



# **Interphalangeal Joint Arthroplasty - Single Service**

*Clinical Guidelines for Medical Necessity Review*

**Version:** 2  
**Effective Date:** September 20, 2024

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## Guideline Information:

**Specialty Area:** Diseases & Disorders of the Musculoskeletal System

**Guideline Name:** Interphalangeal Joint Arthroplasty (Single Service)

**Literature review current through:** 9/20/2024

**Document last updated:** 9/20/2024

**Type:**  Adult (18+ yo) |  Pediatric (0-17 yo)

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# Medical Necessity Criteria

## **Service: Interphalangeal Joint Arthroplasty**

### General Guidelines

- **Units, Frequency, & Duration:** None.
- **Criteria for Subsequent Requests:** None
- **Recommended Clinical Approach:** Small joint arthroplasty of the hand is a well-established surgery that can provide pain relief, preserve motion, and improve hand function. The metacarpophalangeal joints (MCPs) and proximal interphalangeal joints (PIPs) are typically the only joints of the hand involved when performing these procedures. This guideline relates to interphalangeal joint arthroplasty so will be limited to those procedures and will not address MCP joint arthroplasty.<sup>1-2</sup>
- **Exclusions:** None.

### Medical Necessity Criteria

#### Indications

- **Interphalangeal joint arthroplasty** is considered appropriate if **ALL** of the following are **TRUE**<sup>1-5</sup>:
- ◆ The patient has finger or toe pain and loss of motion, which is interfering with hand function and activities of daily living; **AND**
  - ◆ Radiographic confirmation of advanced joint disease of the PIP joint, including **ANY** of the following:
    - PIP joint space narrowing; **OR**
    - Osteophytes; **OR**
    - Subchondral sclerosis or cysts; **AND**
  - ◆ Failure of conservative management for greater than 3 months including **ALL** of the following<sup>4</sup>:
    - Oral steroids, anti-inflammatory medications, or analgesics; **AND**
    - Occupational therapy or physician-directed home exercise program; **AND**
    - **ANY** of the following:
      - Corticosteroid injection if medically appropriate; **OR**
      - Corticosteroid injection is contraindicated.

## Non-Indications

→ **Interphalangeal joint arthroplasty** is not considered appropriate if **ANY** of the following is **TRUE**:

- ◆ Persistent infection at the surgical site; **OR**
- ◆ Non-reconstructable or irreparable extensor or flexor tendon mechanism; **OR**
- ◆ Skin defect or loss; **OR**
- ◆ The procedure is a distal interphalangeal (DIP) joint arthroplasty with implant<sup>3</sup>; **OR**
- ◆ The procedure is an interphalangeal joint replacement of the thumb; **OR**
- ◆ The procedure is an interphalangeal joint replacement of the toes.

## Level of Care Criteria

Outpatient

## Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
26535	Arthroplasty, interphalangeal joint; each joint
26536	Arthroplasty, interphalangeal joint; with prosthetic implant, each joint

## Medical Evidence

Terpstra et al. (2022) provide insights into prominent hand osteoarthritis (OA) therapy guidelines and examine how closely clinical practices align with these guidelines. While there is a general prevalence of utilizing these treatment options in clinical practice, significant variations exist in their application. An optimal balance between non-pharmacological and pharmacological approaches could be enhanced, perhaps by increasing referrals to physical or occupational therapists. However, it is advised to consider guidelines from organizations such as the European Alliance of Associations for Rheumatology (EULAR), OsteoArthritis Research Society International (OARSI), and American College of Rheumatology (ACR) for referral, alongside embracing a multidisciplinary treatment strategy. Future research should focus on identifying additional factors influencing treatment modalities for hand OA and developing strategies to align hand OA management with established guidelines.<sup>4</sup>

Chan et al. (2021) performed a review on distal interphalangeal joint (DIPJ) arthroplasty. The authors examine surgical techniques, implant varieties, clinical outcomes, and associated complications. A comprehensive search across five databases from inception to April 18, 2020, yielded insights suggesting that employing silicone implants for DIPJ arthroplasty presents a viable alternative to arthrodesis. Arthroplasty facilitates the preservation of joint mobility, alleviates pain, and enhances patient satisfaction. However, the available evidence remains insufficient to designate any specific implant design or surgical approach as definitively superior to others.<sup>3</sup>

Demino et al. conducted a systematic literature review to present postoperative results of different treatment approaches for proximal interphalangeal joint (PIPJ) fracture-dislocations across diverse studies. Outcomes assessed included range of motion (ROM) at the proximal interphalangeal joint (PIPJ), grip strength (as a percentage of the contralateral hand), and Quick Disabilities of the Arm, Shoulder, and Hand (QuickDASH) scores. Articles were categorized by the surgical method used (e.g., open reduction, percutaneous fixation, dynamic external fixation, extension-block pinning, and hemi-hamate arthroplasty). Of the 1679 screened articles, only 48 were included in the analysis. The weighted means

of postoperative ROM (in degrees) at final follow-up were as follows: open reduction (84.7, n = 146), percutaneous fixation (86.5, n = 32), dynamic external fixation (81.7, n = 389), extension-block pinning (83.6, n = 85), and hemi-hamate arthroplasty (79.3, n = 52). Dorsal fracture-dislocations, regardless of the surgical method used, had an average ROM of 83.2 (n = 321), grip strength of 91% (n = 132), and QuickDASH score of 6.6 (n = 59), while pilon injuries had an average ROM of 80.2 (n = 48), grip strength of 100% (n = 13), and QuickDASH score of 11.4 (n = 13). The authors concluded that percutaneous fixation led to the highest postoperative ROM at final follow-up, while extension-block pinning resulted in the greatest grip strength. Dorsal fracture-dislocations generally exhibited higher average ROM and lower QuickDASH scores, whereas pilon fractures showed higher grip strength. However, no specific treatment method or fracture type consistently produced superior outcomes.<sup>5</sup>

## References

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3. Chan EHY, Ip WY, Lui YF, et al. Arthroplasty of the distal interphalangeal joint: A review of currently available surgical approaches, implants and complications. *J Orthop Surg Tech*. 4(1):293–300. doi: 10.36959/453/563.
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5. Demino C, Yates M, Fowler JR. Surgical management of proximal interphalangeal joint fracture–dislocations: A review of outcomes. *Hand (N Y)*. 2021 Jul;16(4):453–460. doi: 10.1177/1558944719873152. PMID: 31517516; PMCID: PMC8283102.

# Clinical Guideline Revision History/Information

Original Date: April 5, 2024		
Review History		
Version 2	9/20/2024	Updated language regarding conservative treatment.