

Usually, heel spur pain can be diagnosed using a physical examination. Pressing on the bottom of the heel where the arch begins usually causes pain. Pain with pressure to the center of the heel indicates that an inflamed bursa may also be present. X-rays may be used to confirm the diagnosis, but results may be normal at first.

Treatment is aimed at relieving pain. Wrapping the foot and arch with padding and tape or using orthotics, which help to stabilize the foot, can minimize stretching of the fascia and reduce pain. Heel cushion pads and supportive shoes with soft soles may also help. Calf stretching exercises and ice massage are also effective. Ice massage consists of massaging an area of skin, using ice. One way to do this is to freeze water in a paper cup, then turn the cup upside down and rub the ice against the skin. As the ice melts, the paper is progressively peeled away. A mixture of corticosteroids and a local anesthetic can be injected into the painful area of the heel. Most painful heels will resolve without surgery.

Surgery to remove the spur or the dense mass of tissue that extends from the spur at the bottom of the heel bone to the base of the plantar fascia) should be performed only when constant pain is not relieved by other treatment measures. Surgery should be considered only as a last resort because the results are not predictable. Occasionally, pain persists after surgery.

Ankle Sprain

Ankle sprain is an injury to the ligaments through elastic tissue that connects bones (one to another) in the ankle.

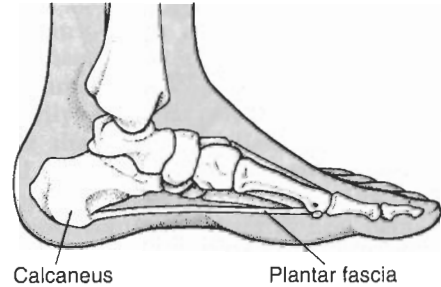
Some of the ligaments in the ankle can be injured. Sprains usually occur when the ankle rolls outward, causing the sole of the foot to turn toward the other foot (invert). This kind of injury usually occurs when a person steps on uneven ground, especially when stepping on a rock or the edge of a curb. Loose ligaments in the ankle, weak or nerve-damaged leg muscles, and certain types of shoes such as spiked heels, or certain walking patterns (such as an inverted gait pattern) tend to cause the ankle to roll outward, increasing the risk of a sprain. People with specific foot types, such as a high arch, may also be more prone to ankle sprains.

Diagnosis

The severity of the sprain depends on the extent of stretching or tearing of the liga-

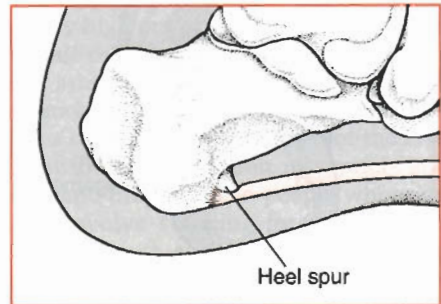
What Is a Heel Spur?

A heel spur is a growth of extra bone on the heel bone (calcaneus). It may form when the plantar fascia, the connective tissue extending from the bottom of the heel bone to the base of the toes, pulls excessively on the heel. Usually the spur is painful as it develops, but it may become less painful as the foot adjusts to it. Most spurs can be treated without surgery.



Calcaneus

Plantar fascia



Heel spur

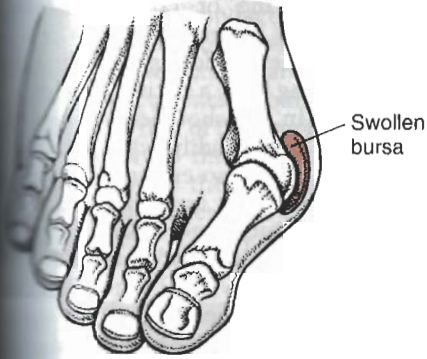
ments. In a mild sprain, the ligaments may stretch, but they do not actually tear. The ankle usually does not hurt or swell very much, but a mild sprain increases the risk of a repeat injury. In a moderate sprain, a ligament tears partially. Obvious swelling and bruising are common, and walking is usually painful and difficult. In a severe sprain, a ligament tears completely, causing swelling and sometimes bleeding under the skin. As a result, the ankle is unstable and unable to bear weight.

Diagnosis and Treatment

Physical examination of the ankle can give clues as to the extent of ligament damage. X-

Hallux Valgus With a Bunion

A **hallux valgus** is a bulging out of the base of the big toe sideways, away from the midline. The end of the big toe tilts toward the second toe. A **bunion** is a painful swelling of the fluid-filled sac (bursa) at the base of the big toe. A bunion is caused by hallux valgus.



the inside edge of the foot, where the metatarsal head meets the base of the big toe. This bump is a bursa (a fluid-filled sac). The bursa becomes irritated by friction with the shoe, resulting in swelling of the bursa under the bump, thus increasing the size of the bump—this is called a bunion. Continued growth of the bunion by friction with the shoe leads to increased bone growth and further swelling of the bursa, enlarging the bump and further widening the foot.

A doctor can usually make the diagnosis of hallux valgus and bunion by directly examining the foot. X-rays may help to determine the extent of the hallux valgus.

A bunion can be treated by injecting a corticosteroid mixed with a local anesthetic into the bursa. Bunion shield pads or modified shoes can help relieve painful pressure over the bump. Severely painful bunions or a severe hallux valgus may require surgical correction of the toe's position.

Hammer Toe

A hammer toe is in a fixed (rigid) contracted posi-

The most usual cause of a hammer toe is years of wearing ill-fitting shoes. Because part of the toe is higher than normal, excessive friction may result, sometimes leading to ulcers on the top of the toe. Treatment is first attempted by ensuring that shoes are comfortable and do not further irritate the toe. Any ulcer or other skin irritation is treated. Surgery to straighten the hammer toe may be needed when the toe has become fixed. Rarely, surgery is necessary to straighten the toe.

Sesamoiditis

Inflammation or irritation of the tendon and surrounding structures around a small bone (the sesamoid) below the metatarsal head where it adjoins the big toe (first metatarsal head).

The cause of sesamoiditis is usually repeated injury. Sesamoiditis is particularly common among dancers, joggers, and those who wear high heels. The area may be swollen and is painful when walking and when pressure is applied to it. The doctor makes the diagnosis by examining the foot and confirms the diagnosis by x-rays to exclude a fracture of the sesamoid bone.

Treatment consists of placing a special pad ("dancer's pad") inside the shoe to reduce pressure on the area. A nonsteroidal anti-inflammatory drug (NSAID) taken by mouth and injections of corticosteroids and local anesthetic into the affected area can be helpful.

What Is Hammer Toe?

In hammer toe, the second, third, or fourth toe becomes bent and cannot be straightened.

