

## DRAFT Medical Coverage Policy | Total Joint Arthroplasty – Hip and Knee



**EFFECTIVE DATE:** 12|01|2022

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### OVERVIEW

Joint replacement surgery, also known as arthroplasty, has proved to be an important medical advancement. Arthroplasty surgery is most commonly performed for diseases which affect the function of the hip joint and knee joint, but is also performed on ankles, shoulders, and phalanges. In addition, the arthroplasty may be total (involving the entire joint) or partial (involving less than the entire joint).

**Note: This policy is applicable for Commercial Products only. For Medicare Advantage Plans, see the applicable policy in the Related Policies section.**

### MEDICAL CRITERIA

#### Commercial

#### Total Knee Arthroplasty (TKA)

A total knee arthroplasty is considered medically necessary for individuals with **one or more** of the following (1, 2, 3, 4 or 5):

1. Osteoarthritis or posttraumatic arthritis as demonstrated by meeting all of the following (a,b,c,d,e,f,g,h):
  - a. Individual is 18 years old or older
  - b. Must have at least 2 of the following:
    - Pain increased with initiation of activity
    - Pain increased with weight bearing
    - Pain interferes with activities of daily living (ADLs)
    - Pain with range of motion (ROM)
  - c. Must have at least 2 of the following:
    - Limited range of motion (ROM)
    - Crepitus
    - Joint effusion or swelling
  - d. Must have at least ONE of the following (Needs to meet 1 or 2):
    1. Imaging shows bone-on-bone contact OR
    2. There is no bone-on-bone contact, but has at least 2 of the following 5 findings:
      - 1. Subchondral cysts
      - 2. Subchondral sclerosis
      - 3. Periarticular osteophytes
      - 4. Joint subluxation
      - 5. Joint space narrowingAND MUST ALSO MEET THE FOLLOWING:
      - The individual must have tried ALL of the following treatments within the last year (with continued symptoms or findings after treatments):
        - NSAIDs or acetaminophen  $\geq 3$  weeks
        - PT or home exercise  $\geq 12$  weeks
        - Activity modification  $\geq 12$  weeks
  - e. There is no active infection
  - f. Obesity: BMI <40

- g. Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery
  - h. Diabetes control: HgbA1C < 8.1%
2. Avascular necrosis (osteonecrosis) as demonstrated by meeting all of the following (a,b,c,d,e,f,g,h,i):
- a. Individual is 18 years old or older
  - b. Must have at least 2 of the following:
    - Pain increased with initiation of activity
    - Pain increased with weight bearing
    - Pain interferes with activities of daily living (ADLs)
    - Pain with range of motion (ROM)
  - c. Must have at least 2 of the following:
    - Limited range of motion (ROM)
    - Crepitus
    - Joint effusion or swelling
  - d. Imaging shows avascular necrosis
  - e. Must have ONE of the following:
    - There is collapse of tibial plateau or femoral condyle OR
    - There is no collapse of tibial plateau or femoral condyle, however, the individual has tried ALL of the following treatments within the last year (with continued symptoms or findings after treatments):
      - NSAIDs or acetaminophen  $\geq 3$  weeks
      - PT or home exercise  $\geq 12$  weeks
      - Activity modification  $\geq 12$  weeks
  - f. There is no active infection
  - g. Obesity: BMI <40
  - h. Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery
  - i. Diabetes control: HgbA1C < 8.1%
3. Bone tumor involving the knee seen on imaging as demonstrated by meeting all of the following (a,b,c,d,e):
- a. Individual is 18 years old or older
  - b. There is no active infection
  - c. Obesity: BMI <40
  - d. Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery
  - e. Diabetes control: HgbA1C < 8.1%
4. Nonunion or malunion, articular fracture as demonstrated by meeting all of the following (a,b,c,d,e,f):
- a. Individual is 18 years old or older
  - b. Symptomatic nonunion or malunion of fracture
  - c. There is no active infection
  - d. Obesity: BMI <40
  - e. Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery
  - f. Diabetes control: HgbA1C < 8.1%
5. Rheumatoid arthritis as demonstrated by meeting all of the following (a,b,c,d,e,f,g,h,i):
- a. Individual is 18 years old or older
  - b. Must have at least 2 of the following:
    - Pain increased with initiation of activity
    - Pain increased with weight bearing

- Pain interferes with activities of daily living (ADLs)
- Pain with range of motion (ROM)
- Pain at night
- c. Must have at least 2 of the following:
  - Limited range of motion (ROM)
  - Crepitus
  - Joint effusion or swelling
- d. Imaging shows at least 2 of the following:
  - Subchondral cysts
  - Marginal erosions
  - Periarticular osteopenia
  - Joint subluxation
  - Joint space narrowing
- e. The individual has tried ALL of the following treatments within the last year (with continued symptoms or findings after treatments):
  - Disease modifying antirheumatic drugs  $\geq 12$  weeks
  - PT or home exercise  $\geq 12$  weeks
  - Activity modification  $\geq 12$  weeks
- f. There is no active infection
- g. Obesity: BMI <40
- h. Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery
- i. Diabetes control: HgbA1C < 8.1%

### **Replacement/Revision Knee Arthroplasty**

A removal and replacement of a total knee arthroplasty is considered medically necessary when ALL of the following has been met:

- Individual is 18 years old or older AND
- There is no active infection AND
- Obesity: BMI <40 AND
- Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery AND
- Diabetes control: HgbA1C < 8.1% AND
- Must have at least ONE of the following (1, 2, 3,4, 5, 6 or 7):
  1. Fractured prosthesis or cement by imaging
  2. Recurrent dislocation by imaging
  3. Worn or dislocated plastic insert by imaging
  4. Malposition of tibial or femoral component by imaging
  5. Symptomatic loosening of prosthesis or cement by imaging
  6. Joint infection with sinus tract communicating with prosthetic joint by imaging
  7. Prosthetic joint infection by positive synovial fluid culture or tissue culture with ALL of the following (a,b,c):
    - a. Infection as demonstrated by at least ONE of the following:
      - Two cultures positive for the same organism OR
      - Culture positive for staphylococcus aureus OR
      - Culture positive for gram-negative organism OR
      - Culture positive for enterococci
    - b. Joint infection onset within 4 weeks of total joint replacement or new joint symptoms and findings  $\leq 3$  weeks
    - c. Prosthesis or cement on imaging shows:
      - Loosening OR

- No loosening and the individual has been treated with IV anti-infectives  $\geq 4$  weeks and has had a joint lavage with continued symptoms or findings after treatment

### **Total Hip Arthroplasty (THA)**

A total hip arthroplasty is considered medically necessary for individuals with **one or more** of the following (1, 2, 3, 4, 5 or 6):

1. Osteoarthritis or posttraumatic arthritis as demonstrated by meeting all of the following (a,b,c,d,e,f,g,h):
  - a. Individual is 18 years old or older
  - b. Must have at least 2 of the following:
    - Pain increased with initiation of activity
    - Pain increased with weight bearing
    - Pain interferes with activities of daily living (ADLs)
    - Pain with range of motion (ROM)
  - c. Must have BOTH of the following:
    - Limited range of motion (ROM)
    - Antalgic gait
  - d. Must have at least ONE of the following (Needs to meet 1 or 2):
    - 1 Imaging shows bone-on-bone contact OR
    3. There is no bone-on-bone contact, but has at least 2 of the following 5 findings:
      - 1. Subchondral cysts
      - 2. Subchondral sclerosis
      - 3. Periarticular osteophytes
      - 4. Joint subluxation
      - 5. Joint space narrowing

AND MUST ALSO MEET THE FOLLOWING:

      - The individual must have tried ALL of the following treatments within the last year (with continued symptoms or findings after treatments):
        - NSAIDs or acetaminophen  $\geq 3$  weeks
        - PT or home exercise  $\geq 12$  weeks
        - Activity modification  $\geq 12$  weeks
  - e. There is no active infection
  - f. Obesity: BMI  $< 40$
  - g. Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery
  - h. Diabetes control: HgbA1C  $< 8.1\%$
2. Femoral head avascular necrosis (osteonecrosis) as demonstrated by meeting all of the following (a,b,c,d,e,f,g,h,i):
  - a. Individual is 18 years old or older
  - b. Must have at least 2 of the following:
    - Pain increased with initiation of activity
    - Pain increased with weight bearing
    - Pain interferes with activities of daily living (ADLs)
    - Pain with range of motion (ROM)
  - c. Must have BOTH of the following:
    - Limited range of motion (ROM)
    - Antalgic gait
  - d. Imaging shows avascular necrosis

- e. Must have ONE of the following:
    - There is stage III or IV collapse of femoral head OR
    - There is no stage III or IV collapse of femoral head, however, the individual has tried ALL of the following treatments within the last year (with continued symptoms or findings after treatments):
      - NSAIDs or acetaminophen  $\geq 3$  weeks
      - PT or home exercise  $\geq 12$  weeks
      - Activity modification  $\geq 12$  weeks
  - f. There is no active infection
  - g. Obesity: BMI  $< 40$
  - h. Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery
  - i. Diabetes control: HgbA1C  $< 8.1\%$
3. Nonunion or malunion, articular fracture as demonstrated by meeting all of the following (a,b,c,d,e):
- a. Individual is 18 years old or older
  - b. Symptomatic nonunion or malunion of fracture
  - c. There is no active infection
  - c. Obesity: BMI  $< 40$
  - d. Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery
  - e. Diabetes control: HgbA1C  $< 8.1\%$
4. Rheumatoid arthritis as demonstrated by meeting all of the following (a,b,c,d,e,f,g,h,i):
- a. Individual is 18 years old or older
  - b. Must have at least 2 of the following:
    - Pain increased with initiation of activity
    - Pain increased with weight bearing
    - Pain interferes with activities of daily living (ADLs)
    - Pain with range of motion (ROM)
    - Pain at night
  - c. Must have ALL of the following:
    - Limited range of motion (ROM)
    - Antalgic gait
  - d. Imaging shows at least 2 of the following:
    - Subchondral cysts
    - Marginal erosions
    - Periarticular osteopenia
    - Joint subluxation
    - Joint space narrowing
  - e. The individual has tried ALL of the following treatments within the last year (with continued symptoms or findings after treatments):
    - Disease modifying antirheumatic drugs  $\geq 12$  weeks
    - PT or home exercise  $\geq 12$  weeks
    - Activity modification  $\geq 12$  weeks
  - f. There is no active infection
  - g. Obesity: BMI  $< 40$
  - h. Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery
  - i. Diabetes control: HgbA1C  $< 8.1\%$
5. Bone tumor involving the hip seen on imaging as demonstrated by meeting all of the following (a,b,c,d,e):

- a. Individual is 18 years old or older
  - b. There is no active infection
  - c. Obesity: BMI <40
  - d. Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery
  - e. Diabetes control: HgbA1C < 8.1%
6. Acute hip fracture by imaging as demonstrated by meeting all of the following (a,b,c,d,e,f):
- a. Individual is 18 years old or older
  - b. Must have ONE of the following:
    - Comminuted or impacted acetabular fracture
    - Displaced femoral head or neck fracture
    - Intertrochanteric or subtrochanteric fracture and repair has failed or not feasible
    - Arthritis of acetabulum or femoral head by imaging AND at least 2 of the following:
      - Subchondral cysts
      - Subchondral sclerosis
      - Marginal erosions
      - Periarticular osteophytes
      - Periarticular osteopenia
      - Joint subluxation
      - Joint space narrowing
  - c. There is no active infection
  - d. Obesity: BMI <40
  - e. Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery
  - f. Diabetes control: HgbA1C < 8.1%

### **Replacement/Revision Hip Arthroplasty**

A removal and replacement of a total hip arthroplasty is considered medically necessary when ALL of the following has been met:

- Individual is 18 years old or older AND
- Obesity: BMI <40 AND
- Nicotine/smoking: 4 weeks off of ANY nicotine product prior to scheduled surgery AND
- Diabetes control: HgbA1C < 8.1% AND
- Must have at least ONE of the following:
  1. Fractured prosthesis or cement by imaging
  2. Recurrent dislocation by imaging
  3. Malposition of acetabular or femoral component by imaging
  4. Symptomatic loosening of prosthesis or cement by imaging
  5. Thigh pain with uncemented component with ALL of the following (a,b)
    - a. Thigh pain  $\geq$  6 months
    - b. The individual has tried ALL of the following treatments within the last year (with continued symptoms or findings after treatments):
      - NSAIDs or acetaminophen  $\geq$ 3 weeks
      - PT or home exercise  $\geq$ 12 weeks
      - External joint support  $\geq$ 12 weeks
      - Activity modification  $\geq$ 12 weeks
  6. Joint infection with sinus tract communicating with prosthetic joint by imaging
  7. Prosthetic joint infection by positive synovial fluid culture or tissue culture with ALL of the following (a,b,c):
    - a. Infection as demonstrated by ONE of the following:
      - Two cultures positive for the same organism OR
      - Culture positive for staphylococcus aureus OR

- Culture positive for gram–negative organism OR
  - Culture positive for enterococci
- b. Joint infection onset within 4 weeks of total joint replacement or new joint symptoms and findings  $\leq$  3 weeks
- c. Prosthesis or cement on imaging shows
- Loosening OR
  - No loosening and the individual has been treated with IV anti-infectives  $\geq$  4 weeks and has had a joint lavage with continue symptoms or findings after treatment

## **PRIOR AUTHORIZATION**

### **Commercial Products**

Prior authorization is recommended for Commercial Products and is obtained via the online tool for participating providers. See Related Policies section.

## **POLICY STATEMENT**

### **Commercial Products**

Total hip and knee arthroplasties are considered medically necessary when the medical criteria in this policy has been met.

## **COVERAGE**

Benefits may vary between groups and contracts. Please refer to Evidence of Coverage for applicable surgery benefit/coverage.

## **BACKGROUND**

### **Total Knee Arthroplasty (TKA)**

The knee joint includes the lower end of the femur, the upper end of the tibia and the patella. The knee joint has three compartments, the medial, the lateral and the patellofemoral. The surfaces of these compartments are normally covered with articular cartilage and are bathed in synovial fluid. The most common reason for knee arthroplasty is arthritis of the knee joint. Arthritis may cause pain, stiffness, or other symptoms which limit normal activities such as walking, squatting, and climbing stairs. Additional indications for knee arthroplasty include osteonecrosis, malignancy, and other degenerative conditions. The goal of knee arthroplasty is to relieve pain and improve or increase patient function.

### **Total Hip Arthroplasty (THA)**

The hip joint is made up of two components: a ball (femoral head) and socket (acetabulum). These components are covered with articular cartilage and are bathed in synovial fluid produced by a synovial membrane. Hip arthroplasty is most often performed due to symptoms arising from arthritis, osteonecrosis, malignancy, and degenerative conditions. The goal of hip arthroplasty is to relieve pain and improve or increase patient function.

### **Revision Arthroplasty**

Revision arthroplasty is performed on an individual who has had a prior hip or knee arthroplasty. Revision arthroplasty may be needed when pain or other symptoms occur as a result of failure of the prior surgery. Failure may occur as a result of infection of the joint, bone loss in the structures supporting the prosthesis, fracture, aseptic loosening of the components, wear of the prosthetic components, and for other reasons.

## **CODING**

### **Commercial Products**

The following code(s) are medically necessary when the medical criteria has been met:

#### **Hip**

**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 allograft

### **Knee**

- 27447 Arthroplasty, knee, condyle and plateau; medial AND lateral compartments with or without patella resurfacing (total knee arthroplasty)
- 27486 Revision of total knee arthroplasty, with or without allograft; 1 component
- 27487 Revision of total knee arthroplasty, with or without allograft; femoral and entire tibial component

### **RELATED POLICIES**

Preauthorization via Web-Based Tool for Procedures

### **PUBLISHED**

Provider Update, October 2022

### **REFERENCES**

1. Other MAC LCDs:, Palmetto GBA Local Coverage Determination DL33050 for Total Joint Arthroplasty; Noridian Healthcare Solutions, LLC LCD L33494, Total Joint Arthroplasty; and First Coast Service Options, Inc. LCD L32078 for Major Joint Replacement (Hip and Knee); whose sources include:
2. Ackerman IN, Bennell KL, Osbourne RH, et al. Decline in health-related quality of life reported by more than half of those waiting for joint replacement surgery: a prospective cohort study. *BMC Musculoskeletal Disorders*. 2011;12:108
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4. Dennis DA, Berry DJ, Engh G. AAOS Symposium: Revision total knee Arthroplasty. *Journal of the American Academy of Orthopaedic Surgeons*. 2008;16(8):442-454.
5. Emedicine. Total Knee Arthroplasty Accessed 9/9/2014.
6. Feeley BT, Gallo RA, Sherman S, Williams RJ. Management of osteoarthritis of the knee in the active patient. *Journal of the American Academy of Orthopaedic Surgeons*. 2010;18(7):406-416.
7. InterQual® 2011 Procedures Adult Criteria, Total Joint Replacement, Knee and Hip & Removal and Replacement, Total Joint Replacement Knee and Hip. McKesson Corporation.
8. Milliman Care Guidelines® 2011. Inpatient and Surgical Care 15th Edition. Knee Arthroplasty and Hip Arthroplasty. Milliman Care Guidelines LLC.
9. O'Connor M. Implant Survival, knee function and pain relief after TKA: Are there differences between men and women? *Clinical Orthopaedics & Related Research*. 2011;469(7):1846-1851.
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11. Richmond J, Hunter D, Irrgang J, et al. Treatment of osteoarthritis of the knee (non-arthroplasty). *J Amer Acad Orthop Surg*. 2009;17(9):591-600.
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