcium and 200 IU Vitamin D (as cholecalciferol) daily.

C7.10.3 Sarcopenia

Two citations (102, 103) corresponding to one RCT (Zhu 2016b) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There were no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Zhu 2016b was conducted via a single residential centre in China. The study enrolled 90 ambulant men aged older than 85 (mean age 88.6 years) who had been diagnosed with sarcopenia. Participants with comorbid conditions such as diabetes, cardiovascular disease, knee or hip prosthesis were not eligible for inclusion.

Zhu 2016b compared a simplified 8-form Tai Chi with an inactive (no intervention) and an active intervention (whole body vibration [WBV]). All participants also received 40-minute health education sessions that were delivered once per month. The Tai Chi or WBV sessions were 40 minutes in duration and were practised 5 days a week for 8 weeks.

C7.10.4 Conditions associated with the spine

Two citations (104, 105) corresponding to 2 quasi-RCTs (Lee 2008, Ma 2020) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There were no studies awaiting classification (see **Appendix C4**) and one ongoing study (see **Appendix C5**).

Both studies were conducted at a single medical centre in either Korea (Lee 2008) or China (Ma 2020). One study (Lee 2008) enrolled 40 outpatients who had been diagnosed with ankylosing spondylitis (AS) classified as functional class II for AS (mean age 35 years). Of the 30 participants who completed the study, 25 were men (83.3%). One study (Ma 2020) enrolled 84 patients aged between 18 and 60 years with axial spondylitis who were attending hospital for treatment but had not used NSAIDs within the previous 6 months.

One study (Lee 2008) compared a 21-movement based Tai Chi (developed for rheumatoid arthritis) with control (no intervention). The Tai Chi sessions were 45 minutes in duration and were practised twice a week for 8 weeks in a group setting, with participant also encouraged to practice daily at home. One study (Ma 2020) compared the effectiveness of 'Tai Chi spinal exercises' with an active intervention (standard spinal exercises) that were delivered as an adjunct to celecoxib capsules (200 mg twice daily). Exercise sessions were approximately 30 to 40 minutes in duration and were practised 3 times a week for 12 weeks.

C7.11 Diseases of the genitourinary system

C7.11.1 Diseases of prostate

One citation (142) corresponding to one RCT (Jung 2012) was identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There is one study awaiting classification (see **Appendix C4**) and one ongoing study (see **Appendix C5**).

One study (Jung 2012) was carried out in a single medical centre in Korea. The study enrolled 46 men aged over 60 years who had symptoms of lower urinary tract discomfort that was associated with benign prostate hyperplasia.

Jung 2012 compared the effectiveness of a modified 20-form Tai Chi program with an inactive control (no intervention). Tai Chi sessions were 60 minutes in duration and were practised 3 times a week for 12 weeks. Participants were also encouraged to practise twice daily at home, assisted by take home instruction booklets.

C7.11.2 Kidney disease

One citation (143) corresponding to one RCT (Shi 2014) was identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are 2 studies awaiting classification (see **Appendix C4**) and 3 ongoing studies (see **Appendix C5**).

One study (Shi 2014) was conducted at a single medical centre in China. The study enrolled 21 participants with chronic kidney disease (CKD) and concomitant cardiovascular disease (CVD). Participants with a left ventricular ejection fraction of less than 30% or were unable to exercise, were excluded.

One study (Shi 2014) compared the effectiveness of a 10-form Yang style Tai Chi with an inactive control (no intervention). All participants received standard medical care for their CKD and CVD. Tai Chi sessions lasted 30 minutes and were practised 3 to 5 times a week for 12 weeks.

C7.11.3 Menopausal symptom or complaint

Two studies awaiting classification conducted in perimenopausal women (with symptoms) were identified in the literature (see **Appendix C4**). No additional studies were identified in the Department's public call for evidence (see **Appendix C2**) and there are no ongoing studies (see **Appendix C5**).

C7.12 Injury, poisoning or certain other consequences of external causes

C7.12.1 Knee or ankle injury

One citation (106) corresponding to one RCT (Buyukturan 2019) was identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There is one study awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

One study (Buyukturan 2019) was conducted at a single centre in Turkey. The study enrolled 58 patients who had presented with partial anterior cruciate ligament injury (mean age 25.5 years).

The study compared the effectiveness of Tai Chi with an inactive control (waitlisted). The 10-form Yang style Tai Chi exercises lasted 60 minutes in duration and were practised 3 times a week for 24 weeks.

C7.12.2 Spinal cord injury

One citation (144) corresponding to one RCT (Qi 2018) was identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There is one study awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

One study (Qi 2018) was conducted at a single centre in China. The study enrolled 40 participants aged between 20 and 70 years (mean age 40.67 years) who were survivors of a spinal cord injury, as defined by the American Spinal Injury Association.

Qi 2018 examined the effectiveness of a modified Wheelchair Tai Chi (WCTC) delivered as an adjunct to standard rehabilitation therapy compared with no intervention. The WCTC program lasted 30 minutes in duration and was practised twice a day, 5 times a week for 6 weeks.

C7.12.3 Traumatic brain injury

Two citations (145, 146) corresponding to one RCT (Hwang 2020) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Hwang 2020 was conducted in Taiwan across 3 university-affiliated hospitals. The study enrolled 96 participants aged over 55 years who had a traumatic brain injury requiring hospital admission. Participants with diagnosed dementia or major unstable cardiopulmonary diseases were not eligible for inclusion.

Hwang 2020 compared a modified 8-form Yang style Tai Chi with an inactive control (no intervention). An active intervention arm was also included that consisted of computerised cognitive training focused on training of attention, memory, speed of processing and executive functioning. All participants also received an education booklet promoting physical and mental activities. Tai Chi sessions were 50 minutes in duration and were delivered once per week for 6 months. The intensity and complexity of the Tai Chi exercises increased gradually over the intervention period, with participants also encouraged to practise Tai Chi at least 3 times per week at home.

C7.13 Factors influencing health status or contact with health services

C7.13.1 Employment conditions

Two citations (107, 147) corresponding to 2 RCTs (Dinani 2019, Palumbo 2012) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Both studies were conducted in single centre settings in either Iran (Dinani 2019) or the United States (Palumbo 2012). The studies enrolled either 64 student nurses (Dinani 2019; mean age 21.50 years) or 11 experienced nurses (Palumbo 2012; aged over 45 years) who were at risk of workplace-related physical and mental decline. Across all studies, participants with cardiovascular, musculoskeletal or mental problems were excluded.

The 2 studies (Dinani 2019, Palumbo 2012) compared the effectiveness of a simplified Yang style Tai Chi with an inactive control (no intervention). Tai Chi classes were 40 to 45 minutes in duration and were practised either 3 times a week for 8 weeks (Dinani 2019) or once a week for 15 weeks (Palumbo 2012). Participants were also encouraged to practise at home, with participants in Dinani 2019 given a tutorial CD and participant in Palumbo 2012 instructed to practise 4 times per week for 10 minutes.

C7.13.2 Caregivers

One ongoing study was identified in the literature (see **Appendix C5**). No additional studies were identified in the Department's public call for evidence (see **Appendix C2**) and there are no studies awaiting classification (see **Appendix C4**).

C7.13.3 Harmful or traumatic events

Two ongoing studies were identified in the literature (see **Appendix C5**). No additional studies were identified in the Department's public call for evidence (see **Appendix C2**) and there are no studies awaiting classification (see **Appendix C4**).

C7.14 Prevention

C7.14.1 Shingles

Two citations (148, 149) corresponding to one RCT (Irwin 2003) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

One study (Irwin 2003) was conducted in a community setting in the United States. The study enrolled 36 participants with a history of varicella zoster virus infection over the age of 60 years. Participants with significant underlying illness or conditions which may impair participation, as well as those on immunosuppression from neoplastic disease, corticosteroids or other drug therapies were excluded.

Irwin 2003 compared the effectiveness of Tai Chi Chih with a waitlisted control. Tai Chi sessions were 45 minutes in duration and were practised 3 times a week for 15 weeks.

C7.14.2 Metabolic syndrome

Four citations (150-153) corresponding to one RCT (Choi 2017) and one cluster-RCT (Hui 2015) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

One study (Choi 2017) was conducted in single centre settings in Korea. One study (Hui 2015) was conducted across 9 geographic areas in Hong Kong. One study (Choi 2017) enrolled 66 male office workers aged between 40 to 60 years who had 2 or more risk factors for metabolic syndrome. One study (Hui 2015) enrolled 345 participants aged between 36 and 60 years from a variety of large housing estates who had not been physically active in the previous 6 months. Participants with cardiovascular and pulmonary diseases, as well as neurological and musculoskeletal disorders were excluded.

One study (Hui 2015) examined the effectiveness of Tai Chi against both an inactive control (no intervention) and active control (self-paced brisk walking). One study (Choi 2017) examined the effectiveness of Tai Chi delivered as an adjunct to a health education program (compared with the health education program alone). In Hui 2015, a modified 34-form Yang style Tai Chi Chuan was practised for 30 minutes 5 days per week for 12 weeks. Sessions were instructor-led for 3 sessions, with 2 sessions being self-practised. Participants in the inactive control group were asked to continue their usual activities and provided with 2 free health and fitness assessments over the intervention period. The active control group were encouraged to walk with friends or families. In Choi 2017, the Tai Chi program included a standardised form of Sun and Yang style Tai Chi. Sessions lasted 60 minutes and were practised twice weekly at the same time for 12 weeks. The education health program sessions were 30 minutes in duration and occurred once per fortnight.

C7.14.3 Cardiovascular disease

Three citations (154-156) corresponding to one RCT (Robins 2015) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There is one study awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

One RCT (Robins 2015) was carried out in a community setting in the United States. The study enrolled 96 women aged 35 to 50 years who were at risk of cardiovascular disease (CVD), defined as a waist circumference greater than 35 inches and prior family history of CVD.

Robins 2015 examined the effectiveness of a modified short-form of Tai Chi compared with an inactive control (waitlisted). The 60-minute instructor-led group Tai Chi classes were practised once a week for 8 weeks. Participants were also asked to practise daily at home using a 15-minute DVD.

C7.14.4 Stroke

Four citations (157-160) corresponding to one RCT (Zheng 2015) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are no studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Zheng 2015 was carried out at 3 community centres in China and included adults aged 55 to 70 years who were at high risk of ischaemic stroke and had not participated in regular exercise in the previous year. Risk of stroke required a history of transient ischaemic attack and the presence of at least 2 of the following criteria: high blood pressure (systolic/diastolic pressure great or equal to 140/90 mm Hg); taking antihypertensive medication; atrial fibrillation; smoking (at least one cigarette a day for one year); dyslipidaemia; diabetes mellitus; overweight or obesity (body mass index greater or equal to 24 kg/m^2); a family history of stroke.

The study compared the effectiveness of a 24-form simplified Tai Chi Chuan with an inactive control (usual activities that included as housework, daily living activities, slow walking, shopping and babysitting). Tai Chi sessions were 60 minutes in duration and were practised 5 days a week for 12 weeks.

C7.14.5 Osteopenia

Five citations (161-165) corresponding to 2 RCTs (Shen 2007, Zhao 2007) and 2 quasi-RCTs (Chan 2004, Wang 2015c) were identified in the literature search. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are 8 studies awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Two studies were carried out by a single centre in either Hong Kong (Chan 2004) or the United States (Shen 2007) and 2 studies were conducted in a community setting in China (Wang 2015c, Zhao 2007). Sample sizes ranged from 28 to 132 (total 359 participants) and included participants at risk of osteopenia. Three studies (Chan 2004, Wang 2015c, Zhao 2007) enrolled postmenopausal women (aged over 50 to 52 years) who were inactive. One study (Shen 2007) enrolled sedentary men and women aged 65 years or older from a senior living campus. Participants with major disease such as renal or liver disease that affect the ability to exercise were excluded.

Three studies (Chen 2004, Wang 2015c, Zhao 2007) compared a Yang style Tai Chi with an inactive control (usual activities). One study (Wang 2015c) included an additional intervention group that consisted of a simplified Tai Chi program and one study (Zhao 2007) also examined the effect of Tai Chi delivered as an adjunct to calcium supplementation (comparing Tai Chi plus calcium with a calcium only group). One study (Shen 2007) compared the effectiveness of Yang style Tai Chi with a low-impact exercise (resistance training). In all studies, the exercise interventions were typically 40 to 60 minutes in duration and ranged in intensity from 5 times a week for 12 months (Chan 2004), 4 times a week for 12 months (Wang 2015c), 4 times a week for or 24 weeks (Shen 2007), to 3 times a week for 26 weeks (Zhao 2007).

C7.14.6 Age-related physical or mental decline

Six citations (166-171) corresponding to 4 RCTs (Dechamps 2009b, Dechamps 2010, Hsu 2016, Mastel-Smith 2019) were identified in the literature. No additional studies were identified in the Department's public call for evidence (see **Appendix C2**). There are 26 studies awaiting classification (see **Appendix C4**) and 7 ongoing studies (see **Appendix C5**).

Two studies (Dechamps 2009b, Dechamps 2010) were carried in multicentre settings in France and 2 single centre studies were conducted in either Taiwan (Hsu 2016) or the United States (Mastel-Smith 2019). Sample size ranged from 26 to 160 (total 288) and included participants with age-related cognitive or physical decline. Three studies (Dechamps 2010, Hsu 2016, Mastel-Smith 2019) enrolled participants aged over 60 years who were in long-term care or assisted living residences, with participants in Hsu 2016 being those who were also using a wheelchair for mobilisation. One study (Dechamps 2009b) included participants aged 65 years or older; those who were terminally ill or bedridden were excluded.

Two studies (Dechamps 2010, Hsu 2016) compared Tai Chi with an inactive control (usual care). Hsu 2016 used a seated Tai Chi exercise based on a simplified Tai Chi program (STEP) that had been modified to allow participants to perform the exercise seated. Dechamps 2010 used a simplified Yang style Tai Chi for elderly persons. Dechamps 2010 also included a third intervention arm described as a cognitive action program that included lower limb and upper body movements as well as stretching and resistance exercises. Two studies compared variations of Tai Chi with an active control being either a cognitive action program (Dechamps 2009b) or an electronic tablet intervention that focused on individualised modules consisting of experimental exercises (Mastel-Smith 2019). In all studies, Tai Chi sessions were typically 30 to 60 minutes in duration and ranged in intensity from 4 sessions a week for 6 weeks (Dechamps 2010), 4 sessions a week for 24 weeks (Dechamps 2009b), 3 times a week for 26 weeks (Hsu 2016), down to once a week for 4 weeks (Mastel-Smith 2019).

C8 Studies with mixed eligible and non-eligible participants

C8.1 Falls prevention (excluded subset)

There were 28 citations (39-46, 48-67) corresponding to 12 RCTs (Hosseini 2018, Hunag 2011, Li 2004a, Manor 2014, Mortazavi 2018, Nowalk 2001, Okuyan 2017, Saravanakumar 2014, Voukelatos 2002, Wallsten 2006, Wolf 1993, Woo 2007) and 2 cluster RCTs (Faber 2006, Huang 2010) identified in the literature where a variable proportion of participants within the study met our eligibility criteria (e.g. had a history of falls, confirmed balance impairment) but other participants did not (were otherwise healthy). Data relevant to the eligible population were not available, therefore these studies were not eligible for inclusion in the review. No additional studies were identified in the Department's call for evidence that had this mixed eligibility (see **Appendix C2**). There is one study awaiting classification (see **Appendix C4**) and no ongoing studies (see **Appendix C5**).

Four studies were conducted at a single centre in either Australia (Saravanakumar 2014), Turkey (Okuyan 2017) or the United States (Wallsten 2006, Wolf 1993). Twelve studies were conducted in the community or involved several clinics across Australia (Voukelatos 2002), Hong Kong (Woo 2007) Iran (Hosseini 2018, Mortazavi 2018), the Netherlands (Faber 2006), Taiwan (Huang 2010, Huang 2011) and the United States (Li 2004, Manor 2014, Nowalk 2001). All studies enrolled adults aged older than 60 years with sample sizes ranging from 15 to 242 (total 2216 participants). Eight studies enrolled people from either a residential care home (Manor 2014, Okauyan 2017) or a mixed assisted living site (Faber 2006, Hosseini 2018, Nowalk 2001, Saravanakumar 2014, Wallsten 2006, Wolf 1993). Six studies (Huang 2010, Huang 2011, Li 2004, Mortazavi 2018, Voukelatos 2002, Woo 2007) included community-dwelling adults who were otherwise healthy.

There were 11 studies (Faber 2006, Hosseini 2018, Huang 2010, Huang 2011, Mortazavi 2018, Nowalk 2001, Okuyan 2017, Saravanakumar 2014, Voukelatos 2002, Wallsten 2006, Woo 2007) that compared a Sun- or modified short Yang style Tai Chi with an inactive control (no intervention, usual activities or waitlisted). In 3 of these studies Tai Chi was delivered as an adjunct to either a wellness education program (Haung 2010, Nowalk 2001) or cognitive behaviour therapy (Haung 2011). Five studies also included an active intervention group being either a wellness education program (Huang 2010), Yoga (Saravanakumar 2014), or a low-impact exercise including functional walking (Faber 2006), resistance training (Woo 2007) or progressive strength and conditioning (Nowalk 2001). Three studies compared a short-form Yang style Tai Chi with an active intervention only, being either a wellness education program (Manor 2014, Wolf 1993) or a low-impact exercise (Li 2004a).

Tai Chi sessions ranged from 20 to 60 minutes in duration, and the treatment programs ranged in intensity from 5 times a week for 8 weeks (Huang 2011) down to once a week for 16 weeks (Voukelatos 2002). One study (Faber 2006) practised once a week for the first 4 weeks and then progressed to twice a week for the remaining 16 weeks. Participants in 5 studies practised Tai Chi 3 times a week, with the trial duration being either 10 weeks (Mortazavi 2018), 5 months (Huang 2010), 6 months (Li 2004), 12 months (Woo 2007) or 24 months (Nowalk 2011). Participants in 6 studies practised Tai Chi twice a week for either 8 (Hosseinin 2018), 12 (Okuyan 2017, Manor 2014), 14 (Saravanakumar 2014), 15 (Wolf 1993) or 20 weeks (Wallsten 2006).

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Contributions of authors

The evidence evaluation report was written and developed by **HT**ANALYSTS, with evidence synthesis (statistical analysis and GRADE) conducted by the following lead reviewers: Margaret Jorgensen, Kevin Phan, Sinead McCraith and 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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