

1 **Clinical Practice Guideline: Metatarsal Osteotomy**

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3 **Date of Implementation: May 21, 2015**

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5 **Product: Specialty**

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8 **GUIDELINES**

9 American Specialty Health – Specialty (ASH) considers CPT Code 28308 to be medically
 10 necessary when supported by one or more of the following diagnoses and when the noted
 11 clinical indications are met:

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13 **ICD-10 CODES AND DESCRIPTIONS:**

ICD-10 Code	ICD-10 Code Description
M19.071 - M19.079	Primary osteoarthritis, ankle and foot
M20.40 - M20.42	Other hammer toe(s) (acquired)
M20.5X1 - M20.5X9	Other deformities of toe(s) (acquired)
M20.60 - M20.62	Acquired deformities of toe(s), unspecified
M21.371 - M21.379	Foot drop
M21.621 – M21.629	Bunionette of foot
M21.6X1 – M21.6X9	Other acquired deformities of foot
M25.774 - M25.776	Osteophyte, foot
M77.40 - M77.42	Metatarsalgia

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15 **Clinical Indications:**

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- 16 • Noted deformity, AND
- 17 • Failure of at least 2 non-operative treatments with persistent pain and dysfunction
 - 18 ○ Shoe modification
 - 19 ○ Protective padding
 - 20 ○ Orthotics/bracing
 - 21 ○ Oral medications/NSAIDs
 - 22 ○ Physical therapy
 - 23 ○ Injection therapy
 - 24 ○ Activity modification

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26 The ICD-10 diagnosis codes listed above only apply to conditions of the second through
 27 the fifth metatarsal.

1 Since CPT code 28308 excludes the first metatarsal, procedures used to treat conditions of
 2 the first metatarsal (e.g., hallux valgus of the first metatarsal) would not be appropriately
 3 described using this CPT code.

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CPT CODES AND DESCRIPTIONS

CPT® Code	CPT® Code Description
28308	Osteotomy, with or without lengthening, shortening or angular correction, metatarsal; other than first metatarsal, each.

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BACKGROUND

8 Deformities of the lesser toes often occur gradually, though they can be brought on by
 9 trauma. Ill-fitting or high-heeled footwear is often implicated in the causation of deformity.
 10 Pathology can also occur due to inflammatory arthritis, synovitis, diabetes mellitus and
 11 neuromuscular disorders. The main adult sagittal plane deformities consist of claw toes,
 12 hammer toes and mallet toes. Axial plane deformities include crossover toes. Mallet toe is
 13 an isolated flexion deformity of the distal interphalangeal joint (DIPJ) and described a
 14 hammer toe as a primary flexion deformity of the proximal interphalangeal joint (PIPJ),
 15 with or without hyperextension at the metatarsophalangeal joint (MTPJ), but with a neutral
 16 or hyperextended DIPJ. A commonly accepted definition of a claw toe is a primary
 17 hyperextension deformity of the MTPJ with flexion at the PIPJ and DIPJ, and a crossover
 18 toe as a deviation of the toe in the axial plane associated with hyperextension at the MTPJ
 19 These deformities may occur as a result of an imbalance between the forces of extension
 20 and flexion about the relevant joints.

21

22 The relative length of the metatarsals also plays a role in symptomatology. In the normal
 23 foot morphotype, the second metatarsal is the longest lesser metatarsal and the fifth is the
 24 shortest. The first metatarsal is often similar in length to the second (square foot
 25 morphology), although it may be shorter (Greek type foot) or longer (Egyptian foot type).
 26 The metatarsal heads form a normal distal cascade or parabola. If one or more metatarsals
 27 are relatively elongated or plantar-flexed, abnormal pressure and metatarsalgia may occur
 28 as a result (Malhotra et al., 2016).

29

30 A significant proportion of patients will respond to non-operative treatment measures
 31 which should be tried prior to surgical intervention. Treatment consists largely of footwear
 32 modification: using wider shoes with a larger toe box region may help alleviate symptoms
 33 and prevent progression of the deformities. Pressure areas may be relieved by toe sleeves
 34 and padding over the dorsum of the PIPJ and under the metatarsal heads. Metatarsal off-
 35 loading insoles may also be used. Capsulitis may respond to a steroid injection, and
 36 reducible MTPJ subluxation associated with plantar plate tears may be managed with
 37 taping. If such conservative treatment does not succeed in managing or eliminating the

1 patient's symptoms, operative reconstructive procedures in terms of metatarsal osteotomies
2 can be considered. Lesser metatarsal osteotomy as defined above by CPT code 28308,
3 excludes the first toe. Thus, osteotomies included within the scope of this CPG are those
4 for the second through fifth MTP(s).

5
6 Nonsurgical care is the first option for a patient with lesser toe metatarsalgia and should be
7 provided before considering surgical options. This should include evaluation of the
8 patient's footwear and education regarding selection of appropriate footwear (e.g., shoes
9 with low heels and broad toe box or other shoe modifications). Eliminating friction can
10 often relieve pain, blistering and bursal inflammation. Metatarsal pads or foot orthoses may
11 also be appropriate. In addition, initial treatment is often patient directed, such as footwear
12 changes noted above, padding, ice, over-the-counter analgesics, and non-steroidal anti-
13 inflammatory medications (NSAIDs). Physical therapy may also be helpful. Local
14 anesthetic and steroid injection into the involved metatarsophalangeal (MTP) joint(s) may
15 provide short-term pain relief, but these are not considered curative. In the case of
16 ulceration, local wound care should be administered (e.g., cleansing, debridement, and
17 dressings as appropriate).

18
19 If conservative management is unsuccessful, surgical treatment would be indicated to
20 relieve signs and symptoms of lesser toe metatarsalgia. Weil osteotomy (WO) is the most
21 common technique worldwide for the treatment of mechanical metatarsalgia. The main
22 indication for WO is propulsive/third rocker metatarsalgia that is in relation with an
23 abnormal length of a certain metatarsal with respect to the neighboring metatarsals in the
24 frontal plane. Most clinical studies have showed good to excellent results after WO.
25 However, complications such as floating toes led to evolution of WO and the development
26 of the triple-cut WO that allows for shortening coaxial to the shaft without plantar
27 translation of metatarsal head can arise (Monteagudo et al., 2019).

28
29 Diaphyseal proximal phalangeal shortening osteotomy can be performed for correction of
30 hammertoe deformity. Diaphyseal proximal phalangeal shortening osteotomy (DPPSO) is
31 a joint-sparing procedure resecting a cylindrical portion of the proximal phalanx on the
32 middiaphysis. Bastias et al. (2021) carried out a retrospective review including patients
33 treated using DPPSO with at least a 1-year follow-up. Demographic, comorbidity, and
34 Visual Analogue Scale (VAS) scores and complication data were obtained. Radiological
35 assessment included union status and alignment. Medial frontal anatomical (mFAA),
36 frontal proximal interphalangeal (mFIA), plantar lateral anatomical (pLAA), and medial
37 and plantar lateral interphalangeal angles (pLIA) were measured. A total of 31 patients (45
38 toes) were included, with a mean age of 59 years (range: 24-72) and follow-up of 35 months
39 (range: 12-60; mean preoperative VAS score was 4.9 ± 1.72 improving to 1.62 ± 2.28 ; $P <$
40 $.01$). Union occurred in all patients at an average of 11.2 weeks. Complications were
41 present on 4 toes (8.8%), with no recurrences. The pLIA significantly changed from 44.9°
42 to 17.9° . There were no significant differences in the preoperative and postoperative values

1 of the mFAA, pLAA, and mFIA. The researchers concluded that DPPSO provides adequate
 2 pain relief and corrects the PIP joint in the lateral plane without significantly affecting the
 3 coronal plane or the anatomical axis of the phalanx in the frontal and lateral views, nor
 4 producing secondary deformities, with a low complication rate.

5
 6 According to Schuh et al. (2011) a subluxed or dislocated MTP joint causing metatarsalgia
 7 that is unresponsive to conservative treatment may be addressed with a distal metatarsal
 8 oblique osteotomy. The Weil osteotomy for example, with its modification represents an
 9 evaluated distal metatarsal osteotomy in terms of outcome studies and biomechanical
 10 analysis. This surgical procedure seeks to bring the metatarsal head proximal to the callus
 11 and to provide axial decompression of the toe to correct the deformity contributing to
 12 metatarsalgia.

13
 14 Shortening scarf osteotomy can be an effective treatment for bunionette deformity. Necas
 15 et al. (2020) reviewed the American Orthopaedic Foot and Ankle Society (AOFAS) Lesser
 16 Toe Metatarsophalangeal-Interphalangeal Scale functional score, radiographic results
 17 consisting of 4th/5th intermetatarsal angle, varus angle of the 5th metatarsophalangeal joint
 18 and complications in a consecutive series of 34 feet (27 patients) with bunionette. Nine
 19 males and 18 females (mean age: 45 years) were included in the study. Three males and
 20 four females were operated bilaterally. They found the average AOFAS score improved
 21 from 59.4 to 93 at a mean follow-up of 7.2 years. The 4th/5th intermetatarsal angle and
 22 varus angle of the 5th metatarsophalangeal joint decreased from 13.9°/19.5° preoperatively
 23 to 6°/5.9° at final follow-up. No neurovascular damage was recorded. Some complications
 24 arose in five feet (14.7%) consisting of delayed union, early infection, distal screw
 25 migration, asymptomatic non-union, and transverse metatarsalgia. Three feet also needed
 26 additional surgery, however, shortening scarf osteotomy was found to be an acceptable
 27 surgical option for bunionette deformity, offering promising results in the mid-term.

28
 29 Contraindications to surgical treatment include an active foot infection, unless correction
 30 of a metatarsal deformity is necessary for wound management (e.g., an ulcer that has not
 31 healed). In addition, severe vascular insufficiency is also a contraindication.

32
 33 The ACFAS statement on cosmetic foot surgery notes that “Surgery performed solely for
 34 the purpose of improving the appearance or size of the foot or ankle carries risks without
 35 medical benefit, and therefore should not be undertaken” (ACFAS, 2020).

36 37 **PRACTITIONER SCOPE AND TRAINING**

38 Practitioners should practice only in the areas in which they are competent based on their
 39 education, training, and experience. Levels of education, experience, and proficiency may
 40 vary among individual practitioners. It is ethically and legally incumbent on a practitioner
 41 to determine where they have the knowledge and skills necessary to perform such services
 42 and whether the services are within their scope of practice.

1 It is best practice for the practitioner to appropriately render services to a member only if
 2 they are trained, equally skilled, and adequately competent to deliver a service compared
 3 to others trained to perform the same procedure. If the service would be most competently
 4 delivered by another health care practitioner who has more skill and training, it would be
 5 best practice to refer the member to the more expert practitioner.

6
 7 Best practice can be defined as a clinical, scientific, or professional technique, method, or
 8 process that is typically evidence-based and consensus driven and is recognized by a
 9 majority of professionals in a particular field as more effective at delivering a particular
 10 outcome than any other practice (Joint Commission International Accreditation Standards
 11 for Hospitals, 2020).

12
 13 Depending on the practitioner’s scope of practice, training, and experience, a member’s
 14 condition and/or symptoms during examination or the course of treatment may indicate the
 15 need for referral to another practitioner or even emergency care. In such cases it is prudent
 16 for the practitioner to refer the member for appropriate co-management (e.g., to their
 17 primary care physician) or if immediate emergency care is warranted, to contact 911 as
 18 appropriate. See the *Managing Medical Emergencies (CPG 159 – S)* clinical practice
 19 guideline for information.

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