Surgery of the Foot

Policy Number: 2026T0624P
Effective Date: October 1, 2026

➲ Instructions for Use

Table of Contents **Page**

Application 1
Coverage Rationale 1
Medical Records Documentation Used for Reviews 2
Definitions 2
Applicable Codes 2
Description of Services 3
Clinical Evidence 3
U.S. Food and Drug Administration 6
References 6
Policy History/Revision Information 7
Instructions for Use 7

Related Commercial/Individual Exchange Policies

- Extracorporeal Shockwave Therapy (ESWT) for Musculoskeletal Conditions and Soft Tissue Indications
- Outpatient Surgical Procedures – Site of Service

Community Plan Policy

- Surgery of the Foot

Application

UnitedHealthcare Commercial

This Medical Policy applies to UnitedHealthcare Commercial benefit plans.

UnitedHealthcare Individual Exchange

This Medical Policy applies to Individual Exchange benefit plans.

Coverage Rationale

Surgery of the foot is proven and medically necessary in certain circumstances. For medical necessity clinical coverage criteria, refer to the InterQual® CP: Procedures:

- Arthrodesis or Arthroplasty, Interphalangeal Joint, Second-Fifth Toes
- Exostectomy, First Metatarsophalangeal (MTP) Joint (Bunionectomy)
- Osteotomy, Distal Transpositional, First Metatarsal (MT) (Bunionectomy)
- Osteotomy, Proximal, First Metatarsal (MT) (Bunionectomy)
- Osteotomy, Proximal Phalanx, First Toe +/- Bunionectomy
- Plantar Fascial Release

Click here to view the InterQual® criteria.

Hallux Limitus or Rigidus (Correction Without Implant)

Correction of the first metatarsophalangeal joint with cheilectomy, debridement, and capsular release without implant is proven and medically necessary when all the following criteria are met:

- Diagnosis of hallux limitus or hallux rigidus to include the following:
  - Radiographic imaging to confirm a mild to moderate pathology (i.e., a grading scale such as the Coughlin and Shurnas or Hattrup and Johnson Classification may be used)
- Persistent pain despite a reasonable trial of conservative treatment, including one or more of the following:
  - Orthotics, shoe modification (e.g., high and wide toe box, rocker bottom sole), and/or shoe inserts
  - Medical therapy (nonsteroidal anti-inflammatory drugs, analgesics, or intra-articular injections)
  - Activity modification
  - Debridement of hyperkeratotic lesions, if present

Proprietary Information of UnitedHealthcare. Copyright 2026 United HealthCare Services, Inc.

Correction of the first metatarsophalangeal joint with cheilectomy, debridement, and capsular release without implant is unproven and not medically necessary for severe hallux rigidus (i.e., a grading scale such as the Coughlin and Shurnas or Hattrup and Johnson Classification may be used) due to insufficient evidence of efficacy.

Hallux Rigidus (Correction With Implant)

Correction of the first metatarsophalangeal joint with cheilectomy, debridement, and capsular release with implant (Hemi-Implant Arthroplasty or Total Implant Arthroplasty) is proven and medically necessary when all the following criteria are met:

- Diagnosis of hallux rigidus to include the following:
  - Radiographic imaging to confirm a moderate to severe pathology (i.e., a grading scale such as the Coughlin and Shurnas or Hattrup and Johnson Classification may be used)
- Persistent pain despite a reasonable trial of conservative treatment, including one or more of the following:
  - Orthotics, shoe modification (e.g., high and wide toe box, rocker bottom sole), and/or shoe inserts
  - Medical therapy (nonsteroidal anti-inflammatory drugs, analgesics, or intra-articular injections)
  - Activity modification
  - Debridement of hyperkeratotic lesions, if present

Interposition/Interpositional Arthroplasty

Due to insufficient evidence of efficacy, Interposition/Interpositional Arthroplasty of the first or second metatarsophalangeal joint, using any method, is unproven and not medically necessary for treating limitations in motion or degenerative changes.

Osteochondral Allograft or Autograft Transplant

Osteochondral allograft or autograft transplant is unproven and not medically necessary for treating cartilage defects of the foot due to insufficient evidence of efficacy.

Medical Records Documentation Used for Reviews

Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. Medical records documentation may be required to assess whether the member meets the clinical criteria for coverage but does not guarantee coverage of the service requested; refer to the guidelines titled Medical Records Documentation Used for Reviews.

Definitions

Hemi-Implant Arthroplasty: A surgical procedure to replace one side of a joint with a prosthetic implant. Also known as partial joint replacement. This does not include Interposition Arthroplasty [American Orthopaedic Foot & Ankle Society (AOFAS), 2025a].

Interposition/Interpositional Arthroplasty: A surgical procedure to remove some of the damaged bone and place a spacer between two bones to minimize contact on either side of the joint. The spacer material can come from the individual, a donor, or a graft made from animal or synthetic materials (AOFAS, 2025b). This type of procedure does not replace the joint itself.

Total Implant Arthroplasty: A surgical procedure to replace both sides of a joint with prosthetic implants. Also known as total joint replacement. This does not include Interposition Arthroplasty (AOFAS, 2025a).

Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other policies and guidelines may apply.

CPT Code	Description
28285	Correction, hammertoe (e.g., interphalangeal fusion, partial or total phalangectomy)

Proprietary Information of UnitedHealthcare. Copyright 2026 United HealthCare Services, Inc.

CPT Code	Description
28289	Hallux rigidus correction with cheilectomy, debridement and capsular release of the first metatarsophalangeal joint; without implant
28291	Hallux rigidus correction with cheilectomy, debridement and capsular release of the first metatarsophalangeal joint; with implant
28292	Correction, hallux valgus with bunionectomy, with sesamoidectomy when performed; with resection of proximal phalanx base, when performed, any method
28295	Correction, hallux valgus with bunionectomy, with sesamoidectomy when performed; with proximal metatarsal osteotomy, any method
28296	Correction, hallux valgus with bunionectomy, with sesamoidectomy when performed; with distal metatarsal osteotomy, any method
28297	Correction, hallux valgus with bunionectomy, with sesamoidectomy when performed; with first metatarsal and medial cuneiform joint arthrodesis, any method
28298	Correction, hallux valgus with bunionectomy, with sesamoidectomy when performed; with proximal phalanx osteotomy, any method
28299	Correction, hallux valgus with bunionectomy, with sesamoidectomy when performed; with double osteotomy, any method
28899	Unlisted procedure, foot or toes
29893	Endoscopic plantar fasciotomy

CPT® is a registered trademark of the American Medical Association

Description of Services

Hallux rigidus is a condition that causes pain and stiffness in the joint located at the base of the big toe. Causes can include osteoarthritis, rheumatoid arthritis, or gout. Symptoms include pain, stiffness, and swelling around the joint as well as difficulty with certain activities. Hallux rigidus is a progressive condition in which toe motion decreases over time. In early stages, when toe motion is only somewhat limited, the condition may be referred to as hallux limitus. As toe motion gradually decreases, the condition can reach the end stage of rigidus, in which the big toe becomes stiff. Surgery may be indicated when conservative measures fail to provide sufficient relief (American College of Foot and Ankle Surgeons, 2026).

In cases of early hallux limitus and/or hallux rigidus with mild damage, a cheilectomy may be performed to remove a bone spur on the top of the main joint of the big toe. Cheilectomy is less drastic than arthrodesis and/or joint arthroplasty and can preserve motion, but symptoms are likely to return as joint degeneration progresses. Advanced stages of hallux rigidus with moderate to severe joint damage can be treated with arthrodesis and/or arthroplasty.

Interposition Arthroplasty is a salvage procedure during which damaged cartilage and bone are removed from the affected joint and a spacer is placed between joint surfaces to reduce friction (Hayes, 2026). The spacer material can come from the individual, a donor, or a graft made from animal or synthetic materials (American Orthopaedic Foot & Ankle Society, 2025b).

Osteochondral transplant involves replacing the diseased cartilage and subchondral bone with one or more autograft or allograft plugs that contain both bone and cartilage.

Clinical Evidence

Hallux Limitus or Hallux Rigidus

There are several surgical approaches that are available for treating severe hallux rigidus if conservative measures are not effective. Cheilectomy without implant is often performed in the early stages of hallux rigidus, while cheilectomy with implant is more effective for moderate to severe conditions. Additional published randomized controlled trials (RCTs) that have long-term follow-up are needed to demonstrate the efficacy of cheilectomy without implant for severe hallux rigidus.

de Bot et al. (2022) conducted a systematic review and meta-analysis that compared arthrodesis with metallic hemiarthroplasty for the treatment of end-stage hallux rigidus. The authors evaluated clinical outcomes, pain reduction, complications, and revision rates. In total, 33 studies were included for analysis. Only six studies were eligible for the meta-analysis. Clinical outcomes, complication rates, and revisions were comparable after both interventions. The lowest

Proprietary Information of UnitedHealthcare. Copyright 2026 United HealthCare Services, Inc.

pain score was observed after arthrodesis. The authors concluded that arthrodesis seems to be superior in pain reduction, while metallic hemiarthroplasty is a suitable alternative for individuals performing activities that require motion in the first metatarsophalangeal joint (MTPJ). Study limitations include a lack of RCTs that compare both interventions. Included evaluation and retrospective cohort studies had moderate- to low-level evidence. Additionally, the majority of studies had short- to mid-term follow-up.

Rajan et al. (2021) supplied an in-depth biomechanical analysis to examine the effects of the first MTPJ replacement for hallux rigidus on gait mechanics. Data from pressure plate readings, the Manchester-Oxford Foot Questionnaire, and a validated outcome measure were obtained before surgery and 6 and 12 months after surgery. Kinematic data showed substantially increased stride length, cadence, and velocity after first MTPJ replacement for hallux rigidus. Foot kinematic data exposed reduced tibia-hindfoot abduction and pronation and diminished hindfoot-forefoot supination and adduction. There was no effect on the first MTPJ weight-bearing range of motion. Pressure plate data revealed improved peak pressure and pressure time integral toward the first metatarsal after surgery. There was a substantial improvement in the participant-reported outcome measures. The authors observed an increase in pressure and total load of the plantar area under the first metatarsal head as the participants redistributed more weight to the medial column. The foot intersegment kinematics also showed changes that permit the above pressure reallocation. These favorable mechanical variations and advanced Manchester-Oxford Foot Questionnaire scores also improved self-confidence and permitted improved gait velocity, stride length, and cadence.

Park et al. (2019) completed a meta-analysis of five retrospective and two prospective comparative studies to identify whether implant arthroplasty or arthrodesis is superior for treating severe hallux rigidus. The authors concluded that there were no significant differences between the two surgical approaches in the AOFAS-HMI (American Orthopaedic Foot & Ankle Society Hallux Metatarsophalangeal Interphalangeal) score or individuals' satisfaction rate, reoperation rate, and complication rate. They noted that based on the three studies that contributed to the visual analog scale (VAS) analysis for pain, the VAS scores were significantly lower in the arthrodesis group than in the implant arthroplasty group. In their analysis of individuals' satisfaction, the authors noted that satisfaction tended to be lower in the implant arthroplasty group but was not statistically significant based on the three studies that contributed to the analysis of this measure. The reoperation rate did not differ significantly between the implant arthroplasty and arthrodesis groups based on their analysis of the rate in seven studies. The authors concluded that their meta-analysis shows that implant arthroplasty and arthrodesis of the first MTPJ led to similar clinical outcomes, satisfaction among individuals, reoperation rates, and complication rates, whereas pain was significantly lower with arthrodesis. Limitations that the authors identified include the small number of studies that were obtainable and the still smaller number of studies (small sample sizes) available for the analyses for pain, individuals' satisfaction, and the AOFAS-HMI scores. They also noted heterogeneity among the implants that were included in the studies and the postoperative physical therapy programs. The authors concluded that further RCTs are needed to strengthen the conclusions of their meta-analysis.

McNeil et al. (2013) conducted a level III systematic review and determined that there were no consistent findings among published studies to allow any definitive conclusions on which surgical approach is best for treating hallux rigidus. The authors reviewed 135 studies and assigned each study a level of evidence (I-V) to denote quality and to prove a grade recommendation (A-C) in support of or against the surgical approach. Based on the results of their review, the authors determined that there is fair evidence (grade B) in support of arthrodesis for treating hallux rigidus. Other approaches, including cheilectomy, osteotomy, implant arthroplasty, resection arthroplasty, and interposition arthroplasty, for treating hallux rigidus had poor evidence (grade C) due to the mostly level IV and V studies for these approaches. The authors also determined that there was insufficient evidence (grade I) for cheilectomy with osteotomy for treating hallux rigidus. Limitations noted by the authors include the use of unvalidated rating scales in many of the studies; additionally, the surgical approach was often chosen based on the severity of hallux rigidus and was therefore biased in operative selection and inclusion. This selection process may have distorted results, as individuals with less severe hallux rigidus likely had a higher level of function post operation. They concluded that there were no consistent findings in comparative studies that were properly powered with validated and appropriate outcome measures to allow for definitive conclusions on which procedure may be superior. The authors stated that further studies, including high-quality, level I RCTs that use validated outcome measures and longer-term follow-up, are needed to make more substantial recommendations. (Maffulli et al., 2011, previously summarized in this policy, is included in the McNeil et al. systematic review.)

Various scales have been used to grade the severity of hallux rigidus, although the scales proposed by Hattrup and Johnson (1988) and Coughlin and Shurnas (2003) are the most common. Either scale can be used to determine whether hallux rigidus is mild, moderate, or severe.

Proprietary Information of UnitedHealthcare. Copyright 2026 United HealthCare Services, Inc.

Radiographic	Clinical	Qualitative	Hattrup and Johnson	Coughlin and Shurnas
No radiographic evidence for osteoarthritis	No pain +/- mild stiffness	Normal or minimal	–	0
Mild to moderate osteophyte formation with no joint space involvement	Mild pain maximal with flexion, mild stiffness	Mild	I	1
Moderate osteophyte formation and joint space narrowing; subchondral sclerosis	Moderate to severe pain constant at the extremes of motion, moderate to severe stiffness	Moderate	II	2
Marked osteophyte formation and loss of the joint space, cystic changes with or without subchondral sclerosis	Nearly constant pain (3), pain throughout the range of motion (including midrange) (4)	Severe	III	3 or 4

Interposition/Interpositional Arthroplasty

The evidence for interposition arthroplasty of the first MTPJ is limited by small patient populations and a lack of long-term follow-up. The evidence is of low quality and shows inconsistent data reporting, leading to uncertainty regarding efficacy and durability. Additionally, the studies show substantial clinical heterogeneity with respect to operative procedure, variable graft material, indications, and outcome measures. These pooled data make interpretation limited. Further well-designed, comparative studies that use reliable and validated scoring measures are needed to provide strong evidence that interposition arthroplasty is consistently durable, safer, or better than arthrodesis for the treatment of hallux rigidus. No quality evidence was identified for interposition arthroplasty of the second MTPJ.

A Hayes (2026) report concluded that there is insufficient published, peer-reviewed literature to evaluate the evidence related to interposition arthroplasty for degenerative diseases of the second MTPJ. No abstracts or clinical guidelines were found in the literature review.

Several systematic reviews, with considerable overlap of included studies, evaluated clinical outcomes following interposition arthroplasty for moderate to severe hallux rigidus.

- Di Caprio et al. (2023) included 21 studies and reported that interposition arthroplasty may be an alternative for treating hallux rigidus in young, active individuals; however, the level of evidence is low, with substantial heterogeneity among the included studies.
- Butler et al. (2022) included 16 studies and reported good clinical outcomes at the mid-term follow-up but a high complication rate. All included studies were deemed low-level evidence and were classified as being of poor quality.
- Patel et al. (2019) included 15 studies and came to similar conclusions.
- Emmons and Carreira (2019) included 20 studies and found that interposition arthroplasty may be a viable option for individuals who want to maintain range of motion; however, the same limitations apply to the level and quality of evidence.

Osteochondral Allograft or Autograft Transplant

The evidence for osteochondral grafts in the foot consists of small case series and is insufficient to draw conclusions regarding the effect of this treatment on health outcomes. Most available studies are small, retrospective case series or cohort studies that have limited long-term follow-up. There is heterogeneity in techniques and outcome measures. Further studies that include a larger number of individuals and longer follow-up are needed, including studies that compare osteochondral grafts with established treatments.

Artioli et al. (2023) conducted a systematic review of case reports and small case series that evaluated surgical treatments for focal osteochondral lesions of the first metatarsal head. Eleven studies (n = 90) were included in the analysis. Osteochondral autograft was the most used technique. After surgery, an improvement was achieved in the AOFAS Score, VAS, and hallux dorsiflexion but not in plantar flexion. The authors noted that while good clinical results

Proprietary Information of UnitedHealthcare. Copyright 2026 United HealthCare Services, Inc.

have been achieved, the small number of individuals limits the conclusions. Further high-level, comparative studies are necessary to design an evidence-based treatment algorithm.

Diniz et al. (2019) systematically reviewed the use of allografts in the surgical treatment of foot and ankle disorders in adult individuals. Of 107 studies that were included in the analysis, three (n = 24) evaluated the use of allografts for the treatment of hallux rigidus. All three studies were evidence level IV. Two studies used interposition arthroplasty procedures, and one study used bipolar fresh osteochondral allograft transplant. Although AOFAS scores improved in all three studies, range of motion remained severely restricted in the two studies that reported this outcome. The authors noted that this same increase in AOFAS score could be expected with other procedures, such as arthrodesis or arthroplasty.

U.S. Food and Drug Administration (FDA)

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

Surgeries of the foot are procedures and therefore not regulated by the FDA. However, devices and instruments that are used during the surgery may require FDA approval. Search the following website for additional information: http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm. (Accessed March 15, 2026)

References

American College of Foot and Ankle Surgeons. Hallux rigidus. 2026. Available at: https://www.foothealthfacts.org/conditions/hallux-rigidus. Accessed April 17, 2026.

American Orthopaedic Foot & Ankle Society (AOFAS). Big toe arthritis (hallux rigidus). 2025a. Available at: https://www.footcaremd.org/conditions-treatments/toes/big-toe-arthritis-hallux-rigidus. Accessed March 15, 2026.

American Orthopaedic Foot & Ankle Society (AOFAS). First MTP joint interposition arthroplasty. 2025b. Available at: https://www.footcaremd.org/foot-and-ankle-treatments/toes/first-mtp-joint-interposition-arthroplasty. Accessed April 17, 2026.

Artioli E, Mazzotti A, Zielli SO, et al. Surgical management of osteochondral lesions of the first metatarsal head: a systematic review. Foot Ankle Surg. 2023 Jul;29(5):387-392.

Butler JJ, Shimozono Y, Gianakos AL, et al. Interpositional arthroplasty in the treatment of hallux rigidus: a systematic review. J Foot Ankle Surg. 2022 May-Jun;61(3):657-662.

Coughlin MJ and Shurnas PS. Hallux rigidus. Grading and long-term results of operative treatment. J Bone Joint Surg Am. 2003 Nov;85(11):2072-2088.

de Bot RTAL, Veldman HD, Eurlings R, et al. Metallic hemiarthroplasty, or arthrodesis of the first metatarsophalangeal joint as treatment for hallux rigidus: a systematic review and meta-analysis. Foot Ankle Surg. 2022 Feb;28(2):139-152.

Di Caprio F, Mosca M, Ceccarelli F, et al. Interposition arthroplasty in the treatment of end-stage hallux rigidus: a systematic review. Foot Ankle Spec. 2023 Dec;16(6):547-557.

Diniz P, Pacheco J, Flora M, et al. Clinical applications of allografts in foot and ankle surgery. Knee Surg Sports Traumatol Arthrosc. 2019 Jun;27(6):1847-1872.

Emmons BR and Carreira DS. Outcomes following interposition arthroplasty of the first metatarsophalangeal joint for the treatment of hallux rigidus: a systematic review. Foot Ankle Orthop. 2019 Apr;4(2):2473011418814427.

Hattrup SJ and Johnson KA. Subjective results of hallux rigidus following treatment with cheilectomy. Clin Orthop Relat Res. 1988 Jan;(226):182-191.

Hayes. Evidence Analysis Research Brief. Interposition arthroplasty for treatment of degenerative diseases of the second metatarsophalangeal joint. March 3, 2026.

Maffulli N, Papalia R, Palumbo A, et al. Quantitative review of operative management of hallux rigidus. Br Med Bull. 2011; 98:75-98.

McNeil DS, Baumhauer JF, Glazebrook MA. Evidence-based analysis of the efficacy for operative treatment of hallux rigidus. Foot Ankle Int. 2013 Jan;34(1):15-32.

Park YH, Jung JH, Kang SH, et al. Implant arthroplasty versus arthrodesis for the treatment of advanced hallux rigidus: a meta-analysis of comparative studies. J Foot Ankle Surg. 2019 Jan;58(1):137-143.

Proprietary Information of UnitedHealthcare. Copyright 2026 United HealthCare Services, Inc.

Patel HA, Kalra R, Johnson JL, et al. Is interposition arthroplasty a viable option for treatment of moderate to severe hallux rigidus? A systematic review and meta-analysis. Foot Ankle Surg. 2019 Oct;25(5):571-579.

Rajan RA, Kerr M, Evans H, et al. A prospective clinical and biomechanical analysis of feet following first metatarsophalangeal joint replacement. Gait Posture. 2021 Sep;89:211-216.

Policy History/Revision Information

Date	Summary of Changes
10/01/2026	**Coverage Rationale** ***Interposition/Interpositional Arthroplasty*** • Added language to indicate Interposition/Interpositional Arthroplasty of the first or second metatarsophalangeal joint, using any method, is unproven and not medically necessary for treating limitations in motion or degenerative changes due to insufficient evidence of efficacy **Definitions** • Updated definition of "Interposition/Interpositional Arthroplasty" **Supporting Information** • Updated *Description of Services*, *Clinical Evidence*, and *References* sections to reflect the most current information • Archived previous policy version 2026T0624O

Instructions for Use

This Medical Policy provides assistance in interpreting UnitedHealthcare standard benefit plans. When deciding coverage, the member specific benefit plan document must be referenced as the terms of the member specific benefit plan may differ from the standard plan. In the event of a conflict, the member specific benefit plan document governs. Before using this policy, check the member specific benefit plan document and any applicable federal or state mandates. UnitedHealthcare reserves the right to modify its policies and guidelines as necessary. This Medical Policy is provided for informational purposes. It does not constitute medical advice.

This Medical Policy may also be applied to Medicare Advantage plans in certain instances. In the absence of a Medicare National Coverage Determination (NCD), Local Coverage Determination (LCD), or other Medicare coverage guidance, CMS allows a Medicare Advantage Organization (MAO) to create its own coverage determinations, using objective evidence-based rationale relying on authoritative evidence (Medicare IOM Pub. No. 100-16, Ch. 4, §90.5).

UnitedHealthcare may also use tools developed by third parties, such as the InterQual® Care Guidelines, to assist us in administering health benefits. UnitedHealthcare Medical Policies are intended to be used in connection with the independent professional medical judgment of a qualified health care provider and do not constitute the practice of medicine or medical advice.

Proprietary Information of UnitedHealthcare. Copyright 2026 United HealthCare Services, Inc.