



MEDICAL POLICY

Date Reviewed: 03/01/11, 04/15/11

Subject: Joint Resurfacing (Non-Biologic)

Description: Resurfacing of the joints involves the limited removal of one or both surfaces of the joint followed by replacement of the joint surface with non-biologic material (for example, metal or plastic). Biologic joint resurfacing procedures (for example, chondrocyte implants, fascia lata grafts, tendon allografts, osteoarticular grafts (OATS)) are not addressed in this policy.

Indications of Coverage:

Hip resurfacing is considered medically necessary for the treatment of osteoarthritis, avascular necrosis of the femoral head, osteonecrosis of the femoral head, traumatic arthritis, rheumatoid arthritis, or developmental dislocation (abnormal formation) of the hip when the following criteria are met:

Pain at the hip joint that increases with activity or weight bearing and interferes with activities of daily living.

Physical findings of reproducible pain with passive range of motion (ROM) testing **AND** limited range of motion of the joint **AND** an antalgic gait (a method of ambulating that lessens the painful symptoms, for example, limping).

Imaging documentation consistent with the conditions described above (for example, subchondral cysts (areas of decreased density), subchondral sclerosis (areas of increased density), periarticular osteophytes (bone spurs), joint subluxation (partial dislocation), or joint space narrowing).

Symptoms that have failed to respond to a recent four week trial of physical therapy **AND** a recent four-week trial of anti-inflammatory medication (or other analgesic medication if the anti-inflammatory medication is contraindicated), which was used on a regular basis. **If the imaging documents bone-on-bone contact, the trial of conservative therapy is not required.**

The procedure will be performed with FDA-approved resurfacing systems (Birmingham Hip Resurfacing System (Smith + Nephew), Buechel-Pappas Hip Replacement System – Resurfacing (Endotec), Conserve Plus Total Resurfacing Hip System (Wright Medical), or Cormet Hip Resurfacing System (Stryker)).

The procedure is being performed on an individual less than 65 years of age.

Limitations of Coverage:

Review contract and endorsements for exclusions and prior authorization or benefit requirements.

If used for a condition/diagnosis other than is listed in the Indications of Coverage, deny as experimental or investigative.

If used for a condition/diagnosis that is listed in the Indications of Coverage, but the criteria are not met, deny as not medically necessary.

Resurfacing is considered not medically necessary when any of the following conditions are documented:

Infection or sepsis

Patients who are skeletally immature (under twenty one years of age)

Patients with vascular insufficiency, muscular atrophy, or neuromuscular disease that would compromise implant stability or postoperative recovery

Patients with bone inadequate to support the device, including patients with severe osteopenia (decreased bone mineral density), a family history of severe osteoporosis, or a family history of severe osteopenia.

Patients with osteonecrosis or avascular necrosis involving more than 50% of the femoral head

Patients with more than one cyst of the femoral head greater than one centimeter in diameter

Females of child-bearing age (due to unknown effects on the fetus of metal ions produced during friction of the joint)

Patients with known moderate to severe renal insufficiency

Patients who are immunosuppressed with a disease such as AIDS or patients receiving high doses of corticosteroids

Patients with known or suspected metal sensitivity (for example, sensitivity to jewelry)

The individual is greater than 65 years of age

Joint resurfacing is considered investigational in any of the situations below as there is insufficient supporting peer-reviewed scientific literature:

For any system not approved by the FDA

When used for any joint other than the hip (for example, knee, shoulder (Copeland devices by Biomet), toe (Futura Hemi Toe by Tornier)). **Note: Procedures for the knee are generally performed with both femoral and tibial components and should be considered unicompartmental or bicompartamental knee replacement, not resurfacing.**

When a partial (hemi) resurfacing procedure (only one bony surface of the joint is resurfaced) is performed (for example, HemiCAP, UniCAP). **Note: When devices are implanted on both bony surfaces of a joint, this is not considered resurfacing.**

Documentation Required:

Office notes

Physical therapy notes

Imaging reports

Rationale: Joint resurfacing has been proposed as an alternative to total joint replacement because it removes less bone, allows for a more normal function of the joint, and preserves the possibility for total joint replacement in the future. Resurfacing procedures typically involve the removal of a limited amount of the bony surface, which is then replaced with metal or metal/plastic components. In total resurfacing procedures, both sides of the joint (for example, the femoral head and acetabulum in hip resurfacing, the femur and tibia in knee resurfacing) are resurfaced. Partial resurfacing is performed to only one side of the joint (for example, resurfacing of the femoral head in partial hip resurfacing).

Removal of more substantial amounts of bone from both sides of the joint (for example, the end of the femur and the acetabulum in the hip, the femur and tibia in the knee) is not considered resurfacing, and would usually be considered a replacement procedure. Replacement procedures may be performed to one or multiple surfaces of the joint, assuming the joint in question has multiple surfaces. For example, replacement of the knee surfaces may include any or all of the medial surface, lateral surface, or patellar surface. (In the knee, these procedures may be referred to as unicompartmental or bicompartamental knee replacement.)

At this time, there is insufficient literature supporting the effectiveness of resurfacing procedures for any joint other than the hip.

References: American Academy of Orthopedic Surgeons. Technology Overviews. Hip resurfacing. Dec 4, 2009. Available at: www.aaos.org/research/overviews/overviewlist.asp. Accessed: 24 Feb 11.

Birmingham Hip Resurfacing System. Smith and Nephew. Available at: www.birminghamhipresurfacing.com. Accessed: 24 Feb 11.

Buchner M, Eschbach N, Loew M. Comparison of the short-term functional results after surface replacement and total shoulder arthroplasty for osteoarthritis of the shoulder: A matched-pair analysis. *Arch Orthop Trauma Surg.* 2008; 128(4):347-354.

Burgess DL, McGrath MS, Bonutti PM, Marker DR, Delanois RE, Mont MA. Shoulder resurfacing. *J Bone Joint Surg Am.* 2009; 91(5):1228-1238.

Makela KT, Eskelinen A, Pulkkinen P, Paavolainen P, Remes V. Total hip arthroplasty for primary osteoarthritis in patients fifty-five years of age or older. An analysis of the Finnish arthroplasty registry. *J Bone Joint Surg Am.* 2008 Oct; 90(10):2160-70.

McGrath MS, Desser DR, Ulrich SD, Seyler TM, Marker DR, Mont MA. Total hip resurfacing in patients who are sixty years of age or older. *J Bone Joint Surg Am.* 2008; 90(Supplement 3): 27-31.

Nunley RM, Della Valle CJ, Barrack RL. Is patient selection important for hip resurfacing? *Clin Orthop Relat Res.* 2009 Jan; 467(1): 56-65.

Raiss P, Pape G, Becker S, Rickert M, Loew M. Cementless humeral surface replacement arthroplasty in patients less than 55 years of age. *Orthopade.* 2010; 39(2):201-208.

Total joint replacement, hip. InterQual 2010 Procedures Criteria. McKesson Corporation. 2010.

U.S. Food and Drug Administration (FDA). Birmingham hip resurfacing (BHR) system. May 9, 2006. Available at: www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/DeviceApprovalsandClearances/Recently-ApprovedDevices/ucm078189.htm. Accessed: 24 Feb 11.

These guidelines are designed for reference purposes only, do not guarantee coverage, and should not be construed as medical advice. See full Medical Policy Disclaimer.

Approved by the Medical Director