

Bunions (hallux abductovalgus)



A bunion is a bony prominence that typically occurs on the inner side of the forefoot at the base of the big toe. The problem is also associated with a big toe that is deviated towards or under the second toe. The medical term for this condition is called hallux abductovalgus (with bunion).

The bunion is not a growth of bone or a calcium deposit. The bunion is actually the rounded end of the first metatarsal bone (the bone just in back of the big toe joint) that is slowly dislocating towards the inner side of the foot. As the big toe dislocates towards the second toe, the first metatarsal buckles in the opposite direction towards the inner side of the foot.

The condition is not always painful, but can be, if the deformity is large enough, activities are strenuous enough, or shoes are too tight or have heels that are too high. When pain is present, it usually results from shoe pressure on the bunion. Other times, pain can also occur at the top of the joint if it is jamming with activities or with wearing heels. Rarely, pain can be caused by degenerative arthritis in the big toe joint that can develop in long-standing advanced cases of hallux abductovalgus.

The condition usually develops slowly over a period of years. During this time, both the big toe deviation and the bunion size progress. The condition usually starts at a young age and slowly progresses over time, resulting in a deformity large enough to cause pain in the 40s or later. However, the condition can occasionally be seen to progress more rapidly and become large enough to cause pain in late childhood and early adolescence.

The condition develops as a result of abnormal mechanics of the foot in general and the big toe joint in particular. The biggest factor that plays a role in determining abnormal foot mechanics is heredity. Therefore, heredity is the biggest factor in determining whether someone develops this condition. Nevertheless, there are other causation factors and usually there are a combination of these factors that ultimately determine whether someone develops a bunion, and how fast the condition progresses.

Factors that can lead to hallux abductovalgus with bunion

Heredity / Abnormal mechanics of the foot and big toe joint

Poor shoes – especially tight shoes, pointy shoes, and high heels

Injury

Arthritis disorders

Demanding activities – ballet, running

Tight calf muscle

The condition can be found equally developed on both feet (symmetrical), but in other cases, one foot may have a more pronounced deformity than the opposite foot (asymmetrical). When the condition is asymmetrical, it is usually more pronounced on the side of a leg that is longer than the other, or less frequently, on a foot that has previously developed a collapsed arch from a posterior tibial tendon tear.

Treatment of the condition falls into non-surgical and surgical categories. The goal of non-surgical treatment is to eliminate pain and/or prevent progression of the deformity. The goal of surgical treatment is to eliminate pain and correct the deformity. Non-surgical treatment usually does not correct the deformity.

Non-surgical Treatment

- q Wear appropriate shoes. The shoes should have ample toe box width and should be made of soft upper materials. High heels must not be worn. Purchase your shoes only after being properly measured for your length and width, and preferably later in the day.
- q Have your shoes stretched at a shoe repair shop. Ask the shoe repairperson to “spot stretch” just the spot on the shoe that is overlying the bunion. Some people have also obtained great relief by cutting an x in the shoe at the spot that overlies the bunion.
- q Use orthotic inserts in your shoes. Foot orthotics help to control the abnormal mechanics of the foot that may be at the root of the problem. Over-the-counter orthotics are pre-fabricated, usually based on shoe size, are less expensive than custom-made orthotics, and may be less effective than custom foot orthotics. For over-the-counter foot orthotics, we recommend Superfeet orthotics, which can be purchased at The Depot Store next to the Department of Foot and Ankle Surgery. Custom foot orthotics are made from plaster molds of your feet, are more expensive than over-the-counter orthotics, and are usually more effective than over-the-counter foot orthotics. Custom foot orthoses are not a covered benefit of the Kaiser Health Plan. However, custom foot orthoses are available through the Department of Foot and Ankle Surgery on a fee for service.
- q Use padding. We recommend the Gel Bunion Guard – a silicone pad for the bunion. Also, a Gel Toe Separator between the first and second toes may be helpful. Both of these pads are available at The Depot Store, next to the Department of Foot and Ankle Surgery.
- q Perform calf stretching exercises for 30-60 seconds on each leg at least two times per day. (Stand an arm’s length away from the wall, facing the wall. Lean into the wall, stepping forward with one leg, leaving the other leg planted back. The leg remaining back is the one being stretched. The leg being stretched should have the knee straight (locked) and the toes pointed straight at the wall. Stretch forward until tightness is felt in the calf. Hold this position without bouncing for a count of 30-60 seconds. Repeat the stretch for the opposite leg.)
- q Use ice on the painful area for 5-10 minutes, 1-3 times per day - especially in the evening. Fill a styrofoam or paper cup with water and freeze it. Peel back the leading edge of the cup before application. Massage the affected area for 15-20 minutes. CAUTION: AVOID USING ICE WITH CIRCULATION OR SENSATION PROBLEMS.
- q Use an oral anti-inflammatory medication. (We recommend over-the-counter ibuprofen. Take three 200mg tablets, three times per day with food – breakfast, lunch, and dinner. To obtain the proper anti-inflammatory effect, you must maintain this dosing pattern for at least 10 days. Discontinue the medication if any side effects are noted, including, but not limited to: stomach upset, rash, swelling, or change in stool color. IF YOU TAKE ANY OF THE FOLLOWING MEDICATIONS, DO NOT TAKE IBUPROFEN: COUMADIN, PLAVIX, OR OTHER PRESCRIPTION OR OVER-THE-COUNTER ORAL ANTI-INFLAMMATORY MEDIATIONS. IF YOU HAVE ANY OF THE FOLLOWING HEALTH CONDITIONS, DO NOT TAKE IBUPROFEN: KIDNEY DISEASE OR IMPAIRMENT, STOMACH OR DUODENAL ULCER, DIABETES MELLITUS, BLEEDING DISORDER.)

Surgical Treatment

- q There are a number of different procedures that are used for the surgical correction of hallux abductovalgus with bunion. In general, the surgery involves more than simply “shaving off the bunion”. The surgical correction usually involves rebalancing the tendons and ligaments around the big toe joint and perhaps bone cuts near the big toe joint to improve the alignment of the big toe. Most importantly, the abnormal position of the first metatarsal must be surgically corrected by either a bone cut of the first metatarsal or a fusion near the midfoot. Furthermore, additional surgical procedures may be required to correct associated deformities (like hammertoes) or predisposing factors (like a tight calf muscle). The number and nature of the procedures required for correction of your foot is determined by an examination of your foot clinically and with x-rays.

Typically, the surgery is performed on only one foot at a time. Usually bone screws are used to stabilize bone cuts or fusions and stay implanted permanently. The surgery is usually performed on an outpatient basis. Depending on the actual procedures required, you may or may not be allowed to walk on the foot after surgery and you may or may not be required to be in a cast.

Full recovery may take 4-6 months. Depending on the type of work that you do, you will be advised to remain off work for as little as 2 weeks (for a completely sedentary job with no mobility requirements) to as much as 2-3 months (for a job that requires standing/walking).

The success rate is approximately 85%. Approximately 12% are improved, but may still have some limitations or footwear or activities. About 3% are no better or worse. Risks include, but are not limited to: undercorrection, overcorrection, recurrent deformity, stiffness of the big toe joint, weakness of the toe, transfer of pain or callus to an adjacent bone or area, broken pins or hardware, intolerance of pins or hardware, delayed or non-healing of bone, nerve injury or entrapment, delayed incision healing, painful or unsightly scar, prolonged recovery, recurrent pain, incomplete relief of pain, no relief of pain, worsened pain, and circulation impairment or loss of the toe.)