

**Clinical Practice Guideline: Management of Hallux Valgus (Bunions)**

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

**Product: Specialty**

## **GUIDELINES**

A. American Specialty Health (ASH) considers CPT Codes 28292, 28296, 28297, 28298, 28299, 28306, and 28307 to be medically necessary for the treatment of Hallux Valgus (acquired) (ICD-10 codes M20.10 - M20.12) when **ALL of the following criteria are met:**

1. Symptomatic bunion (hallux valgus) indicated by **1 or more of the following:**
  - a. Ulceration at first metatarsophalangeal joint
  - b. Difficulty walking because of pain at first metatarsophalangeal (MTP) joint
  - c. Inability to accommodate or modify footwear to control pain
2. At least 2 of the following non-operative interventions has been tried and failed:
  - a. Shoe modification
  - b. Orthoses
  - c. Padding
  - d. Activity modifications

Surgery performed solely for the purpose of improving the foot's appearance is cosmetic and not medically indicated (ACFAS, 2020).

ASH considers use of hallux valgus night dynamic splint described by HCPCS Code L3100 as an inappropriate treatment for hallux valgus for an adult as there is no evidence to demonstrate long term effectiveness. Only while the skeleton is still growing can the position of the great toe be improved with lasting effect. A night splint can be prescribed to move the great toe to medial position prior to closure of epiphyseal plates. After the end of growth, adequate correction is no longer possible and conservative treatment is restricted to alleviation of symptoms.

ASH considers the following procedures to be experimental, investigational or unproven and does not cover the any of these, including but not limited to:

- Use of a ceramic type of implant for partial or total replacement of any foot joint (including the first MTP)
- MTP joint replacement for joints other than the first MTP joint
- Replacement of any other toe joint (e.g., interphalangeal joints)
- Replacement of tarsometatarsal (TMT) joint

1 **CPT/HCPCS CODES AND DESCRIPTIONS**

CPT/HCPCS Code	Description
28292	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with resection of proximal phalanx base, when performed, any method
28295	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with proximal metatarsal osteotomy, any method
28296	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with distal metatarsal osteotomy, any method
28297	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with first metatarsal and medial cuneiform joint arthrodesis, any method
28298	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with proximal phalanx osteotomy, any method
28299	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with double osteotomy, any method
28306	Osteotomy, with or without lengthening, shortening or angular correction, metatarsal; first metatarsal
28307	Osteotomy, with or without lengthening, shortening or angular correction, metatarsal; first metatarsal with autograft (other than first toe)
L3100	Hallux valgus night dynamic splint, prefabricated, off-the-shelf

2

3

**BACKGROUND**

4

Hallux valgus is defined as the lateral deviation of the great toe towards the midline of the foot, which is typically accompanied by a bunion. A bunion is characterized by inflammation and painful thickening of the bursal sac on the medial side of the first metatarsophalangeal (MTP) joint of the great toe. Frequently bunion and hallux valgus are used interchangeably. The bunion or the medial eminence is often the most visible feature

8

of a hallux valgus deformity. Hallux valgus is a common disorder with a higher prevalence among females where long-term use of pointed shoes during the growth phase of the foot can lead to lateral deviation of the first MTP. Additional risk factors for hallux valgus include heel-wearing, being overweight, and having pes planus. Other specific anatomical and structural abnormalities may also contribute to the development of hallux valgus. The primary symptom of a bunion is pain, typically located over the medial eminence. Footwear related pressure is the most common cause of pain. Associated findings can include ulceration of the medial eminence, transfer metatarsalgia, corns, calluses, second toe hammer-toe deformity, stress fracture of lesser metatarsal, first MTP joint arthritis, or ingrown toenail. The condition may be asymptomatic despite significant visible deformity.

The physical examination should be performed with the patient both seated and standing. The foot should also be examined for other conditions. This includes evaluation for pes planus deformity, Achilles tendon contracture, the severity of the hallux valgus deformity, measurement of active and passive joint ranges of motion, and hypermobility, pain or crepitus with joint movement. Neurovascular status should be assessed, and the lesser toes examined for deformities, as well as the plantar surface of the foot evaluated.

Radiographs provide important angular measurements which assist in defining the severity of the deformity (Ray et al., 2019). This includes the intermetatarsal (IM) angle which is the angle between the first and second metatarsals; an angle measurement of less than 9° is considered normal. In addition, the angle between the first metatarsal and the hallux itself is the hallux valgus angle (HVA) and an HVA of less than 15° is considered normal. Radiographs can also objectively document an increased IM angle, an increase in the HVA, lateral dislocation of sesamoids, subluxation of the first metatarsal joint, great toe pronation and evidence of arthritis. Films are also used for preoperative surgical planning.

### **Nonsurgical Management**

Nonsurgical care is the first option for a patient with Hallux Valgus and is typically provided before considering surgical options. Treatment of hallux valgus is focused on relieving pain and improving function. Initial conservative management often includes padding, splinting, shoe modification, orthoses, and non-steroidal anti-inflammatory drugs, followed by surgery if these methods fail. Conservative management is not curative; while it may be effective in the short term, it is rarely sufficient in the long term (Heineman et al., 2020; Hurn et al., 2021). CPT code L3100 describes a prefabricated hallux-valgus night dynamic splint. A slip-on type splint is applied to the great toe and straps are applied to correctly align the toe while the patient sleeps. A 2004 Cochrane review by Ferrari et al. reported that only a few studies that qualified for the review had considered conservative treatments. The evidence from these suggested that orthoses and night splints did not appear to be any more beneficial in improving outcomes than no treatment. According to the results of a study by Tehraninasr et al. (2008), using night splint seems to have no effect on painful hallux valgus deformity.

Some patients may report relief of their symptoms following multimodal conservative treatment. In addition, initial treatment is often patient directed [e.g., footwear changes noted above, bunion pads, ice, over-the-counter analgesics, and non-steroidal anti-inflammatory medications (NSAIDs)]. Physical therapy has been noted to have a limited role in the treatment of hallux valgus. Local anesthetic and steroid injection into the first metatarsophalangeal (MTP) joint may provide short-term pain relief but is not considered curative. In the case of ulceration, local wound care should be administered (e.g., cleansing, debridement, and dressings as appropriate).

### **Surgical Management**

Following unsuccessful conservative management, surgical treatment would be indicated to relieve signs and symptoms of hallux valgus. Surgical objectives should be relieving pain and restoring normal alignment of the first metatarsal and great toe. The literature documents a vast number of procedures to correct hallux valgus. No single procedure is appropriate for all deformities. The choice of operative procedure depends on the patient's condition, anatomy, degree of deformity, symptoms and radiographic information. All elements of the deformity, including an increased HVA, increased IM angle, pronation of enlarged medial eminence and subluxation of the sesamoids, must be corrected. Surgical options include MTP soft tissue construction, osteotomy of the distal or proximal end of the metatarsal, osteotomy of the cuneiform, arthrodesis of the MTP joint and excisional arthroplasty. Bunionectomy procedures have a variety of names, as well as many variations of these procedures. It is important to note that the literature cites both the HVA and IM angle as guidelines for clinical decisions. However, the literature also cites the potential for variance in the measurements of these angles. Care should be taken when applying these measurements to determine appropriate treatment.

Most surgical procedures include correction of the hallux valgus (i.e., bunion) with or without sesamoidectomy. The following surgical procedures may also include:

- Simple resection of the medial eminence or simple exostectomy for hallux valgus with mild IM angle and HV angle (Silver-type procedure).
- Simple resection of the base of the proximal phalanx with removal of the medial eminence: involve a distal soft tissue release (i.e., McBride), a resection of the base of the proximal phalanx (i.e., Keller), or a resection of the metatarsal head. (i.e., Mayo).
- Tendon transplant: primarily involves tendon transplant(s) (Joplin type procedure).
- Metatarsal osteotomy: involves a distal metatarsal osteotomy; a complex, biplane, double step-cut osteotomy through the neck of the first metatarsal (i.e., Mitchell, Chevron or Austin type procedures).
- Lapidus type procedure: a distal soft tissue rearrangement and a proximal first metatarsal-cuneiform arthrodesis.
- Phalanx osteotomy: involves removal of a bony wedge from the base of the proximal phalanx (i.e., Akin type procedure) to reorient the axis.

- Double osteotomy: The first technique includes a distal osteotomy of the first metatarsal plus a base osteotomy of the attached proximal phalanx. The second technique includes a proximal and distal osteotomy of the first metatarsal.

A randomized controlled trial compared the effectiveness of surgical and orthotic treatments with no treatment (i.e., control group) for patients with hallux valgus (Torkki, et al., 2001). The patients were assigned to surgery (i.e., Chevron procedure) ( $n=71$ ), orthoses ( $n=69$ ), or a one-year waiting list (i.e., no treatment control group) ( $n=69$ ). At 12 months, the surgical group had significantly better scores for pain and disability, footwear problems and self-reported global foot assessment ( $p<0.01$ ). Eighty-three percent of surgical patients rated their feet better at one year after surgery, compared to 46% of the orthosis group and 24% of the control group. The study concluded that surgery is an effective treatment for moderate, painful hallux valgus and that orthoses provide short-term symptomatic relief.

According to Chambers (2003) bunions are common among the general adolescent population. A bunion in this group may differ from an adult bunion in that there may be a significant hallux valgus without a large medial bursa and/or bone changes. Initial treatment is dependent on the presenting symptoms. Treatment can include changing shoes, altering the activities and use of an orthotic. Surgery may be needed, but there is a high level of recurrence in this age group. Surgery should be considered only when all other treatment has failed in individuals who have not reached skeletal maturity. Even with surgical repair, residual joint stiffness and pain at end ranges of motion may limit children from regaining their previous level of functioning (Chambers, 2003). According to Duan, et al. (2012) following surgical treatment to correct hallux valgus, recurrence of this deformity is a common occurrence. The underlying reason(s) include surgeon's factor, patient's factor, and deformity components that were not addressed at the initial procedure. Salvage of recurrence can be challenging for the patient and the surgeon. Successful treatment requires understanding the underlying reason(s) for the failed initial surgery, balancing soft tissues, and restoring both bony alignment and joint congruity.

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

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

## 1 PRACTITIONER SCOPE AND TRAINING

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

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

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

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

## 28 References

29 American College of Foot and Ankle Surgeons (ACFAS) Cosmetic Surgery Position  
30 Statement (2020). Retrieved on February 16, 2023 from:  
31 <https://www.acfas.org/policypositionstatements/>

33 American Medical Association. (current year). Current Procedural Terminology (CPT)  
34 Current year (rev. ed.). Chicago: AMA.

36 American Medical Association (current year). HCPCS Level II. American Medical  
37 Association

39 American Medical Association. (current year). ICD-10-CM. American Medical Association.

41 Chambers, H. G. (2003). Ankle and foot disorders in skeletally immature athletes.  
42 *Orthopedic Clinics of North America*, 34(3), 445-459.

- 1 Duan, X., & Kadakia, A. R. (2012). Salvage of recurrence after failed surgical treatment  
2 of hallux valgus. *Archives of Orthopaedic and Trauma Surgery*, 132(4), 477-485.  
3 DOI: 10.1007/s00402-011-1447-6.  
4
- 5 Ferrari J, Higgins JP, Prior TD. (2004). Interventions for treating hallux valgus  
6 (abductovalgus) and bunions. *Cochrane Database Syst Rev*. (1):CD000964.  
7
- 8 HeinemanW, N., Liu, G., Pacicco, T., Dessouky, R., Wukich, D. K., & Chhabra, A. (2020).  
9 Clinical and imaging assessment and treatment of hallux valgus. *Acta radiologica*  
10 (*Stockholm, Sweden : 1987*), 61(1), 56–66.  
11
- 12 Hurn, S. E., Matthews, B. G., Munteanu, S. E., & Menz, H. B. (2022). Effectiveness of non-  
13 surgical interventions for hallux valgus: a systematic review and meta-analysis.  
14 *Arthritis care & research*, 74(10), 1676-1688. <https://doi.org/10.1002/acr.24603>  
15
- 16 Joint Commission International. (2020). Joint Commission International Accreditation  
17 Standards for Hospitals (7th ed.): Joint Commission Resources.  
18
- 19 Laughlin, RO. (2021). Bunion. Medscape. Retrieved on February 16, 2023 from  
20 <http://emedicine.medscape.com/article/1235796-overview>  
21
- 22 Ray, J. J., Friedmann, A. J., Hanselman, A. E., Vaida, J., Dayton, P. D., Hatch, D. J., ... &  
23 Santrock, R. D. (2019). Hallux valgus. *Foot & Ankle Orthopaedics*, 4(2),  
24 2473011419838500.  
25
- 26 Richardson EG. (2013). Disorders of the hallux. In: Canale ST, Beaty JH, editors.  
27 *Campbell's Operative Orthopaedics*. 12th ed. Philadelphia, PA: Elsevier Mosby;  
28 3805-906.  
29
- 30 Tehraninasr, A., Saeedi, H., Forogh, B., Bahramizadeh, M., & Keyhani, M. R. (2008).  
31 Effects of insole with toe-separator and night splint on patients with painful hallux  
32 valgus: a comparative study. *Prosthetics and Orthotics International*, 32(1), 79-83.  
33
- 34 Torkki, M., Malmivaara, A., Seitsalo, S., Hoikka, V., Laippala, P., & Paavolainen, P.  
35 (2001). Surgery vs. orthoses vs watchful waiting for hallux valgus: a randomized  
36 controlled trial. *JAMA*. 285(19):2474-80.  
37
- 38 Vanore, J. V., Christensen, J. C., Kravitz, S. R., Schuberth, J. M., Thomas, J. L., Weil, L.  
39 S., ... & Clinical Practice Guideline First Metatarsophalangeal Joint Disorders  
40 Panel of the American College of Foot and Ankle Surgeons (2003). Diagnosis and  
41 treatment of first metatarsophalangeal joint disorders. Section 1: Hallux valgus. *The*  
42 *Journal of foot and ankle surgery: official publication of the American College of*

1           *Foot and Ankle Surgeons*, 42(3), 112–123. <https://doi.org/10.1016/s1067->  
2           2516(03)70014-3

3  
4           Wülker, N., & Mittag, F. (2012). The Treatment of Hallux Valgus. *Deutsches Ärzteblatt*  
5           *International*, 109(49), 857–868.