

Appendix A: Search strategies

PMID: (30151823 or 3364308 or 15282985 or 25183726 or 19690943 or 29137628 or 27561376 or 10429599)

Medline

Ovid MEDLINE(R) ALL <1946 to December 09, 2021>

#	Query	Results from 10 Dec 2021
1	exp Delirium/ or exp Confusion/ or delir*.mp. or ((cognitive or brain or mental*) adj3 (impairment* or decrease* or dysfunction*)).mp. or confusion*.mp. or ((acute or brain) adj3 (dysfunction* or psychosyndrome* or syndrome* or confusional*)).mp. or disorientation*.mp. or metabolic* encephalopathy.mp. or cloud* state*.mp. or (clouding adj2 consciousness).mp. or ((toxic or exogenous) adj2 psychosis).mp.	300,907
2	exp Femoral Fractures/ or exp Hip Fractures/ or ((hip* or femoral* or femur* or trochant* or pertrochant* or intertrochant* or subtrochant* or intracapsular* or extracapsular*) adj4 (fracture* or surger* or surgical*)).mp.	72,786
3	((randomized controlled trial or controlled clinical trial).pt. or random*.ab. or placebo.ab. or drug therapy.fs. or trial.ab. or groups.ab. or clinical trials as topic.sh. or random allocation.sh.) not (exp animals/ not humans.sh.)	4,813,646
4	1 and 2 and 3	615
5	exp Delirium/ or exp Confusion/ or delir*.mp. or ((cognitive or brain) adj3 (impairment* or decrease* or dysfunction*)).mp. or confusion*.mp. or ((acute or brain) adj3 (dysfunction* or psychosyndrome* or syndrome* or confusional*)).mp. or disorientation*.mp. or metabolic* encephalopathy.mp. or cloud* state*.mp. or (clouding adj2 consciousness).mp. or ((toxic or exogenous) adj2 psychosis).mp.	296,805
6	exp Femoral Fractures/ or exp Hip Fractures/ or ((hip* or femoral* or femur* or trochant* or pertrochant* or intertrochant* or subtrochant* or intracapsular* or extracapsular*) adj4 fracture*).mp.	58,649
7	((randomized controlled trial or controlled clinical trial).pt. or random*.ab. or placebo.ab. or drug therapy.fs. or trial.ab. or groups.ab. or clinical trials as topic.sh. or random allocation.sh.) not (exp animals/ not humans.sh.)	4,813,646
8	5 and 6 and 7	524
9	4 not 8	91
10	(2019* or 2020* or 2021* or 2022*).dt,ez,dp,ed.	5,036,922
11	4 and 10	204
12	9 or 11	268

Embase

Database:

Embase <1974 to 2021 December 09>

#	Query	Results from 10 Dec 2021
1	exp Delirium/ or exp Confusion/ or mild cognitive impairment/ or delir*.mp. or ((cognitive or brain or mental*) adj3 (impairment* or decrease* or dysfunction*)).mp. or confusion*.mp. or ((acute or brain) adj3 (dysfunction* or psychosyndrome* or syndrome* or confusional*)).mp. or disorientation*.mp. or metabolic* encephalopathy.mp. or cloud* state*.mp. or (clouding adj2 consciousness).mp. or ((toxic or exogenous) adj2 psychosis).mp.	529,447
2	exp femur fracture/ or exp hip fracture/ or hip surgery/ or ((hip* or femoral* or femur* or trochant* or pertrochant* or intertrochant* or subtrochant* or intracapsular* or extracapsular*) adj4 (fracture* or surger* or surgical*)).mp.	100,958
3	(randomized controlled trial/ or randomization/ or placebo/ or crossover procedure/ or double blind procedure/ or single blind procedure/ or (crossover* or cross over*).ti,ab. or ((singl* or doubl* or trebl* or tripl*) adj (blind* or mask*)).ti,ab. or (controlled adj3 (study or design or trial)).ti,ab. or (placebo* or allocat* or trial* or random* or groups).ti,ab.) not ((exp animal/ or animal.hw. or nonhuman/) not (exp human/ or human cell/ or (human or humans).ti,ab.))	4,771,002
4	1 and 2 and 3	1,091
5	exp Delirium/ or exp Confusion/ or mild cognitive impairment/ or delir*.mp. or ((cognitive or brain) adj3 (impairment* or decrease* or dysfunction*)).mp. or confusion*.mp. or ((acute or brain) adj3 (dysfunction* or psychosyndrome* or syndrome* or confusional*)).mp. or disorientation*.mp. or metabolic* encephalopathy.mp. or cloud* state*.mp. or (clouding adj2 consciousness).mp. or ((toxic or exogenous) adj2 psychosis).mp.	523,990
6	exp femur fracture/ or exp hip fracture/ or ((hip* or femoral* or femur* or trochant* or pertrochant* or intertrochant* or subtrochant* or intracapsular* or extracapsular*) adj4 fracture*).mp.	81,112
7	(randomized controlled trial/ or randomization/ or placebo/ or crossover procedure/ or double blind procedure/ or single blind procedure/ or (crossover* or cross over*).ti,ab. or ((singl* or doubl* or trebl* or tripl*) adj (blind* or mask*)).ti,ab. or (controlled adj3 (study or design or trial)).ti,ab. or (placebo* or allocat* or trial* or random* or groups).ti,ab.) not ((exp animal/ or animal.hw. or nonhuman/) not (exp human/ or human cell/ or (human or humans).ti,ab.))	4,771,002
8	5 and 6 and 7	927
9	4 not 8	164
10	(2019* or 2020* or 2021* or 2022*).dc.	5,781,858
11	4 and 10	312
12	9 or 11	441

#1	MeSH descriptor: [Delirium] explode all trees	898
#2	MeSH descriptor: [Confusion] explode all trees	1038
#3	delir* or ((cognitive or brain or mental*) NEAR/3 (impairment* or decrease* or dysfunction*)) or confusion* or ((acute or brain) NEAR/3 (dysfunction* or psychosyndrome* or syndrome* or confusional*)) or disorientation* or metabolic* encephalopathy or cloud* state* or (clouding NEAR/2 consciousness) or ((toxic or exogenous) NEAR/2 psychosis)	36792
#4	#1 or #2 or #3	36792
#5	MeSH descriptor: [Femoral Fractures] explode all trees	2085
#6	MeSH descriptor: [Hip Fractures] explode all trees	1788
#7	((hip* or femoral* or femur* or trochant* or pertrochant* or intertrochant* or subtrochant* or intracapsular* or extracapsular*) NEAR/4 (fracture* or surger* or surgical*))	10604
#8	#5 or #6 or #7	10604
#9	#4 and #8 in Trials	518
#10	MeSH descriptor: [Delirium] explode all trees	898
#11	MeSH descriptor: [Confusion] explode all trees	1038
#12	delir* or ((cognitive or brain) NEAR/3 (impairment* or decrease* or dysfunction*)) or confusion* or ((acute or brain) NEAR/3 (dysfunction* or psychosyndrome* or syndrome* or confusional*)) or disorientation* or metabolic* encephalopathy or cloud* state* or (clouding NEAR/2 consciousness) or ((toxic or exogenous) NEAR/2 psychosis)	36289
#13	#10 or #11 or #12	36289
#14	MeSH descriptor: [Femoral Fractures] explode all trees	2085
#15	MeSH descriptor: [Hip Fractures] explode all trees	1788
#16	((hip* or femoral* or femur* or trochant* or pertrochant* or intertrochant* or subtrochant* or intracapsular* or extracapsular*) NEAR/4 fracture*)	7203
#17	#14 or #15 or #16	7203
#18	#13 and #17 in Trials	419
#19	#9 not #18	99
#20	#9 with Publication Year from 2019 to 2021, in Trials	146
#21	#19 or #20	222

Web of Science

Science Citation Index Expanded (SCI-EXPANDED), Conference Proceedings Citation Index – Science (CPCI-S), Emerging Sources Citation Index (ESCI)

1

TS=(delir* or ((cognitive or brain or mental*) NEAR/3 (impairment* or decrease* or dysfunction*)) or confusion* or ((acute or brain) NEAR/3 (dysfunction* or psychosyndrome* or syndrome* or confusional*)) or disorientation* or "metabolic* encephalopathy" or "cloud* state*" or (clouding NEAR/2 consciousness) or ((toxic or exogenous) NEAR/2 psychosis)) [347,042](#)

2

TS=((hip* or femoral* or femur* or trochant* or pertrochant* or intertrochant* or subtrochant* or intracapsular* or extracapsular*) NEAR/4 (fracture* or surger* or surgical*)) [67,593](#)

3

TS=((controlled OR clinical OR comparative) NEAR/3 (trial* or stud*)) OR TS=random* OR TS=placebo* OR TS=((single or double or triple or treble) NEAR/3 (mask* or blind*)) OR TS=multicenter [3,353,033](#)

4

#3 AND #2 AND #1 [769](#)

5

TS=(delir* or ((cognitive or brain) NEAR/3 (impairment* or decrease* or dysfunction*)) or confusion* or ((acute or brain) NEAR/3 (dysfunction* or psychosyndrome* or syndrome* or confusional*)) or disorientation* or "metabolic* encephalopathy" or "cloud* state*" or (clouding NEAR/2 consciousness) or ((toxic or exogenous) NEAR/2 psychosis)) 343,061

6

TS=(((hip* or femoral* or femur* or trochant* or pertrochant* or intertrochant* or subtrochant* or intracapsular* or extracapsular*) NEAR/4 fracture*)) 53,534

7

TS=((controlled OR clinical OR comparative) NEAR/3 (trial* or stud*)) OR TS=random* OR TS=placebo* OR TS=((single or double or triple or treble) NEAR/3 (mask* or blind*)) OR TS=multicenter 3,353,033

8

#7 AND #6 AND #5 647

9

#4 NOT #8 122

10

#4 Timespan: 2019-01-01 to 2021-12-31 189

11

#9 OR #10 288

Cinahl

S1	(MH "Delirium") or (MH "Confusion+")	9,659
	TX (delir* or ((cognitive or brain or mental*) N3 (impairment* or decrease* or dysfunction*)) or confusion* or ((acute or brain) N3 (dysfunction* or psychosyndrome* or syndrome* or confusional*)) or disorientation* or metabolic* encephalopathy or cloud* state* or (clouding N2 consciousness) or ((toxic or exogenous) N2 psychosis))	
S2		104,198
S3	S1 OR S2	104,198
S4	(MH "Femoral Fractures+") OR (MH "Hip Fractures, Stress") OR (MH "Hip Fractures+") OR (MH "Hip Surgery+")	35,707
	TX (((hip* or femoral* or femur* or trochant* or pertrochant* or intertrochant* or subtrochant* or intracapsular* or extracapsular*) N4 (fracture* or surger* or surgical*))	
S5		38,139
S6	S4 OR S5	49,915
S7	S3 AND S6	1,327
	((MH "Randomized Controlled Trials" OR MH "Clinical Trials+" OR MH "Random Assignment" OR MH "Prospective Studies+" OR MH "Clinical Trial Registry" OR MH "Double-Blind Studies" OR MH "Single-Blind Studies" OR MH "Triple-Blind Studies" OR MH "Multicenter Studies" OR MH "Placebos") OR TX (random* or placebo* or trial*))	
S8		1,301,451
S9	S7 AND S8	631
S10	(MH "Delirium") or (MH "Confusion+")	9,659
	TX (delir* or ((cognitive or brain) N3 (impairment* or decrease* or dysfunction*)) or confusion* or ((acute or brain) N3 (dysfunction* or	
S11		102,281

psychosyndrome* or syndrome* or confusional*)) or disorientation* or metabolic* encephalopathy or cloud* state* or (clouding N2 consciousness) or ((toxic or exogenous) N2 psychosis))

S12	S10 OR S11	102,281
S13	(MH "Femoral Fractures+") OR (MH "Hip Fractures, Stress") OR (MH "Hip Fractures+")	16,304
S14	TX (((hip* or femoral* or femur* or trochant* or pertrochant* or intertrochant* or subtrochant* or intracapsular* or extracapsular*) N4 fracture*))	22,164
S15	S13 OR S14	22,164
S16	S12 AND S15	1,039
S17	((MH "Randomized Controlled Trials" OR MH "Clinical Trials+" OR MH "Random Assignment" OR MH "Prospective Studies+" OR MH "Clinical Trial Registry" OR MH "Double-Blind Studies" OR MH "Single-Blind Studies" OR MH "Triple-Blind Studies" OR MH "Multicenter Studies" OR MH "Placebos") OR TX (random* or placebo* or trial*))	1,301,451
S18	S16 AND S17	494
S19	S9 NOT S18	137
S20	S9 Published Date: 20190101-20211231	164
S21	S19 OR S20	262

Trial registers

WHO ICTRP
 (delir* OR confusion* OR impairment) AND (hip* OR femoral*)
 179

ClinicalTrials.gov
 (delirium OR confusion OR impairment) AND (hip OR femoral)
 78