

Appendix 1: Search Strategies

Part A: PICO search term development summary

P = human adults (18 to 50 years) with hip pain ['hip pain', 'femoracetabular impingement', 'hip joint', 'non arthritic hip pain', 'labr*', 'acetabul*', 'Coxa profunda', 'Profunda acetabul*', 'os acetabul*']

I = Physiotherapist-led interventions ['physiotherap*', 'physical therap*', 'exercis*', 'therapy', 'rehabilitat*', 'manual therap*', 'manipulation therap*', 'massage therap*', 'non surg*', 'non operative', 'tai chi', 'yoga']

C = sham treatment, no treatment, other treatment (e.g. surgery).

O = pain, function, other patient-reported outcome measures. Function may include hip joint ROM, hip muscle strength, measures of functional task performance, electromyography (EMG), gait analysis ['hip', 'muscle strength', 'range of motion', 'range of movement' 'range', 'movement', 'EMG', 'impairment', 'musculoskeletal', 'proprioception', 'balance', 'motor control', 'gait', 'kinematic'. 'stiffness', 'weakness', 'function*', 'performance'].

Part B: Full search strategies undertaken

Search conducted on 31/07/2018 at 4:03pm, and again 20/05/2019 at 4:12pm

MEDLINE (via Ovid) search strategy

Database details: Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

#	Searches
1	exp Femoracetabular Impingement/
2	non-arthritic hip pain.mp.
3	nonarthritic hip pain.mp.
4	((femoracetabular or femoro-acetabular or femoroacetabular) adj2 imping*).mp.
5	labrum.tw.
6	labral.tw.
7	(hip adj2 imping*).mp.
8	(acetabul* adj2 retroversion).mp.

9	(acetabul* adj2 (overcover* or over-cover*)).mp.
10	coxa profunda.mp.
11	((profunda or protusio) adj2 acetabul*).mp.
12	os acetabuli.mp.
13	acetabular ossicle*.mp.
14	((hip or hips) adj2 pain*).mp.
15	pincer lesion.mp.
16	(pincer adj2 (lesion* or imping*)).mp.
17	(cam adj2 (lesion* or imping*)).mp.
18	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 or 16 or 17
19	exercis*.mp.
20	rehabilitat*.mp.
21	physical therap*.mp.
22	physiotherap*.mp.
23	manual therapy.mp.
24	nonsurgical.mp.
25	non-surgical.mp.
26	nonsurgery.mp.
27	non-surgery.mp.
28	nonoperative.mp.
29	non-operative.mp.
30	manipulation therap*.mp.
31	therapeutic exercise.mp.
32	(endurance adj (training or program* or therapy or activity or activities or regime)).tw.
33	(aerobic adj (training or program* or therapy or activities or activity or regime)).tw.
34	(motion adj (training or fitness or therapy)).tw.
35	resistance training.tw.
36	balance training.tw.

37	mobility training.tw.
38	functional training.tw.
39	gait training.tw.
40	((multicomponent or multi-component) adj training).tw.
41	strength* training.tw.
42	plyometric*.mp.
43	exp Physical Therapists/
44	exp Rehabilitation/
45	exp Physical Therapy Modalities/
46	exp Exercise Movement Techniques/
47	exp Exercise Therapy/
48	exp Musculoskeletal Manipulations/
49	exp Conservative Treatment/
50	(hip adj2 strengthen*).mp.
51	(muscle adj2 strengthen*).mp.
52	((isometric or isotonic or isokinetic) adj2 training).mp.
53	massage therap*.mp.
54	yoga.tw.
55	tai chi.tw.
56	(muscle adj2 stretching).tw.
57	(self-administer* adj2 program*).mp.
58	non-supervised.mp.
59	or/19-58
60	18 and 59

CINAHL (via EBSCO) search strategy

#	Query
S1	exercis*
S2	rehabilitat*
S3	physical therap*
S4	physiotherap*
S5	manual therapy
S6	nonsurgical
S7	non-surgical
S8	nonsurgery
S9	non-surgery
S10	nonoperative
S11	non-operative
S12	manipulation therap*
S13	therapeutic exercise
S14	endurance N2 (training or program* or therapy or activity or activities or regime)
S15	aerobic N2 (training or program* or therapy or activities or activity or regime)
S16	motion N2 (training or fitness or therapy)
S17	resistance training
S18	balance training
S19	mobility training

S20	functional training
S21	gait training
S22	(multicomponent or multi-component) N2 training
S23	strength* training
S24	plyometric*
S25	(MH "Physical Therapy")
S26	(MH "Rehabilitation")
S27	(MH "Physical Therapists")
S28	(MH "Therapeutic Exercise+")
S29	(MH "Gait Training+")
S30	(MH "Functional Training")
S31	(MH "Manual Therapy+")
S32	(MH "Exercise+")
S33	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32
S34	(MH "Femoracetabular Impingement")
S35	femoracetabular imping*
S36	(femoro-acetabular or femoroacetabular) N2 imping*
S37	labrum
S38	laboral
S39	non-arthritic hip pain

S40	nonarthritic hip pain
S41	hip N2 imping*
S42	(MH "Hip Labrum Tear")
S43	acetabul* N2 retroversion
S44	acetabul* N2 (overcover* or over-cover*)
S45	coxa profunda
S46	(profunda or protusio) N2 acetabul*
S47	os acetabuli
S48	acetabular ossicle*
S49	pincer lesion
S50	pincer N2 (lesion* or imping*)
S51	cam N2 (lesion* or imping*)
S52	S34 OR S35 OR S36 OR S37 OR S38 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45 OR S46 OR S47 OR S48 OR S49 OR S50 OR S51
S53	S33 AND S52

Cochrane Library search strategy

- #1 MeSH descriptor: [Femoracetabular Impingement] explode all trees
- #2 non-arthritis hip pain:ti,ab,kw
- #3 nonarthritic hip pain:ti,ab,kw
- #4 (femoracetabular or femoro-acetabular or femoroacetabular) near/2 imping*:ti,ab,kw
- #5 labrum:ti,ab,kw

- #6 labral:ti,ab,kw
- #7 hip near/2 imping*:ti,ab,kw 45
- #8 acetabul* near/2 retroversion:ti,ab,kw
- #9 acetabul* near/2 (overcover* or over-cover*):ti,ab,kw
- #10 coxa profunda:ti,ab,kw
- #11 (profunda or protusio) near/2 acetabul*:ti,ab,kw
- #12 os acetabuli:ti,ab,kw
- #13 acetabular ossicle*:ti,ab,kw
- #14 (hip or hips) near/2 pain*:ti,ab,kw
- #15 pincer lesion:ti,ab,kw
- #16 pincer near/2 (lesion* or imping*):ti,ab,kw
- #17 cam near/2 (lesion* or imping*):ti,ab,kw
- #18 #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 or #16 or #17
- #19 exercis*:ti,ab,kw
- #20 rehabilitat*:ti,ab,kw
- #21 physical therap*:ti,ab,kw
- #22 physiotherap*:ti,ab,kw
- #23 manual therapy:ti,ab,kw
- #24 nonsurgical:ti,ab,kw
- #25 non-surgical:ti,ab,kw
- #26 nonsurgery:ti,ab,kw
- #27 non-surgery:ti,ab,kw
- #28 nonoperative:ti,ab,kw
- #29 non-operative:ti,ab,kw
- #30 manipulation therap*:ti,ab,kw
- #31 therapeutic exercise:ti,ab,kw
- #32 endurance next (training or program* or therapy or activity or activities or regime):ti,ab,kw
- #33 aerobic next (training or program* or therapy or activities or activity or regime):ti,ab,kw
- #34 motion next (training or fitness or therapy):ti,ab,kw
- #35 resistance training:ti,ab,kw

- #36 balance training:ti,ab,kw
- #37 mobility training:ti,ab,kw
- #38 functional training:ti,ab,kw
- #39 gait training:ti,ab,kw
- #40 (multicomponent or multi-component) next training:ti,ab,kw
- #41 strength* training:ti,ab,kw
- #42 plyometric*:ti,ab,kw
- #43 MeSH descriptor: [Physical Therapists] explode all trees
- #44 MeSH descriptor: [Rehabilitation] explode all trees
- #45 MeSH descriptor: [Physical Therapy Modalities] explode all trees
- #46 MeSH descriptor: [Exercise Movement Techniques] explode all trees
- #47 MeSH descriptor: [Exercise Therapy] explode all trees
- #48 MeSH descriptor: [Musculoskeletal Manipulations] explode all trees
- #49 MeSH descriptor: [Conservative Treatment] explode all trees
- #50 hip near/2 strengthen*:ti,ab,kw
- #51 muscle* near/2 strengthen*:ti,ab,kw
- #52 (isometric or isotonic or isokinetic) near/2 training:ti,ab,kw
- #53 massage therap*:ti,ab,kw
- #54 yoga:ti,ab,kw
- #55 tai chi:ti,ab,kw
- #56 muscle* near/2 stretching:ti,ab,kw
- #57 self-administer* near/2 program*:ti,ab,kw
- #58 non-supervised:ti,ab,kw
- #59 {or #19-#58}
- #60 #18 and #59

EMBASE (via Ovid) search strategy

Database details: Embase Classic+Embase 1947 to 2017 November 06

#	Searches
1	exp femoroacetabular impingement/
2	non-arthritic hip pain.mp.
3	nonarthritic hip pain.mp.
4	((femoracetabular or femoro-acetabular or femoroacetabular) adj2 imping*).mp.
5	labrum.tw.
6	labral.tw.
7	(hip adj2 imping*).mp.
8	(acetabul* adj2 retroversion).mp.
9	(acetabul* adj2 (overcover* or over-cover*)).mp.
10	coxa profunda.mp.
11	((profunda or protusio) adj2 acetabul*).mp.
12	os acetabuli.mp.
13	acetabular ossicle*.mp.
14	((hip or hips) adj2 pain*).mp.
15	pincer lesion.mp.
16	(pincer adj2 (lesion* or imping*)).mp.
17	(cam adj2 (lesion* or imping*)).mp.
18	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 or 16 or 17
19	exercis*.mp.
20	rehabilitat*.mp.
21	physical therap*.mp.
22	physiotherap*.mp.
23	manual therapy.mp.
24	nonsurgical.mp.
25	non-surgical.mp.
26	nonsurgery.mp.

27	non-surgery.mp.
28	nonoperative.mp.
29	non-operative.mp.
30	manipulation therap*.mp.
31	therapeutic exercise.mp.
32	(endurance adj (training or program* or therapy or activity or activities or regime)).tw.
33	(aerobic adj (training or program* or therapy or activities or activity or regime)).tw.
34	(motion adj (training or fitness or therapy)).tw.
35	resistance training.tw.
36	balance training.tw.
37	mobility training.tw.
38	functional training.tw.
39	gait training.tw.
40	((multicomponent or multi-component) adj training).tw.
41	strength* training.tw.
42	plyometric*.mp.
43	exp physiotherapist/
44	exp rehabilitation/
45	exp isokinetic exercise/ or exp isometric exercise/ or exp movement therapy/ or exp muscle training/ or exp pilates/ or exp plyometrics/ or exp stretching exercise/ or exp tai chi/ or exp yoga/
46	exp kinesiotherapy/
47	exp musculoskeletal manipulation/
48	(hip adj2 strengthen*).mp.
49	(muscle adj2 strengthen*).mp.
50	((isometric or isotonic or isokinetic) adj2 training).mp.
51	massage therap*.mp.

52	yoga.tw.
53	tai chi.tw.
54	(muscle adj2 stretching).tw.
55	(self-administer* adj2 program*).mp.
56	non-supervised.mp.
57	or/19-56
58	18 and 57
59	limit 58 to exclude medline journals

