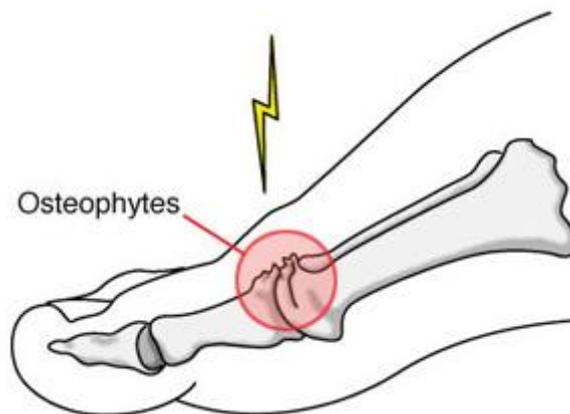


Arthritis of big toe (Hallux Rigidus)

What is Hallux Rigidus?

The big toe is most common site of arthritis in the foot. The joint affected is called the metatarsophalangeal or MTP joint. If the joint starts to stiffen due to arthritis, walking can become painful and difficult. In the MTP joint, as in any joint, the ends of the bones are covered by a smooth articular cartilage. If wear-and-tear or injury damages the articular cartilage, the raw bone ends can rub together. A bone spur or overgrowth may develop on the top of the bone (As shown in the picture below). This overgrowth can prevent the toe from bending as much as it needs to when you walk. The result is a **stiff big toe or hallux rigidus**.



Hallux rigidus usually develops in adults after the ages of 30 years. The cause of arthritis is not known. It may result from an injury or from differences in foot anatomy that increase stress on the joint.

What are the symptoms?

- Pain in the joint when you are active, especially as you push-off on the toes when you walk
- Swelling around the joint
- A bump, like a bunion or callus, that develops on the top of the foot
- Stiffness in the great toe and an inability to bend it up or down

Diagnosis

If you find it difficult to bend your toe up and down or find that you are walking on the outside of your foot because of pain in the toe, see your doctor right away. Hallux rigidus is easier to treat when the condition is caught early. If you wait until you see a bony bump on the top of your foot, the bone spurs will have already developed and the condition will be more difficult to treat. X-rays will show the location and size of any bone spurs, as well as the degree of arthritis.



Treatment

Nonsurgical Treatment

Pain killers and anti-inflammatory medications such as ibuprofen may help reduce the swelling and ease the pain. Applying ice packs or taking contrast baths (described below) may also help reduce inflammation and control symptoms for a short period of time. But they aren't enough to stop the condition from progressing. Wearing a shoe with a large toe box will reduce the pressure on the toe, and you will probably have to give up wearing high heels. A stiff-soled shoe with a rocker or roller bottom design and possibly even a steel shank or metal brace in the sole of the shoe might help to offload the painful joint. This type of shoe supports the foot when you walk and reduces the amount of bend in the big toe.

A contrast bath uses alternating cold and hot water to reduce inflammation. You'll need two buckets, one with water as cold as you can tolerate and the other with water as warm as you can tolerate. Immerse your foot in the cold water for 30 seconds, then immediately place it in the hot water for 30 seconds. Continue to alternate between cold and hot for five minutes, ending in the cold water. You can do contrast baths up to three times a day. However, be careful to avoid extreme temperatures in the water, especially if your feet aren't very sensitive to heat or cold.

Surgical Treatment

- **Cheilectomy, Debridement and Micro fracture**

This surgery is usually recommended when damage is mild or moderate. It involves removing the bone spurs (osteophytes) as well as a portion of the prominent bone at the top of the joint, so the toe has more room to bend. If

there is damage to cartilage, this area can be cleaned (debridement) and drilled with a small pin (micro fracture) to encourage growth of fibrocartilage.

The toe and the operative site may remain swollen for several months after the operation, and you will have to wear a sandal for at least two weeks after the surgery. But most patients do experience long-term relief.

- **Arthrodesis**

Fusing the bones together (arthrodesis) is often recommended when the damage to the cartilage is severe. The damaged cartilage is removed and screws or a plate are used to fix the joint in a permanent position. Gradually, the bones grow together. This type of surgery means that you will not be able to bend the toe at all. However, it is the most reliable way to reduce pain in these severe cases. You would be able to wear comfortable shoe with a small heel once you have recovered from this surgery (3-6 months).

For the first six to eight weeks after surgery, your foot will be in a plaster cast or a special shoe (see below).



Special Heel weight bearing Shoe (Darco Shoe)

For 6-8 weeks after big toe fusion your operated foot would be in plaster cast or special shoe which allows you to bear weight on the heel.



Possible Complications After Surgery

Fewer than 10 percent of patients experience complications from big toe. Possible complications can include wound healing problems, infection, stiffness, *swelling (can last for a long time)*, clot (rarely), non union (bones taking long time to heal), mal union (bones not healing in proper alignment), nerve damage and pain.

Your Recovery at Home

The success of your surgery will depend in large part on how well you follow your orthopaedic surgeon's instructions at home during the first few weeks after surgery. You will see your surgeon regularly for the next several months to make sure your foot heals properly. You can start driving in 6-12 weeks after the operation (Please check with your insurance company).

Dressing Care

You will be discharged from the hospital with bandages holding your toe in its corrected position. You also will wear a special postoperative surgical shoe or cast to protect your foot. The wound needs to be inspected about two weeks after surgery, but your foot will require continued support from dressings or a brace for six to eight weeks. To ensure proper healing, it is very important not to disturb your dressings and to keep them dry. Interference with proper healing could cause a non union or mal union. Be sure to place a plastic bag over your foot while showering.

Swelling and Shoe Wear

Keep your foot elevated as much as possible for the first few days after surgery, and apply ice. *You might have some swelling in your foot for up to two years.* After your dressings have been removed, wear only trainers or soft leather oxford type shoes for the first several months until the surgery has completely healed. Do not wear fashion shoes, including high heels, until after six months.

Exercises to Strengthen Your Foot

Some exercises or physiotherapy may be recommended to restore your foot's strength, range of motion in other joints and gait training after your surgery.

Avoiding Problems after Surgery

Though uncommon, complications can occur. Contact the hospital if:

- Your dressing loosens, comes off or gets wet.
- Your dressing is moistened with blood or drainage.
- You develop side effects from postoperative medications. Also, call the hospital immediately if you notice any of the following warning signs of infection:
 - Fever.
 - Chills.
 - Persistent warmth or redness around the dressing.
 - Increased or persistent pain.
 - Significant swelling or pain in the calf above the treated foot.