



MASSACHUSETTS

Blue Cross Blue Shield of Massachusetts is an independent
Licensee of the Blue Cross and Blue Shield Association

Medical Policy

Hip Resurfacing

Table of Contents

- [Policy: Commercial](#)
- [Policy: Medicare](#)
- [Authorization Information](#)
- [Coding Information](#)
- [Description](#)
- [Policy History](#)
- [Information Pertaining to All Policies](#)
- [References](#)

Policy Number: 046

BCBSA Reference Number: 7.01.80 (For Plan internal use only)

NCD/LCD: N/A

Related Policies

Surgical Treatment of Femoroacetabular Impingement, #[145](#)

Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO BlueSM and Medicare PPO BlueSM Members

Metal-on-metal total hip resurfacing with a device system approved by the U.S. Food and Drug Administration (FDA) may be considered **MEDICALLY NECESSARY** as an alternative to total hip replacement when the individual:

- Is a candidate for total hip replacement; **AND**
- Is likely to outlive a traditional prosthesis; **AND**
- Does not have a contraindication* for total hip resurfacing.

*The FDA lists several contraindications for total hip resurfacing.

These contraindications include, but are not limited to, the following:

- Bone stock inadequate to support the device due to:
 - severe osteopenia or a family history of severe osteoporosis or severe osteopenia
 - osteonecrosis or avascular necrosis with more than 50% involvement of the femoral head
 - multiple cysts of the femoral head (>1 cm)
- Skeletal immaturity
- Vascular insufficiency, muscular atrophy, or neuromuscular disease severe enough to compromise implant stability or postoperative recovery
- Known moderate-to-severe renal insufficiency
- Severely overweight
- Known or suspected metal sensitivity
- Immunosuppressed or receiving high doses of corticosteroids
- Individuals with childbearing potential of childbearing age due to unknown effects on the fetus of metal ion release.

Partial hip resurfacing with an FDA approved device may be considered **MEDICALLY NECESSARY** in patients with osteonecrosis of the femoral head who have one or more contraindications for metal-on-metal implants and meet all of the following criteria:

- The individual is a candidate for total hip replacement; **AND**
- Is likely to outlive a traditional prosthesis; **AND**
- The individual has known or suspected metal sensitivity or concern about potential effects of metal ions; **AND**
- There is no more than 50% involvement of the femoral head; **AND**
- There is minimal change in acetabular cartilage or articular cartilage space identified on radiography.

All other types and applications of hip resurfacing are considered **INVESTIGATIONAL**.

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	This procedure is performed in the inpatient setting.
Commercial PPO and Indemnity	This procedure is performed in the inpatient setting.
Medicare HMO Blue SM	This procedure is performed in the inpatient setting.
Medicare PPO Blue SM	This procedure is performed in the inpatient setting.

CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

The above **medical necessity criteria MUST** be met for the following codes to be covered for **Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:**

CPT Codes

There is no specific CPT code for this service.

HCPCS Codes

HCPCS codes:	Code Description
S2118	Metal-on-metal total hip resurfacing, including acetabular and femoral components

ICD-10 Procedure Codes

ICD-10-PCS procedure codes:	Code Description
0SU90BZ	Supplement Right Hip Joint with Resurfacing Device, Open Approach

0SUA0BZ	Supplement Right Hip Joint, Acetabular Surface with Resurfacing Device, Open Approach
0SUB0BZ	Supplement Left Hip Joint with Resurfacing Device, Open Approach
0SUE0BZ	Supplement Left Hip Joint, Acetabular Surface with Resurfacing Device, Open Approach
0SUR0BZ	Supplement Right Hip Joint, Femoral Surface with Resurfacing Device, Open Approach
0SUS0BZ	Supplement Left Hip Joint, Femoral Surface with Resurfacing Device, Open Approach
0SUR0BZ	Supplement Right Hip Joint, Femoral Surface with Resurfacing Device, Open Approach
0SUS0BZ	Supplement Left Hip Joint, Femoral Surface with Resurfacing Device, Open Approach
0SUA0BZ	Supplement Right Hip Joint, Acetabular Surface with Resurfacing Device, Open Approach
0SUE0BZ	Supplement Left Hip Joint, Acetabular Surface with Resurfacing Device, Open Approach

Description

Total Hip Resurfacing

Hip resurfacing is an alternative to total hip arthroplasty (THA; also known as total hip replacement) for patients with advanced arthritis of the hip. Total hip resurfacing describes the placement of a shell that covers the femoral head together with implantation of an acetabular cup. Partial hip resurfacing is considered a treatment option for avascular necrosis with collapse of the femoral head.

Total hip resurfacing has been investigated in patients with osteoarthritis, rheumatoid arthritis, and advanced avascular necrosis as an alternative to THA, particularly in young active patients who would potentially outlive a total hip prosthesis. Therefore, hip resurfacing could be viewed as a time-buying procedure to delay the need for a THA. Proposed advantages of total hip resurfacing compared with THA include preservation of the femoral neck and femoral canal, thus facilitating revision or conversion to a total hip resurfacing, if required. In addition, the resurfaced head is more similar in size to the normal femoral head, thus increasing the stability and decreasing the risk of dislocation compared with THA.

Total hip resurfacing has undergone various evolutions, with modifications in prosthetic design and composition and implantation techniques. For example, similar to total hip prostheses, the acetabular components of total hip resurfacing have been composed of polyethylene. However, over time it became apparent that device failure was frequently related to the inflammatory osteolytic reaction to polyethylene debris wear particles. Metal acetabular components have since been designed to improve implant longevity. Sensitivity to wear particles from metal-on-metal chromium and cobalt implant components are of increasing concern.

Summary

Description

Hip resurfacing is an alternative to total hip arthroplasty (also known as hip replacement) for patients with advanced arthritis of the hip. Total hip resurfacing describes the placement of a shell that covers the femoral head together with implantation of an acetabular cup in patients with painful hip joints. Partial hip resurfacing is considered a treatment option for avascular necrosis with collapse of the femoral head. Available prostheses are metal-on-metal devices.

Summary of Evidence

For individuals who have an indication for hip replacement who would outlive a traditional prosthesis and have no contraindication for hip resurfacing who receive a metal-on-metal total hip resurfacing device, the evidence includes randomized controlled trials (RCTs), numerous large observational studies, large registry studies, and systematic reviews. Relevant outcomes are symptoms, change in disease status, functional

outcomes, health status measures, quality of life, and treatment-related morbidity. The efficacy of total hip resurfacing performed with current techniques is similar to that for total hip arthroplasty (THA) over the short-to-medium term, and total hip resurfacing may permit easier conversion to a THA for younger patients expected to outlive their prosthesis. Based on potential ease of revision of total hip resurfacing compared with THA, current evidence supports conclusions that hip resurfacing presents a reasonable alternative for active patients who are considered too young for THA when performed by surgeons experienced in the technique. The literature on adverse events (eg, metallosis, pseudotumor formation, implant failure) is evolving as longer follow-up data become available. Due to the uncertain risk with metal-on-metal implants, the risk-benefit ratio needs to be considered carefully on an individual basis. In addition, emerging evidence has suggested an increased risk of failure in women, possibly due to smaller implant size. Therefore, these factors should also be considered in the overall patient evaluation for total hip resurfacing, and patients should make an informed choice with their treating physicians. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have an indication for hip replacement who would outlive a traditional prosthesis and have no contraindication for hip resurfacing who receive a partial hip resurfacing device, the evidence includes a comparative study. Relevant outcomes are symptoms, change in disease status, functional outcomes, health status measures, quality of life, and treatment-related morbidity. Although evidence has shown better outcomes with total hip resurfacing than with partial hip resurfacing, partial hip resurfacing would be appropriate in younger patients with osteonecrosis who have contraindications for a metal-on-metal prosthesis. These factors should be considered in the overall patient evaluation for total hip resurfacing, and patients should make an informed choice with their treating physicians. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

Policy History

Date	Action
6/2023	Annual policy review. Minor editorial refinements to policy statements; intent unchanged.
6/2022	Annual policy review. Description, summary, and references updated. Policy statements unchanged.
5/2021	Annual review. Description, summary, and references updated. Policy statements unchanged.
6/2020	Annual review. Description, summary, and references updated. Policy statements unchanged.
9/2019	Outpatient prior authorization information clarified to N/A. This service is primarily performed in an inpatient setting
5/2019	Annual review. Description, summary, and references updated. Policy statements unchanged.
12/2018	Annual review. Description, summary, and references updated. Policy statements unchanged.
5/2018	Annual review. Description, summary, and references updated. Policy statements unchanged.
3/2018	Annual review. Description, summary, and references updated. Policy statements unchanged.
1/2018	Clarified coding information.
9/2017	Annual review. New references added
11/2015	Annual review. New references added
8/2015	Added coding language.
5/2014	Updated Coding section with ICD10 procedure and diagnosis codes. Effective 10/2015.
12/2013	Removed ICD-9 diagnosis codes as the policy requires prior authorization. Added ICD-9 CM-procedure code 00.75 as it meets the intent of the policy.
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.

6/2011	Reviewed - Medical Policy Group – Orthopedics, Rehabilitation and Rheumatology. No changes to policy statements.
7/2010	Reviewed - Medical Policy Group – Orthopedics, Rehabilitation Medicine and Rheumatology. No changes to policy statements.
6/2010	Annual review. New references added. Policy updated to address partial hip resurfacing when medical criteria are met.
7/2009	Reviewed - Medical Policy Group - Orthopedics, Rehabilitation Medicine, and Rheumatology. No changes to policy statements.
3/2009	Annual review. New references added
10/1/2008	Coding section updated to reflect new HCPCS Level II code for hip resurfacing.
8/2008	Annual review. New references added
7/2008	Reviewed - Medical Policy Group – Orthopedics, Rehabilitation Medicine, and Rheumatology. No changes to policy statements.
2/1/2008	Medical Policy 046 created. Effective 2/1/2008.

Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

[Clinical Exception Process](#)

[Medical Technology Assessment Guidelines](#)

References

1. Blue Cross and Blue Shield Association Technology Evaluation Center. Metal-on-metal total hip resurfacing. TEC Assessments. 2007;Vol 22:Tab 3.
2. Vendittoli PA, Lavigne M, Roy AG, et al. A prospective randomized clinical trial comparing metal-on-metal total hip arthroplasty and metal-on-metal total hip resurfacing in patients less than 65 years old. *Hip Int.* 2006; 16 Suppl 4: 73-81. PMID 19219833
3. Food and Drug Administration. P040033: Birmingham Hip Resurfacing (BHR) System. 2006; http://www.accessdata.fda.gov/cdrh_docs/pdf4/p040033a.pdf. Accessed February 16, 2023.
4. Australian Orthopedic Association. National Joint Replacement Registry Annual Report. Adelaide, Australia: AOA; 2006.
5. Nunley RM, Della Valle CJ, Barrack RL. Is patient selection important for hip resurfacing?. *Clin Orthop Relat Res.* Jan 2009; 467(1): 56-65. PMID 18941859
6. Quesada MJ, Marker DR, Mont MA. Metal-on-metal hip resurfacing: advantages and disadvantages. *J Arthroplasty.* Oct 2008; 23(7 Suppl): 69-73. PMID 18922377
7. Marker DR, Strimbu K, McGrath MS, et al. Resurfacing versus conventional total hip arthroplasty - review of comparative clinical and basic science studies. *Bull NYU Hosp Jt Dis.* 2009; 67(2): 120-7. PMID 19583538
8. Jiang Y, Zhang K, Die J, et al. A systematic review of modern metal-on-metal total hip resurfacing vs standard total hip arthroplasty in active young patients. *J Arthroplasty.* Apr 2011; 26(3): 419-26. PMID 20851564
9. Haddad FS, Konan S, Tahmassebi J. A prospective comparative study of cementless total hip arthroplasty and hip resurfacing in patients under the age of 55 years: a ten-year follow-up. *Bone Joint J.* May 2015; 97-B(5): 617-22. PMID 25922454
10. Mont MA, Seyler TM, Ragland PS, et al. Gait analysis of patients with resurfacing hip arthroplasty compared with hip osteoarthritis and standard total hip arthroplasty. *J Arthroplasty.* Jan 2007; 22(1): 100-8. PMID 17197316
11. Lavigne M, Therrien M, Nantel J, et al. The John Charnley Award: The functional outcome of hip resurfacing and large-head THA is the same: a randomized, double-blind study. *Clin Orthop Relat Res.* Feb 2010; 468(2): 326-36. PMID 19543863

12. Garbuz DS, Tanzer M, Greidanus NV, et al. The John Charnley Award: Metal-on-metal hip resurfacing versus large-diameter head metal-on-metal total hip arthroplasty: a randomized clinical trial. *Clin Orthop Relat Res.* Feb 2010; 468(2): 318-25. PMID 19697090
13. Kumar P, Ksheersagar V, Aggarwal S, et al. Complications and mid to long term outcomes for hip resurfacing versus total hip replacement: a systematic review and meta-analysis. *Eur J Orthop Surg Traumatol.* Aug 25 2022. PMID 36006506
14. Azam MQ, McMahon S, Hawdon G, et al. Survivorship and clinical outcome of Birmingham hip resurfacing: a minimum ten years' follow-up. *Int Orthop.* Jan 2016; 40(1): 1-7. PMID 25820838
15. Daniel J, Pradhan C, Ziaee H, et al. Results of Birmingham hip resurfacing at 12 to 15 years: a single-surgeon series. *Bone Joint J.* Oct 2014; 96-B(10): 1298-306. PMID 25274912
16. Murray DW, Grammatopoulos G, Pandit H, et al. The ten-year survival of the Birmingham hip resurfacing: an independent series. *J Bone Joint Surg Br.* Sep 2012; 94(9): 1180-6. PMID 22933488
17. Matharu GS, McBryde CW, Pynsent WB, et al. The outcome of the Birmingham Hip Resurfacing in patients aged 50 years up to 14 years post-operatively. *Bone Joint J.* Sep 2013; 95-B(9): 1172-7. PMID 23997127
18. Pailhe R, Matharu GS, Sharma A, et al. Survival and functional outcome of the Birmingham Hip Resurfacing system in patients aged 65 and older at up to ten years of follow-up. *Int Orthop.* Jun 2014; 38(6): 1139-45. PMID 24370976
19. Bourget-Murray J, Watt Kearns SJ, Piroozfar S, et al. Birmingham Hip Resurfacing for osteoarthritis - a Canadian retrospective cohort study with a minimum 10-year follow-up. *Can J Surg.* 2022; 65(3): E296-E302. PMID 35504661
20. Van Der Straeten C, Gross TP, Amstutz H, et al. Hip resurfacing arthroplasty in young patients: international high-volume centres' report on the outcome of 11,382 metal-on-metal hip resurfacing arthroplasties in patients \leq 50 years at surgery. *Hip Int.* May 2022; 32(3): 353-362. PMID 32905713
21. Amstutz HC, Le Duff MJ, Campbell PA, et al. Clinical and radiographic results of metal-on-metal hip resurfacing with a minimum ten-year follow-up. *J Bone Joint Surg Am.* Nov 17 2010; 92(16): 2663-71. PMID 21084576
22. Kim PR, Beulé PE, Laflamme GY, et al. Causes of early failure in a multicenter clinical trial of hip resurfacing. *J Arthroplasty.* Sep 2008; 23(6 Suppl 1): 44-9. PMID 18722302
23. Gross TP, Liu F, Webb LA. Clinical outcome of the metal-on-metal hybrid Corin Cormet 2000 hip resurfacing system: an up to 11-year follow-up study. *J Arthroplasty.* Apr 2012; 27(4): 533-538.e1. PMID 21908168
24. Lass R, Bechler U, Springer B, et al. Midterm results of the Birmingham hip resurfacing: a single-surgeon series. *Arch Orthop Trauma Surg.* Feb 2023; 143(2): 1041-1048. PMID 35076766
25. Nunley RM, Zhu J, Brooks PJ, et al. The learning curve for adopting hip resurfacing among hip specialists. *Clin Orthop Relat Res.* Feb 2010; 468(2): 382-91. PMID 19779950
26. McGrath MS, Marker DR, Seyler TM, et al. Surface replacement is comparable to primary total hip arthroplasty. *Clin Orthop Relat Res.* Jan 2009; 467(1): 94-100. PMID 18797977
27. Ball ST, Le Duff MJ, Amstutz HC. Early results of conversion of a failed femoral component in hip resurfacing arthroplasty. *J Bone Joint Surg Am.* Apr 2007; 89(4): 735-41. PMID 17403794
28. de Steiger RN, Miller LN, Prosser GH, et al. Poor outcome of revised resurfacing hip arthroplasty. *Acta Orthop.* Feb 2010; 81(1): 72-6. PMID 20170416
29. Stoney J, Graves SE, de Steiger RN, et al. Is the Survivorship of Birmingham Hip Resurfacing Better Than Selected Conventional Hip Arthroplasties in Men Younger Than 65 Years of Age? A Study from the Australian Orthopaedic Association National Joint Replacement Registry. *Clin Orthop Relat Res.* Nov 2020; 478(11): 2625-2636. PMID 32898048
30. Su EP, Ho H, Bhal V, et al. Results of the First U.S. FDA-Approved Hip Resurfacing Device at 10-Year Follow-up. *J Bone Joint Surg Am.* Jul 21 2021; 103(14): 1303-1311. PMID 33999875
31. Reito A, Puolakka T, Elo P, et al. Outcome of Birmingham hip resurfacing at ten years: role of routine whole blood metal ion measurements in screening for pseudotumours. *Int Orthop.* Nov 2014; 38(11): 2251-7. PMID 25030963
32. Williams DH, Greidanus NV, Masri BA, et al. Prevalence of pseudotumor in asymptomatic patients after metal-on-metal hip arthroplasty. *J Bone Joint Surg Am.* Dec 07 2011; 93(23): 2164-71. PMID 22159851

33. Kwon YM, Ostlere SJ, McLardy-Smith P, et al. "Asymptomatic" pseudotumors after metal-on-metal hip resurfacing arthroplasty: prevalence and metal ion study. *J Arthroplasty*. Jun 2011; 26(4): 511-8. PMID 20591612
34. Steffen RT, Pandit HP, Palan J, et al. The five-year results of the Birmingham Hip Resurfacing arthroplasty: an independent series. *J Bone Joint Surg Br*. Apr 2008; 90(4): 436-41. PMID 18378915
35. Ollivere B, Darrach C, Barker T, et al. Early clinical failure of the Birmingham metal-on-metal hip resurfacing is associated with metallosis and soft-tissue necrosis. *J Bone Joint Surg Br*. Aug 2009; 91(8): 1025-30. PMID 19651828
36. Mont MA, Seyler TM, Ulrich SD, et al. Effect of changing indications and techniques on total hip resurfacing. *Clin Orthop Relat Res*. Dec 2007; 465: 63-70. PMID 17891034
37. Grecula MJ. Resurfacing arthroplasty in osteonecrosis of the hip. *Orthop Clin North Am*. Apr 2005; 36(2): 231-42, x. PMID 15833461
38. Stulberg BN, Fitts SM, Zadzilka JD, et al. Resurfacing arthroplasty for patients with osteonecrosis. *Bull NYU Hosp Jt Dis*. 2009; 67(2): 138-41. PMID 19583542
39. Beaulé PE, Amstutz HC, Le Duff M, et al. Surface arthroplasty for osteonecrosis of the hip: hemiresurfacing versus metal-on-metal hybrid resurfacing. *J Arthroplasty*. Dec 2004; 19(8 Suppl 3): 54-8. PMID 15578554
40. McGrory B, Barrack R, Lachiewicz PF, et al. Modern metal-on-metal hip resurfacing. *J Am Acad Orthop Surg*. May 2010; 18(5): 306-14. PMID 20435881
41. Lombardi AV, Barrack RL, Berend KR, et al. The Hip Society: algorithmic approach to diagnosis and management of metal-on-metal arthroplasty. *J Bone Joint Surg Br*. Nov 2012; 94(11 Suppl A): 14-8. PMID 23118373
42. National Institute for Health and Care Excellence (NICE). Total hip replacement and resurfacing arthroplasty for end-stage arthritis of the hip [TA304]. 2014; <https://www.nice.org.uk/guidance/ta304>. Accessed February 16, 2023.