

## Toe and Forefoot Fractures

Nearly one-fourth of all the bones in your body are in your feet, which provide you with both support and movement. A broken (fractured) bone in your forefoot (**metatarsals**) or in one of your toes (**phalanges**) is often painful but rarely disabling. Most of the time, these injuries heal without operative treatment.

### Types of fractures

**Stress fractures** frequently occur in the bones of the forefoot that extend from your toes to the middle of your foot. Stress fractures are like tiny cracks in the bone surface. They can occur with sudden increases in training (such as running or walking for longer distances or times), improper training techniques or changes in training surfaces. Most other types of fractures extend through the bone. They may be **stable** (no shift in bone alignment) or **displaced** (bone ends no longer line up). These fractures usually result from trauma, such as dropping a heavy object on your foot, or from a twisting injury. If the fractured bone does not break through the skin, it is called a closed fracture.

Several types of fractures occur to the forefoot bone on the side of the little toe (fifth metatarsal). Ballet dancers may break this bone during a misstep or fall from a pointe position. A ankle-twisting injury may tear the tendon that attaches to this bone and pull a small piece of the bone away. A more serious injury in the same area is a Jones fracture, which occurs near the base of the bone and disrupting the blood supply to the bone. This injury may take longer to heal or require surgery.

### Signs and symptoms

Pain, swelling, and sometimes bruising are the most common signs of a fracture in the foot. If you have a broken toe, you may be able to walk, but this usually aggravates the pain. If the pain, swelling, and discoloration continue for more than two or three days, or if pain interferes with walking, something could be seriously wrong; see a doctor as soon as possible. If you delay getting treatment, you could develop persistent foot pain and arthritis. You could also change the way you walk (your gait), which could lead to the formation of painful calluses on the bottom of your foot or other injuries.

### Diagnosis

The doctor will examine your foot to pinpoint the central area of tenderness and compare the injured foot to the normal foot. You should tell the doctor when the pain started, what you were doing at the time, and if there was any injury to the foot. X-rays will show most fractures,

although a bone scan may occasionally be needed to identify stress fractures. Usually, the doctor will be able to realign the bone without surgery, although in severe fractures, pins or screws may be required to hold the bones in place while they heal.

## **Treatment**

See a doctor as soon as possible if you think that you have a broken bone in your foot or toe. Until your appointment, keep weight off the leg and apply ice to reduce swelling. Use an ice pack or wrap the ice in a towel so it does not come into direct contact with the skin. Apply the ice for no more than 20 minutes at a time. Take an analgesic such as aspirin or ibuprofen to help relieve the pain. Wear a wider shoe with a stiff sole.

Rest is the primary treatment for stress fractures in the foot. Stay away from the activity that triggered the injury, or any activity that causes pain at the fracture site, for three to four weeks. Substitute another activity that puts less pressure on the foot, such as swimming. Gradually, you will be able to return to activity. Your doctor or coach may be able to help you pinpoint the training errors that caused the initial problem so you can avoid a recurrence.

The bone ends of a displaced fracture must be realigned and the bone kept immobile until healing takes place. If you have a broken toe, the doctor will "buddy-tape" the broken toe to an adjacent toe, with a gauze pad between the toes to absorb moisture. You should replace the gauze and tape as often as needed. Remove or replace the tape if swelling increases and the toes feel numb or look pale. If you are diabetic or have peripheral neuropathy (numbness of the toes), do not tape the toes together. You may need to wear a rigid flat-bottom orthopaedic shoe for two to three weeks.

If you have a broken bone in your forefoot, you may have to wear a short-leg walking cast, a brace, or a rigid, flat-bottom shoe. It could take six to eight weeks for the bone to heal, depending on the location and extent of the injury. After a week or so, the doctor may request another set of X-rays to ensure that the bones remain properly aligned. As symptoms subside, you can put some weight on the leg. Stop if the pain returns.

Surgery is rarely required to treat fractures in the toes or forefoot. However, when it is necessary, it has a high degree of success.

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