

# What Are Sesamoids?

Most bones in the human body are connected to each other at joints. But there are a few bones that are not connected to any other bone. Instead, they are connected only to tendons or are embedded in muscle. These are the sesamoids. A good example is the kneecap (patella), which is the largest sesamoid. Two other very small sesamoids, each about the size of a kernel of corn, are found in the underside of the forefoot near the big toe, one on the outer side of the foot and the other closer to the middle of the foot.

## How Can The Sesamoids Be Injured?

Sesamoids act like pulleys. They provide a smooth surface over which the tendons slide, thus increasing the ability of the tendons to transmit muscle forces. The sesamoids in the forefoot also assist with weightbearing and help elevate the bones of the big toe. Like other bones, sesamoids can break (fracture). In addition, the tendons surrounding the sesamoids can become irritated or inflamed. This is called sesamoiditis and is a form of tendinitis. It is common among ballet dancers, runners and professional athletes.

## What Are The Symptoms Of A Sesamoid Injury?

- Pain is focused under the big toe on the ball of the foot. With sesamoiditis, pain may develop gradually, whereas with a fracture, the pain will be immediate.
- Swelling and bruising may or may not be present.
- There may be difficulty and pain when bending and straightening the big toe.

## How Is A Sesamoid Injury Diagnosed?

During your examination, your orthopaedic foot and ankle specialist will look for tenderness at the sesamoid bones. Your doctor may manipulate the bone slightly or ask you to bend and straighten the toe. He or she may also bend the big toe up toward the top of the foot to see if the pain intensifies.

Your specialist will request X-rays of the forefoot to ensure a proper diagnosis. In many people, the sesamoid bone nearer the center of the foot (the medial sesamoid) has two parts (bipartite). Because the edges of a bipartite medial sesamoid are generally smooth, and the edges of a fractured sesamoid are generally jagged, an X-ray is useful in making an appropriate diagnosis. Your physician may also request X-rays of the other foot to compare the bone structure. If the X-rays appear normal, the physician may request a bone scan. Blood tests for gout or inflammatory arthritis may also be considered.

## What Are Treatment Options For Sesamoiditis?

Treatment for sesamoiditis usually is nonoperative. However, if conservative measures fail, your physician may recommend surgery to remove the sesamoid bone. First, your specialist will recommend the following:

- [Stop the activity that causes the pain.](#)
- [Take aspirin or ibuprofen to relieve the pain.](#)
- [Rest and ice the sole of your foot. Do not apply ice directly to the skin, but use an ice pack or wrap the ice in a towel.](#)
- [Wear soft-soled, low-heeled shoes. Stiff-soled shoes like clogs may also be comfortable.](#)
- [Use a felt cushioning pad to relieve stress.](#)
- [Return to activity gradually, and continue to wear a cushioning pad of dense foam rubber under the sesamoids to support them. Avoid activities that put your weight on the balls of the feet.](#)
- [Tape the big toe so that it remains bent slightly downward \(plantar flexion\).](#)
- [Your orthopaedic specialists may recommend an injection of a steroid medication to reduce swelling.](#)
- [If symptoms persist, you may need to wear a removable short leg fracture brace for four to six weeks.](#)

# What Are Treatment Options For A Sesamoid Fracture?

If you have fractured a sesamoid bone, your orthopedic specialist may recommend conservative treatments before resorting to surgery