**APPENDIX 1**

*Search strategies - PubMed:*

 (((((((((((((((((((((((((((("Orthopedic Procedures"[Mesh]) OR "Fractures, Bone/surgery"[Mesh]) OR "Tendon Injuries/surgery"[Mesh]) OR "Joint Dislocations/surgery"[Mesh]) OR orthopedic surgeon[Title/Abstract]) OR orthopaedic surgeon[Title/Abstract]) OR "orthopedic surgery"[Title/Abstract]) OR "orthopaedic surgery"[Title/Abstract]) OR "orthopaedic surgeries"[Title/Abstract]) OR "orthopedic surgeries"[Title/Abstract]) OR "orthopedic trauma\*"[Title/Abstract]) OR "orthopaedic trauma\*"[Title/Abstract]) OR open fracture\*[Title/Abstract]) OR "cochrane bone"[Title/Abstract]) OR (prevention AND foot[Title/Abstract])) OR (operative AND fracture\*[Title/Abstract])) OR ((surgical[Title/Abstract] AND fracture\*[Title/Abstract]))) OR ((surgery[Title/Abstract] AND fracture\*[Title/Abstract]))) OR ((fracture\*[Title/Abstract] AND immobilization[Title/Abstract]))) OR ((surgical[Title/Abstract] AND dislocation[Title/Abstract] OR (acetabuloplasty[Title/Abstract]) OR amputation[Title/Abstract]) OR disarticulation[Title/Abstract]) OR hemipelvectomy[Title/Abstract]) OR arthrodesis[Title/Abstract]) OR spinal fusion[Title/Abstract]) OR anterior cruciate ligament reconstruction[Title/Abstract]) OR arthroplasty[Title/Abstract]) OR posterior cruciate ligament reconstruction[Title/Abstract]) OR arthroscopy[Title/Abstract]) OR joint capsule release[Title/Abstract]) OR bone lengthening[Title/Abstract]) OR ilizarov technique[Title/Abstract]) OR osteogenesis[Title/Abstract]) OR bone transplantation[Title/Abstract]) OR sinus floor augmentation[Title/Abstract]) OR cementoplasty[Title/Abstract]) OR vertebroplasty[Title/Abstract]) OR diskectomy[Title/Abstract]) OR fracture fixation[Title/Abstract]) OR closed fracture reduction[Title/Abstract]) OR fracture reduction[Title/Abstract]) OR limb salvage[Title/Abstract]) OR osteotomy[Title/Abstract]) OR orthognathic surgical procedure\*[Title/Abstract]) OR orthognathic surgery[Title/Abstract]) OR tendon transfer[Title/Abstract]) OR tenodesis[Title/Abstract]) OR tenotomy[Title/Abstract]) OR traction[Title/Abstract]) OR ulnar collateral ligament reconstruction[Title/Abstract]))))))))) AND ((systematic[sb] OR meta-analysis[pt] OR meta-analysis as topic[mh] OR meta-analysis[mh] OR meta analy\*[tw] OR metanaly\*[tw] OR metaanaly\*[tw] OR met analy\*[tw] OR integrative research[tiab] OR integrative review\*[tiab] OR integrative overview\*[tiab] OR research integration\*[tiab] OR research overview\*[tiab] OR collaborative review\*[tiab] OR collaborative overview\*[tiab] OR systematic review\*[tiab] OR technology assessment\*[tiab] OR technology overview\*[tiab] OR "Technology Assessment, Biomedical"[mh] OR HTA[tiab] OR HTAs[tiab] OR comparative efficacy[tiab] OR comparative effectiveness[tiab] OR outcomes research[tiab] OR indirect comparison\*[tiab] OR ((indirect treatment[tiab] OR mixed-treatment[tiab]) AND comparison\*[tiab]) OR Embase\*[tiab] OR Cinahl\*[tiab] OR systematic overview\*[tiab] OR methodological overview\*[tiab] OR methodologic overview\*[tiab] OR methodological review\*[tiab] OR methodologic review\*[tiab] OR quantitative review\*[tiab] OR quantitative overview\*[tiab] OR quantitative synthes\*[tiab] OR pooled analy\*[tiab] OR Cochrane[tiab] OR Medline[tiab] OR Pubmed[tiab] OR Medlars[tiab] OR handsearch\*[tiab] OR hand search\*[tiab] OR meta-regression\*[tiab] OR metaregression\*[tiab] OR data synthes\*[tiab] OR data extraction[tiab] OR data abstraction\*[tiab] OR mantel haenszel[tiab] OR peto[tiab] OR der-simonian[tiab] OR dersimonian[tiab] OR fixed effect\*[tiab] OR "Cochrane Database Syst Rev"[Journal:\_\_jrid21711] OR "health technology assessment winchester, england"[Journal] OR "Evid Rep Technol Assess (Full Rep)"[Journal] OR "Evid Rep Technol Assess (Summ)"[Journal] OR "Int J Technol Assess Health Care"[Journal] OR "GMS Health Technol Assess"[Journal] OR "Health Technol Assess (Rockv)"[Journal] OR "Health Technol Assess Rep"[Journal]))

Filters activated: Publication date from 2006/01/01 to 2017/12/31

#### Search strategies – Ovid Embase: <1974 to 2017 February 17>

1 meta-analysis/ or systematic review/ or meta-analysis as topic/ or "meta analysis (topic)"/ or "systematic review (topic)"/ or exp technology assessment, biomedical/ (286440)

2 ((systematic\* adj3 (review\* or overview\*)) or (methodologic\* adj3 (review\* or overview\*))).ti,ab,kw. (137713)

3 ((quantitative adj3 (review\* or overview\* or synthes\*)) or (research adj3 (integrati\* or overview\*))).ti,ab,kw. (8981)

4 ((integrative adj3 (review\* or overview\*)) or (collaborative adj3 (review\* or overview\*)) or (pool\* adj3 analy\*)).ti,ab,kw. (24441)

5 (data synthes\* or data extraction\* or data abstraction\*).ti,ab,kw. (22498)

6 (handsearch\* or hand search\*).ti,ab,kw. (8401)

7 (mantel haenszel or peto or der simonian or dersimonian or fixed effect\* or latin square\*).ti,ab,kw. (24127)

8 (met analy\* or metanaly\* or technology assessment\* or HTA or HTAs or technology overview\* or technology appraisal\*).ti,ab,kw. (10355)

9 (meta regression\* or metaregression\*).ti,ab,kw. (6416)

10 (meta-analy\* or metaanaly\* or systematic review\* or biomedical technology assessment\* or bio-medical technology assessment\*).mp,hw. (317043)

11 (medline or cochrane or pubmed or medlars or embase or cinahl).ti,ab,hw. (186507)

12 (cochrane or (health adj2 technology assessment) or evidence report).jw. (19539)

13 (comparative adj3 (efficacy or effectiveness)).ti,ab,kw. (14088)

14 (outcomes research or relative effectiveness).ti,ab,kw. (10531)

15 ((indirect or indirect treatment or mixed-treatment) adj comparison\*).ti,ab,kw. (2773)

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 (464967)

17 exp orthopedic surgery/ (410530)

18 fracture/su [Surgery] (8158)

19 tendon injury/su [Surgery] (2964)

20 exp joint dislocation/su [Surgery] (835)

21 ("orthopedic surgeon\*" or "orthopaedic surgeon\*" or "orthopaedic surger\*" or "orthopedic surger\*" or "orthopaedic trauma\*" or "orthopedic trauma\*").ti,ab. (26137)

22 "open fracture\*".ti,ab. (3988)

23 "cochrane bone".ti,ab. (208)

24 (prevent\* adj2 foot).ti,ab. (637)

25 (operat\* adj2 fracture\*).ti,ab. (2132)

26 (surg\* adj2 fracture\*).ti,ab. (4927)

27 fracture\* adj4 immobil\*).ti,ab. (1180)

28 (surgical adj2 dislocat\*).ti,ab. (566)

29 acetabuloplasty.ti,ab. (306)

30 amputation.ti,ab. (33778)

31 disarticulation.ti,ab. (1097)

32 hemipelvectomy.ti,ab. (608)

33 arthrodesis.ti,ab. (11688)

34 "spinal fusion".ti,ab. (6278)

35 "anterior cruciate ligament reconstruction".ti,ab. (5290)

36 arthroplasty.ti,ab. (53835)

37 "posterior cruciate ligament reconstruction".ti,ab. (426)

38 arthroscopy.ti,ab. (15579)

39 "joint capsule release".ti,ab. (6)

40 "bone lengthening".ti,ab. (400)

41 "ilizarov technique".ti,ab. (390)

42 osteogenesis.ti,ab. (18762)

43 "bone transplant\*".ti,ab. (1248)

44 "sinus floor augmentation".ti,ab. (325)

45 cementoplasty.ti,ab. (222)

46 vertebroplasty.ti,ab. (3891)

47 diskectomy.ti,ab. (635)

48 "fracture fixation".ti,ab. (2624)

49 "fracture reduction".ti,ab. (2140)

50 "limb salvage".ti,ab. (7145)

51 osteotomy.ti,ab. (26196)

52 "orthognathic surg\*".ti,ab. (3722)

53 "tendon transfer".ti,ab. (1676)

54 tenodesis.ti,ab. (1233)

55 tenotomy.ti,ab. (1984)

56 traction.ti,ab. (19578)

57 "ulnar collateral ligament reconstruction".ti,ab. (132)

58 "bone resection\*".ti,ab. (1235)

59 "cartilage transplant\*".ti,ab. (368)

60 fasciotomy.ti,ab. (2464)

61 "foot surgery".ti,ab. (714)

62 (fracture\* adj4 treat\*).ti,ab. (41278)

63 "hand surgery".ti,ab. (2809)

64 "joint surgery".ti,ab. (7089)

65 "leg lengthening".ti,ab. (430)

66 "ligament surgery".ti,ab. (447)

67 "muscle resection\*".ti,ab. (332)

68 "muscle transposition".ti,ab. (495)

69 "periosteum transplant\*".ti,ab. (19)

70 "spine surgery".ti,ab. (6173)

71 "tendon surgery".ti,ab. (330)

72 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 (507219)

73 16 and 72 (14115)

74 73 (14115)

75 limit 74 to yr="2006 -Current" (12227)

#### Search strategies - Scopus:

1 TITLE-ABS-KEY ( ( ( systematic\* W/3 ( review\* OR overview\* ) ) OR ( methodologic\* W/3 ( review\* OR overview\* ) ) ) ) 177,505 document results

2 TITLE-ABS-KEY ( ( ( quantitative W/3 ( review\* OR overview\* OR synthes\* ) ) OR ( research W/3 ( integrati\* OR overview\* ) ) ) ) 30,844 document results#

3 TITLE-ABS-KEY ( ( ( integrative W/3 ( review\* OR overview\* ) ) OR ( collaborative W/3 ( review\* OR overview\* ) ) OR ( pool\* W/3 analy\* ) ) ) 25,348 document results

4 TITLE-ABS-KEY ( ( data AND synthes\* OR data AND extraction\* OR data AND abstraction\* ) ) 20,435 document results

5 TITLE-ABS-KEY ( ( handsearch\* OR "hand search\*" ) ) 7,884 document results

6 TITLE-ABS-KEY ( "mantel haenszel" OR peto OR "der simonian" OR dersimonian OR "fixed effect\*" OR "latin square\*" ) 33,725 document results

7 TITLE-ABS-KEY ( ( "met analy\*" OR metanaly\* OR "technology assessment\*" OR hta OR htas OR "technology overview\*" OR "technology appraisal\*" ) ) 25,143 document results

8 TITLE-ABS-KEY ( "meta regression\*" OR metaregression\* ) 5,342 document results

9 TITLE-ABS-KEY ( medline OR cochrane OR pubmed OR medlars OR embase OR cinahl ) 166,606 document results

10 TITLE-ABS-KEY ( comparative W/3 ( efficacy OR effectiveness ) ) 29,321 document results

11 TITLE-ABS-KEY ( "outcomes research" OR "relative effectiveness" ) 81,455 document results

12 TITLE-ABS-KEY ( ( ( indirect OR "indirect treatment" OR mixed-treatment ) W/1 comparison\* ) ) 11,149 document results

13 OR/1-12

14 TITLE-ABS-KEY ( ( "orthopedic surgeon\*" OR "orthopaedic surgeon\*" OR "orthopaedic surger\*" OR "orthopedic surger\*" OR "orthopaedic trauma\*" OR "orthopedic trauma\*" OR "open fracture\*" OR "cochrane bone" ) ) 54,772 document results

15 TITLE-ABS-KEY ( ( ( prevent\* W/2 foot ) OR ( operat\* W/2 fracture\* ) OR ( surg\* W/2 fracture\* ) OR ( fracture\* W/4 immobil\* ) OR ( surgical W/2 dislocat\* ) OR acetabuloplasty OR amputation OR disarticulation OR hemipelvectomy OR arthrodesis OR "spinal fusion" ) ) 116,700 document results

16 TITLE-ABS-KEY ( ( "anterior cruciate ligament reconstruction" OR arthoplasty OR "posterior cruciate ligament reconstruction" OR arthroscopy OR "joint capsule release" OR "bone lengthening" OR "ilizarov technique" OR osteogenesis OR "bone transplant\*" ) ) 114,375 document results

17 TITLE-ABS-KEY ( ( "sinus floor augmentation" OR cementoplasty OR vertebroplasty OR diskectomy OR "fracture fixation" OR "fracture reduction" OR "limb salvage" OR osteotomy OR "orthognathic surg\*" OR "tendon transfer" OR tenodesis OR tenotomy OR traction ) ) 203,504 document results

18 TITLE-ABS-KEY ( ( "ulnar collateral ligament reconstruction" OR "bone resection\*" OR "cartilage transplant\*" OR fasciotomy OR "foot surgery" OR ( fracture\* W/4 treat\* ) OR "hand surgery" OR "joint surgery" OR "leg lengthening" OR "ligament surgery" ) ) 93,464 document results

19 TITLE-ABS-KEY ( ( "muscle resection\*" OR "muscle transposition" OR "periosteum transplant\*" OR "spine surgery" OR "tendon surgery" ) ) 24,129 document results

20 OR/ 14-19

21 13 AND 20

22 21 AND ( LIMIT-TO ( PUBYEAR , 2017 ) OR LIMIT-TO ( PUBYEAR , 2016 ) OR LIMIT-TO ( PUBYEAR , 2015 ) OR LIMIT-TO ( PUBYEAR , 2014 ) OR LIMIT-TO ( PUBYEAR , 2013 ) OR LIMIT-TO ( PUBYEAR , 2012 ) OR LIMIT-TO ( PUBYEAR , 2011 ) OR LIMIT-TO ( PUBYEAR , 2010 ) OR LIMIT-TO ( PUBYEAR , 2009 ) OR LIMIT-TO ( PUBYEAR , 2008 ) OR LIMIT-TO ( PUBYEAR , 2007 ) OR LIMIT-TO ( PUBYEAR , 2006 ) ) 7,760 document results

#### Search strategies - The Cochrane Library:

Date Run: 21/02/17 16:26:33.920

ID Search Hits

#1 MeSH descriptor: [Orthopedic Procedures] explode all trees 11842

#2 ("orthopedic surgeon\*" or "orthopaedic surgeon\*" or "orthopaedic surger\*" or "orthopedic surger\*" or "orthopaedic trauma\*" or "orthopedic trauma\*" or "open fracture\*") 6327

#3 ((prevent\* near/2 foot) or (operat\* near/2 fracture\*) or (surg\* near/2 fracture\*) or (fracture\* near/2 immobil\*) or (surgical near/2 dislocat\*) or acetabuloplasty or amputation or disarticulation or hemipelvectomy or arthrodesis or "spinal fusion") 6464

#4 ("anterior cruciate ligament reconstruction" or arthroplasty or "posterior cruciate ligament reconstruction" or arthroscopy or "joint capsule release" or "bone lengthening" or "ilizarov technique" or osteogenesis or "bone transplant\*" or "sinus floor augmentation" or cementoplasty or vertebroplasty or diskectomy or "fracture fixation" or "fracture reduction") 14490

#5 ("limb salvage" or osteotomy or "orthognathic surg\*" or "tendon transfer" or tenodesis or tenotomy or traction or "ulnar collateral ligament reconstruction" or "bone resection\*" or "cartilage transplant\*" or fasciotomy or "foot surgery" or (fracture near/4 treat\*) or "hand surgery" or "joint surgery" or "leg lengthening" or "ligament surgery" or "muscle resection" or "muscle transposition" or "periosteum transplant\*" or "spine surgery" or "tendon surgery") 10581

#6 #1 or #2 or #3 or #4 or #5 28942

Search Results:

|  |  |
| --- | --- |
| PubMed | 9706 |
| Ovid Embase | 12227 |
| Scopus | 7760 |
| The Cochrane Library | 3506 |
| Total | 33199 |
| Total after a search in Endnote All Fields for ‘trial\*’ or ‘RCT\*’  | 12529 |
| Total after deduplication | 5864 |