

**Appendix 1:****MEDLINE (Ovid) search strategy**

	Searches
#1	((spine or spinal or medical) adj3 manip*).ti,ab,kw.
#2	(osteopath* or chiropract* or naprapath* or ((physiotherap* or (physical adj3 therap*)) and manip*).ti,ab,kw.
#3	Manipulation, Chiropractic/ or Manipulation, Spinal/ or Musculoskeletal Manipulations/ or Manipulation, Osteopathic/
#4	1 or 2 or 3
#5	((randomized controlled trial or controlled clinical trial).pt. or randomized.ab. or randomised.ab. or placebo.ab. or drug therapy.fs. or randomly.ab. or trial.ab. or groups.ab.) not (exp animals/ not humans.sh.)
#6	4 and 5
#7	limit 6 to yr="2016 -Current"

**CINAHL search strategy**

	Query	Limiters/expanders
1	TI ((spine OR spinal OR medical) N3 manip*) OR AB ((spine OR spinal OR medical) N3 manip*)	Expanders - Apply equivalent subjects Search modes - Find all my search terms
S2	TI (osteopath* OR chiropract* OR naprapath*) OR AB (osteopath* OR chiropract* OR naprapath*) OR TI (((physiotherap* OR (physical N3 therap*)) AND manip*) OR AB (((physiotherap* OR (physical N3 therap*)) AND manip*))	Expanders - Apply equivalent subjects Search modes - Find all my search terms
S3	(MH "Manipulation, Chiropractic") OR (MH "Manipulation, Osteopathic")	Expanders - Apply equivalent subjects Search modes - Find all my search terms
S4	S1 OR S2 OR S3	Expanders - Apply equivalent subjects Search modes - Find all my search terms
S5	(MH randomized controlled trials OR MH double-blind studies OR MH single-blind studies OR MH random assignment OR MH pretest-posttest design OR MH cluster sample OR TI (randomised OR randomized) OR AB (random*) OR TI (trial) OR (MH (sample size) AND AB (assigned OR allocated OR control)) OR MH (placebos) OR PT (randomized controlled trial) OR AB (control W5 group) OR MH (crossover design) OR MH (comparative studies) OR AB (cluster W3 RCT)) NOT ((MH animals+ OR MH (animal studies) OR TI (animal model*)) NOT MH (human))	Expanders - Apply equivalent subjects Search modes - Find all my search terms
S6	S4 AND S5	Expanders - Apply equivalent subjects Search modes - Find all my search terms
S7	S4 AND S5	Limiters - Published Date: 20160101- Expanders - Apply equivalent subjects Search modes - Find all my search terms

## Cochrane Library search strategy

	Advanced search	Limits
#1	((spine OR spinal OR medical) NEAR/3 manip*):ti,ab,kw	
#2	MeSH descriptor: [Musculoskeletal Manipulations] this term only	
#3	MeSH descriptor: [Manipulation, Spinal] explode all trees	
#4	MeSH descriptor: [Manipulation, Chiropractic] explode all trees	
#5	MeSH descriptor: [Manipulation, Osteopathic] explode all trees	
#6	osteopath*:ti,ab,kw	
#7	chiropract*:ti,ab,kw Limits 1160 - +	
#8	physiotherap*:ti,ab,kw OR (physical NEAR/3 therap*):ti,ab,kw AND manip*:ti,ab,kw	
#9	naprapath*:ti,ab,kw	
#10	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9	in Trials
#11	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9	with Publication Year from 2016 to 2022, in Trials

## Embase search strategy

	Query
#1	((spine OR spinal OR medical) NEAR/3 manip*):ti,ab,kw
#2	osteopath*:ti,ab,kw OR chiropract*:ti,ab,kw OR naprapath*:ti,ab,kw OR ((physiotherap*:ti,ab,kw OR (physical NEAR/3 therap*):ti,ab,kw)) AND manip*:ti,ab,kw
#3	'chiropractic manipulation'/de OR 'musculoskeletal manipulation'/de OR 'spine manipulation'/de OR 'osteopathic manipulation'/de
#4	#1 OR #2 OR #3
#5	('randomized controlled trial'/de OR 'controlled clinical trial'/de OR random*:ti,ab OR 'randomization'/de OR 'intermethod comparison'/de OR placebo:ti,ab OR compare:ti OR compared:ti OR comparison:ti OR ((evaluated:ab OR evaluate:ab OR evaluating:ab OR assessed:ab OR assess:ab) AND (compare:ab OR compared:ab OR comparing:ab OR comparison:ab)) OR ((open NEAR/1 label):ti,ab OR (((double OR single OR doubly OR singly) NEAR/1 (blind OR blinded OR blindly)):ti,ab OR 'double blind procedure'/de OR 'parallel group*':ti,ab OR crossover:ti,ab OR 'cross over':ti,ab OR (((assign* OR match OR matched OR allocation) NEAR/5 (alternate OR group* OR intervention* OR patient* OR subject* OR participant\$)):ti,ab OR assigned:ti,ab OR allocated:ti,ab OR ((controlled NEAR/7 (study OR design OR trial)):ti,ab OR volunteer:ti,ab OR volunteers:ti,ab OR 'human experiment'/de OR trial:ti) NOT (((random* NEAR/1 sampl* NEAR/7 ('cross section*' OR questionnaire\$ OR survey* OR database\$)):ti,ab) NOT ('comparative study'/de OR 'controlled study'/de OR 'randomized controlled':ti,ab OR 'randomised controlled':ti,ab OR 'randomly assigned':ti,ab) OR ('cross-sectional study'/de NOT ('randomized controlled trial'/de OR 'controlled clinical trial'/de OR 'controlled study'/de OR 'randomized controlled':ti,ab OR 'randomised controlled':ti,ab OR 'control group\$':ti,ab)) OR ((case NEAR/1 control*) AND random*) NOT ('randomized controlled':ti,ab OR 'randomised controlled':ti,ab) OR ('systematic review':ti NOT (trial:ti OR study:ti)) OR (nonrandom*:ti,ab NOT random*:ti,ab) OR 'random field*':ti,ab OR (('random cluster' NEAR/3 sampl*):ti,ab) OR (review:ab AND 'review':it NOT trial:ti) OR ('we searched':ab AND (review:ti OR 'review':it)) OR 'update review':ab OR ((databases NEAR/4 searched):ab) OR ((rat:ti OR rats:ti OR mouse:ti OR mice:ti OR swine:ti OR porcine:ti OR murine:ti OR sheep:ti OR lambs:ti OR pigs:ti OR piglets:ti OR rabbit:ti OR rabbits:ti OR cat:ti OR cats:ti OR dog:ti OR dogs:ti OR cattle:ti OR bovine:ti OR monkey:ti OR monkeys:ti OR trout:ti OR marmoset\$:ti) AND 'animal experiment'/de) OR ('animal experiment'/de NOT ('human experiment'/de OR 'human'/de)))
#6	#4 AND #5
#7	#4 AND #5 AND [conference abstract]/lim
#8	#4 AND #5 NOT [conference abstract]/lim
#9	#4 AND #5 NOT [conference abstract]/lim AND [2016-2022]/py

**ICL search strategy**

	Query
S1	Subject:"Manipulation, Chiropractic" OR Subject:"Manipulation, Spinal" OR Subject:"Manipulation, Osteopathic"
S2	All Fields:spine OR All Fields:spinal OR All Fields:physiotherap*
S3	All Fields:"physical therapy" OR All Fields:"physical therapist" OR All Fields:"physical therapists" OR All Fields:spine OR All Fields:spinal
S4	All Fields:manip*
S5	All Fields:spine OR All Fields:spinal OR All Fields:physiotherap* OR All Fields:"physical therapy" OR All Fields:"physical therapist" OR All Fields:"physical therapists" OR All Fields:spine OR All Fields:spinal
S6	All Fields:manip* AND All Fields:spine OR All Fields:spinal OR All Fields:physiotherap* OR All Fields:"physical therapy" OR All Fields:"physical therapist" OR All Fields:"physical therapists" OR All Fields:spine OR All Fields:spinal
S7	All Fields:osteopath* OR All Fields:chiropract* OR All Fields:naprapath*
S8	Subject:"Manipulation, Chiropractic" OR Subject:"Manipulation, Spinal" OR Subject:"Manipulation, Osteopathic" OR All Fields:manip* AND All Fields:spine OR All Fields:spinal OR All Fields:physiotherap* OR All Fields:"physical therapy" OR All Fields:"physical therapist" OR All Fields:"physical therapists" OR All Fields:spine OR All Fields:spinal OR All Fields:osteopath* OR All Fields:chiropract* OR All Fields:naprapath*
S9	All Fields:random* OR All Fields:placebo OR All Fields:trial OR All Fields:groups OR All Fields:rct
S10	Subject:"Manipulation, Chiropractic" OR Subject:"Manipulation, Spinal" OR Subject:"Manipulation, Osteopathic" OR All Fields:manip* AND All Fields:spine OR All Fields:spinal OR All Fields:physiotherap* OR All Fields:"physical therapy" OR All Fields:"physical therapist" OR All Fields:"physical therapists" OR All Fields:spine OR All Fields:spinal OR All Fields:osteopath* OR All Fields:chiropract* OR All Fields:naprapath* AND All Fields:random* OR All Fields:placebo OR All Fields:trial OR All Fields:groups OR All Fields:rct
S11	, Year: from 2016 to 2022
S12	Subject:"Manipulation, Chiropractic" OR Subject:"Manipulation, Spinal" OR Subject:"Manipulation, Osteopathic" OR All Fields:manip* AND All Fields:spine OR All Fields:spinal OR All Fields:physiotherap* OR All Fields:"physical therapy" OR All Fields:"physical therapist" OR All Fields:"physical therapists" OR All Fields:spine OR All Fields:spinal OR All Fields:osteopath* OR All Fields:chiropract* OR All Fields:naprapath* AND All Fields:random* OR All Fields:placebo OR All Fields:trial OR All Fields:groups OR All Fields:rct AND , Year: from 2016 to 2022

**PEDro search strategy**

	Search records added since 01/01/2016
S1	spin* AND manip* AND RCT
S2	spin* AND manip* AND trial
S3	spin* AND manip* AND random*
S4	totally selected