

Physical Therapy Guidelines for Hallux Valgus Correction (Bunion Reconstruction)

For the Clinician: The intent of this protocol is to provide the clinician with a guideline of the post-operative rehabilitation for the patients who undergo therapy for a Hallux Valgus correction. It is not intended to be a substitute for clinical decision making regarding the progression of a patient's post-operative course based on their examination/findings, individual progress, and/or the presence of post-operative complications. If a clinician requires assistance in the progression of a post-operative patient, they should consult with the referring surgeon.

For the Patient: The timeframes for expected outcomes contained within this guideline may vary from patient to patient based on individual differences, surgical techniques, surgeon's preference, additional procedures performed, and/or complications. Compliance with all the recommendations provided by your physician and physical therapist as well as your active participation in all parts of the rehabilitation process, are essential to optimizing the success of this procedure.

Introduction:

A bunion (a.k.a Hallux Valgus) is a common foot condition associated with a prominent bump on the inside of the forefoot (see Figure 1). Bunions can lead to discomfort over the prominence, especially if patients wear tight fitting shoes. It is common for bunions to run in a family and gradually worsen over time. The vast majority of bunions can be managed successfully with basic non-operative treatment. Surgery is reserved for patients who have persistent symptoms in spite of appropriate non-operative treatment.

The primary anatomic cause of a bunion is that the bone on the inside of the forefoot at the base of the big toe (the first metatarsal) begins to drift and separate away from the bone of the midfoot at the base of second toe (the second metatarsals). This V-shaped separation pushes the great toe outwards creating a prominent bump known as a bunion deformity- on the inside of the foot. The bunion bump is often normal bone sticking out of the side of the foot, rather than a growth of new bone. Thickening of the tissues overlying the bony prominence can worsen the prominence. Over time, arthritis can also develop in the joint.

Figure 1:



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Patients with bunions will often describe pain over the prominent bump on the inside of their forefoot (the medial eminence). They may also experience pain under the ball of the foot near the base of the second toe. Symptoms can vary in severity, from none at all to severe discomfort aggravated by standing and walking. There is no direct correlation between the size of the bunion and the patient's symptoms. Some patients with severe bunion deformities may have minimal symptoms, while patients with mild bunion deformities may have significant symptoms. Symptoms are often exacerbated by restrictive shoe wear, particularly shoes with a narrow toe box or an uncomfortable, stiff, toe box.

Surgical Procedures:

There are a variety of procedures that are commonly used as a surgical treatment for bunions. The type of procedure used will depend on: the extent and nature of the deformity, the characteristics of the patient, and the preference of the surgeon. These procedures can achieve realignment of the great toe through an osteotomy (a cut in the bone) of the first metatarsal or proximal phalanx (first bone of the great toe) or through fusion of bones in the midfoot or the forefoot. For osteotomies the patient will typically be required to remain non-weight bearing for 2 weeks followed by partial progressive weightbearing over the next 4 weeks. For fusions, patients will often be expected to be non-weightbearing or touch down weight bearing for 6-8 weeks after surgery.



Reference: [footeducation.com](http://www.footeducation.com)

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IMPORTANT:

Toe competency must be maintained throughout the course of the rehabilitation process as protection of the new foot and toe alignment are paramount. This means that NO post-operative dressings or compression wraps should be applied in such a way that would put undue pressure on the post-operative foot and toes resulting in altered alignment. In the later phases of rehabilitation, toe competency should also be maintained through proper footwear choices in favor of shoe wear that allows sufficient width and length in the toe box. Shoe styles that squeeze the toes in any way should not be worn.

Phase	Restrictions and Precautions	Physical Therapy Treatment	Goals
Pre-operative	None	-Instruct with use of assistive device based on gait assessment, non- weight bearing (NWB) on affected side	-Demonstrate safe ambulation with assistive device NWB -Able to maintain NWB with transfers and stairs
Post-operative: 0-2 weeks	-Non-weight-bearing (NWB) -Wear post-operative splint at all times -Strict elevation (“Toes above the Nose”)	-Edema management -Gait training and safety (emphasize precautions with weight bearing) -Education/modifications for ADLs - AROM of hip and knee - Rest and elevation of the involved lower extremity above the heart as much as possible throughout the day	-Manage swelling and pain - Prevent infection -Demonstrate safe ambulation with assistive device NWB -Able to maintain NWB with transfers and stairs -Perform ADLs in a modified independent manner or with minimal assistance
2-6 weeks	-No joint mobilization of fused joints Osteotomy: -Boot on at all times except remove boot 2-3x/day to do home exercise program - Sleep in boot - May gradually begin to progress to partial weight bearing Fusion: -Short leg cast on at all times -May be touch down weight bearing only	-Incision/scar inspection -Exercises and hands-on techniques (by the PT) for ankle active and passive range of motion (AROM, PROM) with attention to hand placement to avoid pressure on surgical sites - Exercises for increasing AROM/PROM at the 1 st metatarsal phalangeal joint (MTP) motion (avoid pressure on surgical sites) -Strengthening for core, hips, knees (maintain precautions) -Gait training to ensure safety and to proper technique with heel touch weight bearing -Scar mobilization once incisions are fully healed	-Manage swelling -Protect the osteotomy/fusion site -Increase range of motion at the 1 st MTP and ankle -Minimize the loss of strength in the core, hips, and knees -Confirm safety with assistive device NWB/heel touch weight bearing -Independence with home exercise program to be performed daily -Increase scar mobility

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<p>6-10 weeks</p>	<p>-No joint mobilization of fused joints</p> <p>Osteotomy: -May progress to full weight bearing in boot per MD instruction -Boot still on at all times during the day except when sleeping or doing NWB exercises</p> <p>Fusion: -Boot on at all times except remove boot 2-3x/day to do home exercise program - Sleep in boot - May gradually begin to progress weight bearing status</p>	<p>-Ankle and MTP active/passive range of motion, stretching -Strengthening exercises for the foot and ankle -Joint mobilization techniques by the PT to restore motion of the foot and ankle with proper stabilization - avoid movement at the osteotomy/fusion site(s) -Continue with strengthening for core, hips, knees (maintain precautions) -Gait training to wean off the assistive devices and normalize gait in boot -Begin stationary bike avoiding pressure on forefoot (Lapidus not until 10 weeks)</p>	<p>- Full ROM of the foot and ankle -Increase strength of the foot and ankle and maintain hip and knee ROM/strength -A normalized gait pattern on all surfaces in boot -Restore cardiovascular endurance</p>
<p>10-14 weeks</p>	<p>-No joint mobilization of fused joints (if applicable)</p>	<p>-Start weaning out of boot to supportive sneaker with adequate width/length toe box -Pool walking -Continue with treatment for strength, range of motion and conditioning as above -Begin proprioceptive, balance, and motor control exercises in closed chain -Stationary bike, swimming</p>	<p>-Able to bear full weight in shoe with good tolerance -Restore normal gait pattern -Normalize motor control of the lower extremity -Full strength of the core and lower extremities</p>
<p>14-20 weeks</p>	<p>-No joint mobilization of fused joints (if applicable)</p>	<p>-Activity progression per PT instructions -Continue treatment as above -Single leg activities on varying surfaces -Advance functional training to include sports specific movement patterns -Assist patient with casual shoe/dress shoe selection</p>	<p>-Good balance and control on the involved leg in all planes -Return to all activities (not sports) provided strength, gait and ROM goals have been met</p>
<p>20+ weeks</p>	<p>-No joint mobilization of fused joints (if applicable)</p>	<p>-Continue treatment as above -Sports specific training and conditioning beginning with low impact and progressing to high impact</p>	<p>-Gradual return to minimal or low impact sports (cycling, rowing, swimming, Stairmaster, elliptical) -Once low impact sports are tolerated, gradual return to high impact sports (running, jumping)</p>

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If you have any questions or concerns related to the content of these rehabilitation guidelines, please contact:

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