



CLINICAL GUIDELINES

CMM-313: Hip Replacement Arthroplasty

Version 1.0

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Definition

- **Hip arthroplasty** is an orthopaedic surgical procedure during which the articular surface of the hip joint is replaced, remodeled, or realigned.
- **Hip replacement** is a form of arthroplasty that includes the surgical replacement of the hip joint with a prosthesis.
- **Prosthesis** refers to an artificial device used to replace a structural element within a joint to improve and enhance function.
- **Hip resurfacing arthroplasty (HRA)**, also called metal-on-metal (MoM) hip resurfacing and hemiresurfacing arthroplasty, is a surgical technique that involves the removal of diseased cartilage and bone from the head of the femur, and the replacement of the surface of the femoral head with a metal hemisphere that fits into a metal acetabular cup or into the acetabulum respectively. The technique conserves femoral bone and maintains normal femoral loading and stresses. Because of bone conservation, it may not compromise future total hip replacements. Hip resurfacing arthroplasty has been promoted as an alternative to total hip replacement for younger individuals. Hip resurfacing arthroplasty may be either a partial HRA (i.e., hemi-hip resurfacing, hemiresurfacing or femoral head resurfacing arthroplasty [FHRA]) or a total HRA.
- **Partial hip replacement**, also called hip hemiarthroplasty, is a surgical technique where only the femoral head (the ball) of the damaged hip joint is replaced. The acetabulum (the socket) is not replaced.
- **Total hip replacement** is a surgical technique that involves the removal of the damaged hip joint which is then replaced with an artificial prosthesis composed of two or three different components: 1) the head that replaces the original femoral head, 2) the femoral component (a metal stem placed into the femur), and 3) the acetabular component that is implanted into the acetabulum. The stem may be secured using bone cement or press-fit for the bone to grow into it.
- **The Tönnis Classification System** is commonly used to describe the presence of osteoarthritis in the hips on plain x-rays with grading as follows:
 - ◆ Grade 0: No signs of osteoarthritis
 - ◆ Grade 1: Sclerosis of the joint with slight joint space narrowing and osteophyte formation, and no or slight loss of femoral head sphericity
 - ◆ Grade 2: Small cysts in the femoral head or acetabulum with moderate joint space narrowing and moderate loss of femoral head sphericity
 - ◆ Grade 3: Large cysts in the femoral head or acetabulum, severe joint space narrowing or obliteration of the joint space, and severe deformity and loss of sphericity of the femoral head
- **Revision of hip replacement (partial or total)** involves surgical reconstruction or replacement due to failure or complications of previous hip replacement.

- **Non-surgical management**, with regard to the treatment of hip osteoarthritis, is defined as any provider-directed non-surgical treatment, which has been demonstrated in the scientific literature as efficacious and/or is considered reasonable care in the treatment of hip pain from osteoarthritis. The types of treatment involved can include, but are not limited to: relative rest/activity modification, weight loss, supervised physiotherapy modalities and therapeutic exercises, oral prescription and non-prescription medications, assistive devices (e.g., cane, crutches, walker, wheelchair), and/or intra-articular injections (i.e., steroid).

General Guidelines

- The determination of medical necessity for the performance of hip resurfacing and replacement (partial or total) is always made on a case-by-case basis.
- Until the scientific literature is more definitive, the type of bearing surface, such as metal-on-metal, ceramic-on-ceramic, metal-on-polyethylene, should be determined by the treating surgeon and the patient following a frank discussion explaining the pros and cons of each bearing surface.
- For individuals with significant medical conditions or co-morbidities, the risk/benefit of hip arthroplasty procedures should be clearly documented in the medical record.

Indications and Non-Indications

Partial Hip Resurfacing Arthroplasty

- **Partial hip resurfacing arthroplasty** is considered **medically necessary** when **ALL** of the following criteria have been met:
 - ◆ Function-limiting pain at short distances (e.g., walking less than ¼ mile, limiting activity to two city blocks, the equivalent to walking the length of a shopping mall) for at least three (3) months duration
 - ◆ Loss of hip function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
 - ◆ Presence of **EITHER** of the following:
 - Degenerative arthritis primarily affecting the femoral head with joint space narrowing on weight-bearing radiographs
 - Osteonecrosis (avascular necrosis) of the femoral head when the disease is detected early and there is less than 50% involvement of the femoral head
 - ◆ Individual is age 64 years or younger
 - ◆ Failure of at least three (3) months of provider-directed non-surgical management
 - For patients with BMI > 40, there must be failure of at least six (6) months of provider-directed non-surgical management.
 - Provider-directed non-surgical management may be inappropriate (e.g., collapse of the femoral head, inflammatory arthritis, advanced dysplasia). The

medical record must clearly document why provider-directed non-surgical management is not appropriate.

- **Note:** The duration of provider-directed non-surgical management allows for preoperative optimization of reasonably modifiable medical and behavioral health comorbidities.
- **Partial hip resurfacing arthroplasty** is considered **not medically necessary** for any other indication or condition, including **ANY** of the following:
 - ◆ Degenerative arthritis affecting both the femoral head and the acetabulum with joint space narrowing on weight-bearing radiographs
 - ◆ Inflammatory arthropathy affecting both the femoral head and acetabulum
 - ◆ Osteonecrosis (avascular necrosis) of the femoral head involving more than 50% of the femoral head
 - ◆ Skeletal immaturity
 - ◆ Active local or systemic infection
 - ◆ One or more uncontrolled or unstable medical conditions that would significantly increase the risk of morbidity or mortality (e.g., cardiac, pulmonary, liver, genitourinary, or metabolic disease; hypertension; abnormal serum electrolyte levels)
 - ◆ Vascular insufficiency, significant muscular atrophy of the hip or leg musculature, or neuromuscular disease severe enough to compromise implant stability or post-operative recovery
 - ◆ Osseous abnormalities that cannot be optimally managed prior to surgery which would increase the likelihood of a poor surgical outcome (i.e., inadequate bone stock to support the implant)
 - ◆ Severe immunocompromised state
 - ◆ Charcot joint

Total Hip Resurfacing Arthroplasty

- **Total hip resurfacing arthroplasty** is considered **medically necessary** when **ALL** of the following criteria have been met:
 - ◆ Function-limiting pain at short distances (e.g., walking less than ¼ mile, limiting activity to two city blocks, the equivalent to walking the length of a shopping mall) for at least three (3) months duration
 - ◆ Loss of hip function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
 - ◆ Presence of **EITHER** of the following:
 - Degenerative arthritis or an inflammatory arthropathy affecting both the femoral head and acetabulum with joint space narrowing on weight-bearing radiographs
 - Osteonecrosis (avascular necrosis) of the femoral head with possible acetabular surface involvement when the disease is detected early and there is less than 50% involvement of the femoral head
 - ◆ Individual is age 64 years or younger

- ◆ Failure of at least three (3) months of provider-directed non-surgical management
 - For patients with BMI > 40, there must be failure of at least six (6) months of provider-directed non-surgical management.
 - Provider-directed non-surgical management may be inappropriate (e.g., collapse of the femoral head, inflammatory arthritis, advanced dysplasia). The medical record must clearly document why provider-directed non-surgical management is not appropriate.
 - **Note:** The duration of provider-directed non-surgical management allows for preoperative optimization of reasonably modifiable medical and behavioral health comorbidities.
- **Total hip resurfacing arthroplasty** is considered **not medically necessary** for any other indication or condition, including **ANY** of the following:
 - ◆ Osteonecrosis (avascular necrosis) of the femoral head involving more than 50% of the femoral head
 - ◆ Skeletal immaturity
 - ◆ Active local or systemic infection
 - ◆ One or more uncontrolled or unstable medical conditions that would significantly increase the risk of morbidity or mortality (e.g., cardiac, pulmonary, liver, genitourinary, or metabolic disease; hypertension; abnormal serum electrolyte levels)
 - ◆ Vascular insufficiency, significant muscular atrophy of the hip or leg musculature, or neuromuscular disease severe enough to compromise implant stability or post-operative recovery
 - ◆ Osseous abnormalities that cannot be optimally managed prior to surgery which would increase the likelihood of a poor surgical outcome (i.e., inadequate bone stock to support the implant)
 - ◆ Severe immunocompromised state
 - ◆ Charcot joint
 - ◆ Patients on dialysis who are on a renal transplant list

Partial Hip Replacement

- **Partial hip replacement** is considered **medically necessary** when **ANY** of the following criteria have been met:
 - ◆ A non-displaced intracapsular fracture is present and surgical fixation is not considered a reasonable option
 - ◆ An impacted fracture, partially displaced fracture, completely displaced or comminuted fracture of the femoral neck or femoral head is present and conservative management or surgical fixation is not considered a reasonable option
 - ◆ Tönnis Grade 3 osteoarthritis **or** avascular necrosis with collapse of the femoral head when **ALL** of the following criteria have been met:

- Function-limiting pain at short distances (e.g., walking less than ¼ mile, limiting activity to two city blocks, the equivalent to walking the length of a shopping mall) for at least three (3) months duration
 - Loss of hip function secondary to osteoarthritis which interferes with the ability to carry out age-appropriate activities of daily living and/or their demands of employment
 - Failure of at least three (3) months of provider-directed non-surgical management
 - For patients with BMI > 40, there must be failure of at least six (6) months of provider-directed non-surgical management.
 - Provider-directed non-surgical management may be inappropriate (e.g., collapse of the femoral head, inflammatory arthritis, advanced dysplasia). The medical record must clearly document why provider-directed non-surgical management is not appropriate.
 - **Note:** The duration of provider-directed non-surgical management allows for preoperative optimization of reasonably modifiable medical and behavioral health comorbidities.
- **Partial hip replacement** is considered **not medically necessary** for any other indication or condition, including **ANY** of the following:
- ◆ Active local or systemic infection
 - ◆ Osseous abnormalities that cannot be optimally managed prior to surgery which would increase the likelihood of a poor surgical outcome (i.e., inadequate bone stock to support the implant) unless the procedure is being performed for a fracture indication
 - ◆ One or more uncontrolled or unstable medical conditions that would significantly increase the risk of morbidity (e.g., cardiac, pulmonary, liver, genitourinary, or metabolic disease; hypertension; abnormal serum electrolyte levels)
 - ◆ Vascular insufficiency, significant muscular atrophy of the leg, or neuromuscular disease severe enough to compromise implant stability or post-operative recovery
 - ◆ Severe immunocompromised state
 - ◆ Charcot joint
 - ◆ Inflammatory arthropathy affecting both the femoral head and acetabulum

Total Hip Replacement

- **Total hip replacement** is considered **medically necessary** when **ANY** of the following criteria have been met:
- ◆ An impacted fracture, **or** partially displaced fracture, **or** completely displaced, **or** comminuted fracture of the femoral neck or femoral head is present **and** conservative management **or** surgical fixation is not considered a reasonable option
 - ◆ Tönnis Grade 3 osteoarthritis, **or** avascular necrosis with collapse of the femoral head, **or** inflammatory arthropathy affecting both the femoral head and acetabulum with joint space narrowing when **ALL** of the following criteria have been met:

- Function-limiting pain at short distances (e.g., walking less than ¼ mile, limiting activity to two city blocks, the equivalent to walking the length of a shopping mall) for at least three (3) months duration
- Loss of hip function secondary to osteoarthritis which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
- Failure of at least three (3) months of provider-directed non-surgical management
 - For patients with BMI > 40, there must be failure of at least six (6) months of provider-directed non-surgical management
 - Provider-directed non-surgical management may be inappropriate (e.g., collapse of the femoral head, inflammatory arthritis, advanced dysplasia). The medical record must clearly document why provider-directed non-surgical management is not appropriate.
 - **Note:** The duration of provider-directed non-surgical management allows for preoperative optimization of reasonably modifiable medical and behavioral health comorbidities.
- **Total hip replacement** is considered **not medically necessary** for any other indication or condition, including **ANY** of the following:
 - ◆ Active local or systemic infection
 - ◆ Osseous abnormalities that cannot be optimally managed prior to surgery which would increase the likelihood of a poor surgical outcome (i.e., inadequate bone stock to support the implant) unless the procedure is being performed for a fracture indication
 - ◆ One or more uncontrolled or unstable medical conditions that would significantly increase the risk of morbidity (e.g., cardiac, pulmonary, liver, genitourinary, or metabolic disease; hypertension; abnormal serum electrolyte levels)
 - ◆ Vascular insufficiency, significant muscular atrophy of the leg, or neuromuscular disease severe enough to compromise implant stability or post-operative recovery
 - ◆ Severe immunocompromised state
 - ◆ Charcot joint
 - ◆ Patients on dialysis who are on a renal transplant list
- Refer to **MS-12: Osteoarthritis** and **MS-24: Hip** for the advanced imaging indications prior to hip resurfacing and hip replacement surgery
- Refer to **CMM-314: Hip Surgery – Arthroscopic & Open Procedures** for non-resurfacing and non-replacement treatment of avascular necrosis of the femoral head

Revision of Hip Replacement – Partial or Total

- **Revision of Hip Replacement** is considered **medically necessary** for an individual who has previously undergone a partial or total hip replacement and when **ANY** of the following criteria have been met:

- ◆ Presence of **ANY** of the following:
 - Recurrent prosthetic dislocation/subluxation not responsive to a reasonable course of non-surgical care
 - Aseptic loosening
 - Periprosthetic infection
 - Periprosthetic fracture
 - Instability of the implant (e.g., disassembly, modular neck failure)
 - Leg length discrepancy
 - Osteolysis without eccentric wear (wear of elevated rim liner without wear superiorly)
 - Elevated serum metal levels as diagnosis for adverse local tissue reaction (ALTR) secondary to corrosion
- ◆ Unexplained function-limiting pain at short distances (e.g., walking less than ¼ mile, limiting activity to two city blocks, the equivalent to walking the length of a shopping mall) for greater than six (6) months unresponsive to provider-directed non-surgical management
- **Revision of Hip Replacement** is considered **not medically necessary** for any other indication or condition.
- **Isolated head and polyethylene liner exchange (IPE)** is considered **medically necessary** when **ANY** of the following criteria have been met:
 - ◆ Eccentric Polyethylene Wear with or without Osteolysis:
 - Symptomatic individual with well-fixed implants in acceptable position
 - ◆ Periprosthetic joint infection including acute hematogenous infection:
 - Individual is less than four (4) weeks from the index replacement procedure with well-fixed implants
 - ◆ Treatment of dislocation/instability (conversion to a liner with higher offset, larger head size, dual-mobility, constrained liner) and conversion of failed metal-on-metal (MoM) or ceramic-on-ceramic (CoC) bearing surface to metal-on-polyethylene (MoP) or ceramic-on-polyethylene (CoP) bearing surface
- **Isolated head and polyethylene liner exchange (IPE)** is considered **not medically necessary** for any other indication or condition.
- Refer to **MS-16: Post-Operative Joint Replacement Surgery** and **MS-24: Hip** for advanced imaging indications following hip replacement surgery.

Salvage Procedures

- **Salvage procedures** (e.g., Girdlestone acetabuloplasty, hip joint arthrodesis) may be considered **medically necessary** as a surgical alternative in certain patients for whom primary hip replacement or revision of hip replacement is not a reasonable surgical option including **ANY** of the following:
 - ◆ Chronic infection, osteomyelitis, or persistent periprosthetic infection
 - ◆ Pre-existing ambulatory dysfunction or non-ambulatory patient

- ◆ Presence of co-morbidities or diseases which would preclude the performance of a successful hip replacement
 - ◆ Inadequate bone stock (e.g., severe osteoporosis or following tumor resection when there is insufficient bone remaining to support a joint replacement)
 - ◆ Recurrent instability/dislocation of the replaced hip
 - ◆ Aseptic loosening of the replaced hip with no other practical surgical options
 - ◆ Inability to pursue a successful reimplantation
- **Salvage procedures** are considered **not medically necessary** for any other indication or condition.

Procedure (CPT®) Codes

This guideline relates to the CPT® code set below. Codes are displayed for informational purposes only.

Any given code's inclusion on this list does not necessarily indicate prior authorization is required.

CPT®	Code Description/Definition
27090	Removal of hip prosthesis; (separate procedure)
27091	Removal of hip prosthesis; complicated, including total hip prosthesis, methylmethacrylate with or without insertion of spacer
27122	Acetabuloplasty; resection, femoral head (e.g. Girdlestone procedure)
27125	Hemiarthroplasty, hip, partial (e.g. femoral stem prosthesis, bipolar Arthroplasty)
27130	Arthroplasty, acetabular and proximal femoral prosthetic replacement (total hip Arthroplasty), with or without autograft or allograft
27132	Conversion of previous hip surgery to total hip arthroplasty, with or without autograft or allograft
27134	Revision of total hip arthroplasty; both components, with or without autograft or allograft
27137	Revision of total hip Arthroplasty; acetabular component only, with or without autograft or allograft
27138	Revision of total hip Arthroplasty; femoral component only, with or without
27284	Arthrodesis, hip joint (including obtaining graft);
27286	Arthrodesis, hip joint (including obtaining graft);with subtrochanteric osteotomy
HCPCS Level II	Code Description/Definition
S2118	Metal-on-metal total hip resurfacing, including acetabular and femoral components

This list may not be all inclusive and is not intended to be used for coding/billing purposes. The final determination of reimbursement for services is the decision of the health plan and is based on the individual's policy or benefit entitlement structure as well as claims processing rules.

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