Hip replacement in osteoarthritis: update searches and screening for Universitätsklinikum Schleswig-Holstein/Campus Kiel

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November 2021

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1. PROJECT OBJECTIVES

A key aim of the research project "Making SDM a reality" is to inform patients as part of shared decision making (SDM).

Kleijnen Systematic Reviews (KSR) Ltd has prepared an evidence report with a synthesis of the evidence for hip replacement in hip osteoarthritis.

2. METHODS

LITERATURE SEARCHES

Literature searches were conducted to identify systematic reviews and evidence-based guidelines about hip replacement to update the 2019 evidence report.

The search strategies were developed specifically for each database and the keywords adapted according to the configuration of each database. Searches were limited by date range to update earlier searches: 2019-2021. Searches were not limited by language or publication status.

SEARCH SOURCES

Systematic reviews and guidelines

The following systematic review and health technology assessment specific databases were searched:

- Cochrane Database of Systematic Reviews (CDSR) (Wiley): issue 9 of 12, September 2021
- KSR Evidence (Internet) (https://ksrevidence.com/): 2019-2021
- Epistemonikos (Internet) (https://www.epistemonikos.org/): 2019-2021
- International HTA Database (INAHTA) (https://database.inahta.org/): 2019-2021

The following guidelines resources were searched:

- Guidelines International Network (GIN) (Internet) (https://www.g-i-n.net/home): 2019-2021
- NICE Evidence (Internet) (www.evidence.nhs.uk/): 2019-2021
- NICE Guidance (Internet) (https://www.nice.org.uk/guidance): 2019-2021
- ECRI Guidelines Trust (Internet) (https://guidelines.ecri.org/): 2019-2021
- Trip Database (https://www.tripdatabase.com/): 2019-2021
- Canadian Agency for Drugs and Technologies in Health (CADTH) (www.cadth.ca): 2019-2021

Full details of all search strategies are presented in Appendix 1.

Handling of citations

References identified from the searches were downloaded into EndNote bibliographic management software for further assessment and handling.

Supplementary searches

The bibliographies of included studies and review articles were also checked for additional relevant articles.

Prioritisation

During formal screening of titles and abstracts, studies were subject to a prioritisation process whereby the recency e.g., to most up-to-date clinical practice guidelines (CPG), methodological quality e.g., Cochrane systematic review (CSR), quality of the analyses per outcome (e.g., ratio of RCTs to observational studies), the number of included RCTs, the breadth of the timepoints reported etc. were considered to further prioritise which studies would be used to inform analyses. Studies were categorised into the following three categories: '1' = German, American, European or similar CPG; '2' = CSR or similar quality SR; '3' = potentially lower/other quality SR.

3. RESULTS

The original EBSCO searches were conducted on February 25, 2019; and of the 229 references screened, 15 studies were deemed eligible. In the current update, a total of 1,621 records were retrieved from the electronic literature searches (Appendix 1). After the removal of duplicate records 910 titles and abstracts were screened by two reviewers. Fifty-one records were found to be potentially eligible and were longlisted after a consensus. Of those, four were short-listed and included in the analyses (Table 1).[1-4] See also Table 2 for an overview of primary studies included in the identified SRs/CPGs.

UPDATE – Concluding Assessment by SHARE-TO-CARE Evidence Team (21/10/22)

Based on the update searches conducted by KSR Ltd in September 2021, we want to highlight the following aspects: the four recently published clinical practice guidelines (Kolasinski et al., 2020; NICE, 2021; AWMF, 2021; Department of Veterans Affairs, 2020) are in line with the current version of the decision aid. In cases of minor disagreements, we paid particular attention to the recommendations given by the German AWMF guideline.

Conclusion regarding the evidence report: No evidence update required. The present evidence report (February, 2019) remains valid until further notice.

Table 1 Evidence sources

Study/year	Evidence type	Primary studies	Number of studies	Intervention(s)	Comparator(s)	Outcome(s)	Date searched	Conclusions
Kolasinski 2020[1]	CPG	RCT	3*	Multiple	Multiple	Multiple	August 1, 2018	Please refer to: Figures 1 and 2 and Tables 1 and 2.
National Institute for Health and Care Excellence[2]	CPG	RCT	14	Hip replacement	Multiple	Multiple	2018	"Consider referral for joint surgery for people with osteoarthritis who experience joint symptoms (pain, stiffness and reduced function) that have a substantial impact on their quality of life and are refractory to non-surgical treatment. Refer for consideration of joint surgery before there is prolonged and established functional limitation and severe pain."
AWMF 2021[3]	CPG	CPG,RCT	22	Multiple	Multiple	Multiple	August 2019	Multiple sections, e.g., Table 8.1 or 13 of the CPG
Department of Veterans Affairs[4]	CPG	SR,RCT	11*	Non-surgical management	Multiple	Multiple	June 3, 2019	See section VI of the CPG. under C,D,E,F

* = refers to number of studies in hip replacement only.
AWMF = Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften; CPG = clinical practice guideline; RCT = randomised controlled trial.

Table 2 Overview of primary studies included in the identified SRs/CPGs

Study/year	Primary study(ies)	Reference (first author & journal)
Kolasinski 2020[1]	SR,RCT*	1. Runhaar J, Rozendaal RM, van Middelkoop M, Bijlsma HJ, Doherty M, Dziedzic KS, et al. Subgroup analyses of the effectiveness of oral glucosamine for knee and hip osteoarthritis: a systematic review and individual patient data meta-analysis from the OA trial bank. Ann Rheum Dis 2017;76:1862–9. 2. Busse JW, Wang L, Kamaleldin M, Craigie S, Riva JJ, Montoya L, et al. Opioids for chronic noncancer pain: a systematic review and meta-analysis. JAMA 2018;320:2448–60.

Study/year	Primary study(ies)	Reference (first author & journal)
		3. Skelly AC, Chou R, Dettori JR, Turner JA, Friedly JL, Rundell SD, et al, for the Agency for Healthcare Research and Quality. Noninvasive nonpharmacological treatment for chronic pain: a systematic review. 2018. 4. Runhaar J, Rozendaal RM, van Middelkoop M, Bijlsma HJ, Doherty M, Dziedzic KS, et al. Subgroup analyses of the effectiveness of oral glucosamine for knee and hip osteoarthritis: a systematic review and individual patient data meta-analysis from the OA trial bank. Ann Rheum Dis 2017;76:1862–9 5. Da Costa BR, Reichenbach S, Keller N, Nartey L, Wandel S, Juni P, et al. Effectiveness of non-steroidal anti-inflammatory drugs for the treatment of pain in knee and hip osteoarthritis: a network metaanalysis. Lancet 2017;390:e21–33. 6. Leopoldino AO, Machado GC, Ferreira PH, Pinheiro MB, Day R, McLachlan AJ, et al. Paracetamol versus placebo for knee and hip osteoarthritis. Cochrane Database Syst Rev 2019;2: CD013273
National Institute for Health and Care Excellence[2]	RCT	1. Barrett WP, Turner SE, Murphy JA, Flener JL, Alton TB. Prospective, randomized study of direct anterior approach vs posterolateral approach total hip arthroplasty: A concise 5-year follow-up evaluation. Journal of Arthroplasty. 2019; 34(6):1139-1142 2. Brismar BH, Hallert O, Tedhamre A, Lindgren JU. Early gain in pain reduction and hip function, but more complications following the direct anterior minimally invasive approach for total hip arthroplasty: A randomized trial of 100 patients with 5 years of follow up. Acta Orthopaedica. 2018; 89(5):484-489 3. Catma FM, Ozturk A, Unlu S, Ersan O, Altay M. Posterior hip approach yields better functional results vis-a-vis anterolateral approach in total hip arthroplasty for patients with severe hip dysplasia: A prospective randomized controlled clinical study. Journal of Orthopaedic Surgery. 2017; 25(2):2309499017717179 4. Cheng TE, Wallis JA, Taylor NF, Holden CT, Marks P, Smith CL et al. A prospective randomized clinical trial in total hip arthroplasty-comparing early results between the direct anterior approach and the posterior approach. Journal of Arthroplasty. 2017; 32(3):883-890 5. De Anta-Diaz B, Serralta-Gomis J, Lizaur-Utrilla A, Benavidez E, Lopez-Prats FA. No differences between direct anterior and lateral approach for primary total hip arthroplasty related to muscle damage or functional outcome. International Orthopaedics. 2016; 40(10):2025-2030 6. Nistor DV, Caterev S, Bolboaca SD, Cosma D, Lucaciu DOG, Todor A. Transitioning to the direct anterior approach in total hip arthroplasty. Is it a true muscle sparing approach when performed by a low volume hip replacement surgeon? International Orthopaedics. 2017; 41(11):2245-2252

Study/year	Primary study(ies)	Reference (first author & journal)
		7. Parvizi J, Restrepo C, Maltenfort MG. Total hip arthroplasty performed through direct anterior approach provides superior early outcome: Results of a randomized, prospective study. Orthopedic Clinics of North America. 2016; 47(3):497-504 8. Reichert JC, von Rottkay E, Roth F, Renz T, Hausmann J, Kranz J et al. A prospective randomized comparison of the minimally invasive direct anterior and the transgluteal approach for primary total hip arthroplasty. BMC Musculoskeletal Disorders. 2018; 19(1):241 9. Rosenlund S, Broeng L, Overgaard S, Jensen C, Holsgaard-Larsen A. The efficacy of modified direct lateral versus posterior approach on gait function and hip muscle strength after primary total hip arthroplasty at 12months follow-up. An explorative randomised controlled trial. Clinical Biomechanics. 2016; 39:91-99 10. Rykov K, Reininga IHF, Sietsma MS, Knobben BAS, Ten Have B. Posterolateral vs direct anterior approach in total hip arthroplasty (POLADA Trial): A randomized controlled trial to assess differences in serum markers. Journal of Arthroplasty. 2017; 32(12):3652-3658.e1 11. Taunton MJ, Trousdale RT, Sierra RJ, Kaufman K, Pagnano MW. John charnley award: Randomized clinical trial of direct anterior and miniposterior approach THA: Which provides better functional recovery? Clinical Orthopaedics and Related Research. 2018; 476(2):216-229 12. Xie J, Zhang H, Wang L, Yao X, Pan Z, Jiang Q. Comparison of supercapsular percutaneously assisted approach total hip versus conventional posterior approach for total hip arthroplasty: A prospective, randomized controlled trial. Journal of Orthopaedic Surgery and Research. 2017; 12(1):138 13. Zhao HY, Kang PD, Xia YY, Shi XJ, Nie Y, Pei FX. Comparison of early functional recovery after total hip arthroplasty using a direct anterior or posterolateral approach: A randomized controlled trial. Journal of Arthroplasty. 2017; 32(11):3421-3428 14. Zomar BO, Bryant D, Hunter S, Howard JL, Vasarhelyi EM, Lanting BA. A randomised trial comparing spatio-temporal gait parameters after total hip arthroplasty between the direct anterior and direct lateral surgical approaches. Hip International. 2018; 28(5):478-484
AWMF 2021[3]	CPG,SR,RCT*	1. Murphy SL, Kratz AL, Kidwell K, Lyden AK, Geisser ME, Williams DA. Brief time-based activity pacing instruction as a singular behavioral intervention was not effective in participants with symptomatic osteoarthritis. Pain. 2016;157(7):1563. 2. Allen KD, Yancy Jr WS, Bosworth HB, et al. A combined patient and provider intervention for management of osteoarthritis in veterans: a randomized clinical trial. Annals of internal medicine. 2016;164(2):73-83

Study/year	Primary study(ies)	Reference (first author & journal)
		3. Bartels EM, Juhl CB, Christensen R, et al. Aquatic exercise for the treatment of knee and hip osteoarthritis. Cochrane Database of Systematic Reviews. 2016(3) 4. American Academy of Orthopaedic Surgeons (AAOS). Management of Osteoarthritis of the Hip. Evidence-Based Clinical Practice Guideline. 2017. https://aaos.org/globalassets/quality-and-practice-resources/osteoarthritis-of-the-hip/oahip-cpg_6-11-19.pdf 5. Beselga C, Neto F, Alburquerque-Sendín F, Hall T, Oliveira-Campelo N. Immediate effects of hip mobilization with movement in patients with hip osteoarthritis: a randomised controlled trial. Manual therapy. 2016;22:80-5. 6. Svege I, Fernandes L, Nordsletten L, Holm I, Risberg MA. Long-term effect of exercise therapy and patient education on impairments and activity limitations in people with hip osteoarthritis: secondary outcome analysis of a randomized clinical trial. Physical therapy. 2016;96(6):818-27. 7. Pereira L, Kerr J, Jolles B. Intra-articular steroid injection for osteoarthritis of the hip prior to total hip arthroplasty: is it safe? A systematic review. The bone & joint journal. 2016;98(8):1027-35. 8. Zhao YJ, C.Peng, H.Feng, B.Li, Y.Weng, X. The effectiveness and safety of preoperative use of erythropoietin in patients scheduled for total hip or knee arthroplasty: A systematic review and meta-analysis of randomized controlled trials. Medicine (Baltimore). 2016;95(27):e4122 9. Li YY, P.Lv, H.Meng, Y.Zhang, L.Tang, P. A meta-analysis and systematic review evaluating the use of erythropoietin in total hip and knee arthroplasty. Ther Clin Risk Manag. 2018;14:1191-204. 10. Mayne AI, Davies PS, Simpson JM. Antibiotic treatment of asymptomatic bacteriuria prior to hip and knee arthroplasty; a systematic review of the literature. The Surgeon. 2018;16(3):176-82. 11. Wang CY, D.Shi, W.Huang, W.Zuo, D.Lu, Q. Current evidence does not support systematic antibiotherapy prior to joint arthroplasty in patients with asymptomatic bacteriuria-a meta analysis. International Orthopaedics. 2018;42(3):479-85. 12. Gomez-Ochoa SAE-C, B. B.Garcia-Rueda, N. A.Vega-Vera, A.Osma-Rueda, J. L. Risk of Surgical Site Infection in Patients with Asymptomatic Bacteriuria or Abnormal Urinalysis before Joint Arthroplasty: Systematic Review and Meta-Analysis. Surg Infect (Larchmt). 2019;20(3):159-66. 13. Smith TOA, T.Hing, C. B.MacGregor, A. Does bariatric surgery prior to total hip or knee arthroplasty reduce post-operative complications and improve clinical outcomes for obese patients? Systematic review and meta-analysis. Bone Joint J. 2016;98-b(9):1160-6

Study/year	Primary study(ies)	Reference (first author & journal)
		14. Yang LS, Y.Li, G.Liu, J. Is hemoglobin A1c and perioperative hyperglycemia predictive of periprosthetic joint infection following total joint arthroplasty?: A systematic review and meta-analysis. Medicine (Baltimore). 2017;96(51):e8805. 15. Shohat NM, K.Gilat, R.Rondon, A. J.Chen, A. F.Parvizi, J. Inadequate Glycemic Control Is Associated With Increased Surgical Site Infection in Total Joint Arthroplasty: A Systematic Review and Meta-Analysis. J Arthroplasty. 2018;33(7):2312-21.e3. 16. Podmore BH, A.van der Meulen, J.Aggarwal, A.Konan, S. Impact of comorbid conditions on outcomes of hip and knee replacement surgery: a systematic review and meta-analysis. BMJ Open. 2018;8(7):e021784. 17. Elsiwy YJ, I.Doma, K.Hazratwala, K.Letson, H. Risk factors associated with cardiac complication after total joint arthroplasty of the hip and knee: a systematic review. J Orthop Surg Res. 2019;14(1):15. 18. Bedard NAD, D. E.Owens, J. M.Glass, N. A.DeBerg, J.Callaghan, J. J. Tobacco Use and Risk of Wound Complications and Periprosthetic Joint Infection: A Systematic Review and Meta-Analysis of Primary Total Joint Arthroplasty Procedures. J Arthroplasty. 2019;34(2):385- 96.e4. 19. Ponnusamy KES, L.McCalden, R. W.Marsh, J.Vasarhelyi, E. M. Revision Rates and Functional Outcome Scores for Severely, Morbidly, and Super-Obese Patients Undergoing Primary Total Hip Arthroplasty: A Systematic Review and Meta-Analysis. JBJS Rev. 2019;7(4):e11 20. Kunutsor SKW, M. R.Blom, A. W.Beswick, A. D. Patient-Related Risk Factors for Periprosthetic Joint Infection after Total Joint Arthroplasty: A Systematic Review and MetaAnalysis. PLoS One. 2016;11(3):e0150866. 21. Aweid OH, Z.Saed, A.Kalairajah, Y. Treatment modalities for hip and knee osteoarthritis: A systematic review of safety. J Orthop Surg (Hong Kong). 2018;26(3):2309499018808669 22. Goh SLP, M. S. M.Stocks, J.Hou, Y.Lin, J.Hall, M. C.Doherty, M.Zhang, W. Efficacy and potential determinants of exercise therapy in knee and hip osteoarthritis: A systematic review and meta-analysis. Ann Phys Rehabil Med. 2019.
Department of Veterans Affairs 2020[4]	SR,RCT	1. Beumer L, Wong J, Warden SJ, Kemp JL, Foster P, Crossley KM. Effects of exercise and manual therapy on pain associated with hip osteoarthritis: A systematic review and meta-analysis. Br J Sports Med. Apr 2016;50(8): 458-463. 2. Vigdorchik JM, Nepple JJ, Eftekhary N, Leunig M, Clohisy JC. What is the association of elite sporting activities with the development of hip osteoarthritis? Am J Sports Med. Mar 2017;45(4):961-964.

Study/year	Primary study(ies)	Reference (first author & journal)
		3. Beumer L, Wong J, Warden SJ, Kemp JL, Foster P, Crossley KM. Effects of exercise and manual therapy on pain associated with hip osteoarthritis: A systematic review and meta-analysis. Br J Sports Med. Apr 2016;50(8): 458-463. 4. Osteras H, Paulsberg F, Olsen SE, Osteras B, Torstensen TA. Effects of medical exercise therapy in patients with hip osteoarthritis: A randomized controlled trial with six months follow-up. A pilot study. J Bodyw Mov Ther. Apr 2017;21(2):284-289. 5. da Costa BR, Reichenbach S, Keller N, et al. Effectiveness of non-steroidal anti-inflammatory drugs for the treatment of pain in knee and hip osteoarthritis: A network meta-analysis. Lancet. Jul 8 2017;390(10090):e21- e33. 6. Leopoldino AO, Machado GC, Ferreira PH, et al. Paracetamol versus placebo for knee and hip osteoarthritis. Cochrane Database Syst Rev. Feb 25 2019;2:Cd013273. 7. McCabe PS, Maricar N, Parkes MJ, Felson DT, O'Neill TW. The efficacy of intra-articular steroids in hip osteoarthritis: A systematic review. Osteoarthritis Cartilage. Sep 2016;24(9):1509-1517 8. Leite VF, Daud Amadera JE, Buehler AM. Viscosupplementation for hip osteoarthritis: A systematic review and meta-analysis of the efficacy on pain and disability, and the occurrence of adverse events. Arch Phys Med Rehabil. Mar 2018;99(3):574-583.e571. 9. Ye Y, Zhou X, Mao S, Zhang J, Lin B. Platelet rich plasma versus hyaluronic acid in patients with hip osteoarthritis: A meta-analysis of randomized controlled trials. Int J Surg. May 2018;53:279-287. 10. Zhu X, Wu D, Sang L, et al. Comparative effectiveness of glucosamine, chondroitin, acetaminophen or celecoxib for the treatment of knee and/or hip osteoarthritis: A network meta-analysis. Clin Exp Rheumatol. Jul-Aug 2018;36(4):595-602 11. Manheimer E, Cheng K, Wieland LS, et al. Acupuncture for hip osteoarthritis. Cochrane Database Syst Rev. May 5, 2018;5:Cd013010.
* = only studies published after 2015 were extracted CPG = clinical practice guideline; RCT = randomised controlled trial; SR = systematic review.		

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[1] Kolasinski SL, Neogi T, Hochberg MC, Oatis C, Guyatt G, Block J, et al. 2019 American College of Rheumatology/Arthritis Foundation guideline for the management of osteoarthritis of the hand, hip, and knee. *Arthritis Rheumatol* 2020;72(2):220-33.

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[3] AWMF. *Evidenz- und konsensbasierte Indikationskriterien zur Hüfttotalendoprothese bei Coxarthrose (EKIT-Hüfte). S3-LL (DGOU) [Internet]*: AWMF, 2021 [accessed 29.9.21] Available from: https://www.awmf.org/leitlinien/detail/ll/187-001.html

[4] Department of Veterans Affairs, Department of Defense, Non-Surgical Management of Hip & Knee Osteoarthritis Work Group. *VA/DoD clinical practice guideline for the non-surgical management of hip & knee osteoarthritis. Version 2 [Internet]*. Washington DC: Department of Veterans Affairs, Department of Defense, 2021 09 29, 2020 [accessed 29.9.21] Available from: https://guidelines.ecri.org/profile/11

APPENDIX 1: SEARCH STRATEGIES

Shared Decision Making: hip replacement update (EBSCO)

Table 3. Systematic reviews and guideline search results

Database	Dates	Results
CDSR	2019 - Issue 9, September 2021	14
KSR Evidence	2019-2021	473
Epistemonikos	2019-2021	701
INAHTA	2019-2021	5
NICE Evidence	01/01/2019 - 29/09/2021	35
NICE Guidance	2019-2021	4
GIN	2019-2021	2
ECRI	2019-2021	7
Trip	2019-2021	377
CADTH	2019-2021	3
Total		**1621**
Total after de-duplication		**910**

Search strategies

Cochrane Database of Systematic Reviews (CDSR) (Wiley): Issue 9 of 12, September 2021
Searched: 29.9.21

#1 MeSH descriptor: [Arthroplasty, Replacement, Hip] explode all trees 1974
#2 MeSH descriptor: [Hip Prosthesis] explode all trees 1137
#3 (hip* near/3 (replace* or arthroplast* or implant* or prosthe* or endoprosthe* or total)):ti,ab,kw 9087
#4 ("femoral head" near/3 (replace* or arthroplast* or implant* or prosthe* or endoprosthe* or total)):ti,ab,kw 92
#5 (hiparthroplast* or hemiarthroplast*):ti,ab,kw 507
#6 (THR or THA):ti,ab 2364
#7 MeSH descriptor: [Osteoarthritis, Hip] explode all trees 1052
#8 ((hip* near/3 osteoarthrit*) or coxarthros*):ti,ab,kw 2524
#9 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 with Cochrane Library publication date Between Jan 2019 and Dec 2021, in Cochrane Reviews, Cochrane Protocols 14

KSR Evidence (Internet): Database last updated 29 September 2021
www.ksrevidence.com
Searched: 29.9.21

1 hip* near/3 (replace* or arthroplast* or implant* or prosthe* or endoprosthe* or total) in Title Date published: 2019 - 2021 349 results
2 hip* near/3 (replace* or arthroplast* or implant* or prosthe* or endoprosthe* or total) in Bottom line 92 results
3 "femoral head" near/3 (replace* or arthroplast* or implant* or prosthe* or endoprosthe* or total) in All text 27 results

4 hiparthroplast* or hemiarthroplast* in All text 133 results
5 THR or THA in Title 11 results
6 THR or THA in Bottom line 16 results
7 (hip* near/3 osteoarthrit*) or coxarthros* in Title 114 results
8 (hip* near/3 osteoarthrit*) or coxarthros* in Bottom line 32 results
9 #1 or #8 or #2 or #7 or #3 or #6 or #5 or #4 in All text Date published: 2019 - 2021 473 results

Search run Wed Sep 29 2021

Epistemonikos (Internet): up to 29 September 2021
https://www.epistemonikos.org/en/
Searched: 29.9.21

(title:("hip replacement" OR "hip replacements" OR "hip arthroplasty" OR "hip arthroplasties" OR "hip implant" OR "hip implants" OR "hip prostheses" OR "hip prosthesis" OR "hip endoprostheses" OR "hip endoprosthesis" OR "total hip" OR hiparthroplast* OR hemiarthroplast* OR "hip osteoarthritis" OR coxarthros*) OR abstract:("hip replacement" OR "hip replacements" OR "hip arthroplasty" OR "hip arthroplasties" OR "hip implant" OR "hip implants" OR "hip prostheses" OR "hip prothesis" OR "hip endoprostheses" OR "hip endoprosthesis" OR "total hip" OR hiparthroplast* OR hemiarthroplast* OR "hip osteoarthritis" OR coxarthros*)); Publication year: Custom year range: From 2019 To 2021; Publication Type: Systematic Review
Records retrieved 701

International HTA Database (INAHTA): up to 29 September 2021
https://database.inahta.org/
Searched: 29.9.21

1 "Arthroplasty, Replacement, Hip"[mh]
2 "Hip Prosthesis"[mh]
3 "Osteoarthritis, Hip"[mh]
4 "hip replacement" OR "hip replacements" OR "hip arthroplasty" OR "hip arthroplasties" OR "hip implant" OR "hip implants" OR "hip prostheses" OR "hip prosthesis" OR "hip endoprostheses" OR "hip endoprosthesis" OR "total hip" OR hiparthroplast* OR hemiarthroplast* OR "hip osteoarthritis" OR coxarthros*
5 #4 OR #3 OR #2 OR #1 YEAR 2019 TO 2021 5

NICE Evidence Search (Internet): up to 29 September 2021
https://www.evidence.nhs.uk/
Searched: 29.9.21

Search terms	**Results (Guidance): 01/01/2019-29/09/2021**
hip replacement	66
hip arthroplasty	34
hip implant	36
hip prostheses	15

hip prosthesis	19
hemiarthroplasty	10
hip osteoarthritis	39
Total retrieved	**219**
Total after removal of duplicates	**109**
Sifted for relevance	**35**

National Institute for Health and Care Excellence (NICE): Guidelines
https://www.nice.org.uk/
Searched: 29.9.21

NICE Guidance; Conditions and diseases; Musculoskeletal conditions; Hip conditions 2019-2021

Guidance 0
Advice 0
Quality standards 0
Pathways 1

NICE Guidance; Conditions and diseases; Musculoskeletal conditions; Joint replacement 2019-2021

Guidance 1
Advice 0
Quality standards 0
Pathways 1

NICE Guidance; Conditions and diseases; Musculoskeletal conditions; Arthritis 2019-2021

Guidance 0
Advice 0
Quality standards 0
Pathways 1

Total 4

Guidelines International Network (GIN). International Guidelines Library (Internet): up to 29 September 2021
https://g-i-n.net/international-guidelines-library/
Searched: 29.9.21

hip replacement
hip arthroplasty
hip arthroplasties
hip implant
hip prostheses

hip prosthesis
hip osteoarthritis
2019-2021
2 records retrieved

ECRI Institute Guidelines Trust (Internet): up to 29 September 2021
https://guidelines.ecri.org/
Searched: 29.9.21

hip replacement
hip arthroplasty
hip implant
hip prostheses
hip prosthesis
hip osteoarthritis
2019-2021
7 records retrieved

Trip Database: up to 29 September 2021
https://www.tripdatabase.com/
Searched: 29.9.21

"hip replacement" OR "hip replacements" OR "hip arthroplasty" OR "hip arthroplasties" OR "hip implant" OR "hip implants" OR "hip prostheses" OR "hip prosthesis" OR "hip endoprostheses" OR "hip endoprosthesis" OR "total hip" OR hiparthroplast* OR hemiarthroplast* OR "hip osteoarthritis" OR coxarthros*; in the Document; 2019, 2021
Guidelines: 76 records retrieved

"hip replacement" OR "hip replacements" OR "hip arthroplasty" OR "hip arthroplasties" OR "hip implant" OR "hip implants" OR "hip prostheses" OR "hip prosthesis" OR "hip endoprostheses" OR "hip endoprosthesis" OR "total hip" OR hiparthroplast* OR hemiarthroplast* OR "hip osteoarthritis" OR coxarthros*; in the Title; 2019, 2021
Systematic Reviews: 307 records retrieved

383 total records retrieved
377 total records after removal of duplicates

Canadian Agency for Drugs and Technologies in Health (CADTH): up to 29 September 2021
https://www.cadth.ca/
Searched: 29.9.21

"hip replacement"
"hip arthroplasty"
"hip arthroplasties"
"hip implant"
"hip implants"
"hip prostheses"

"hip prosthesis"
"hip osteoarthritis"
Advanced Search; Project Line; Health Technology Assessment; 2019-2021
3 records retrieved