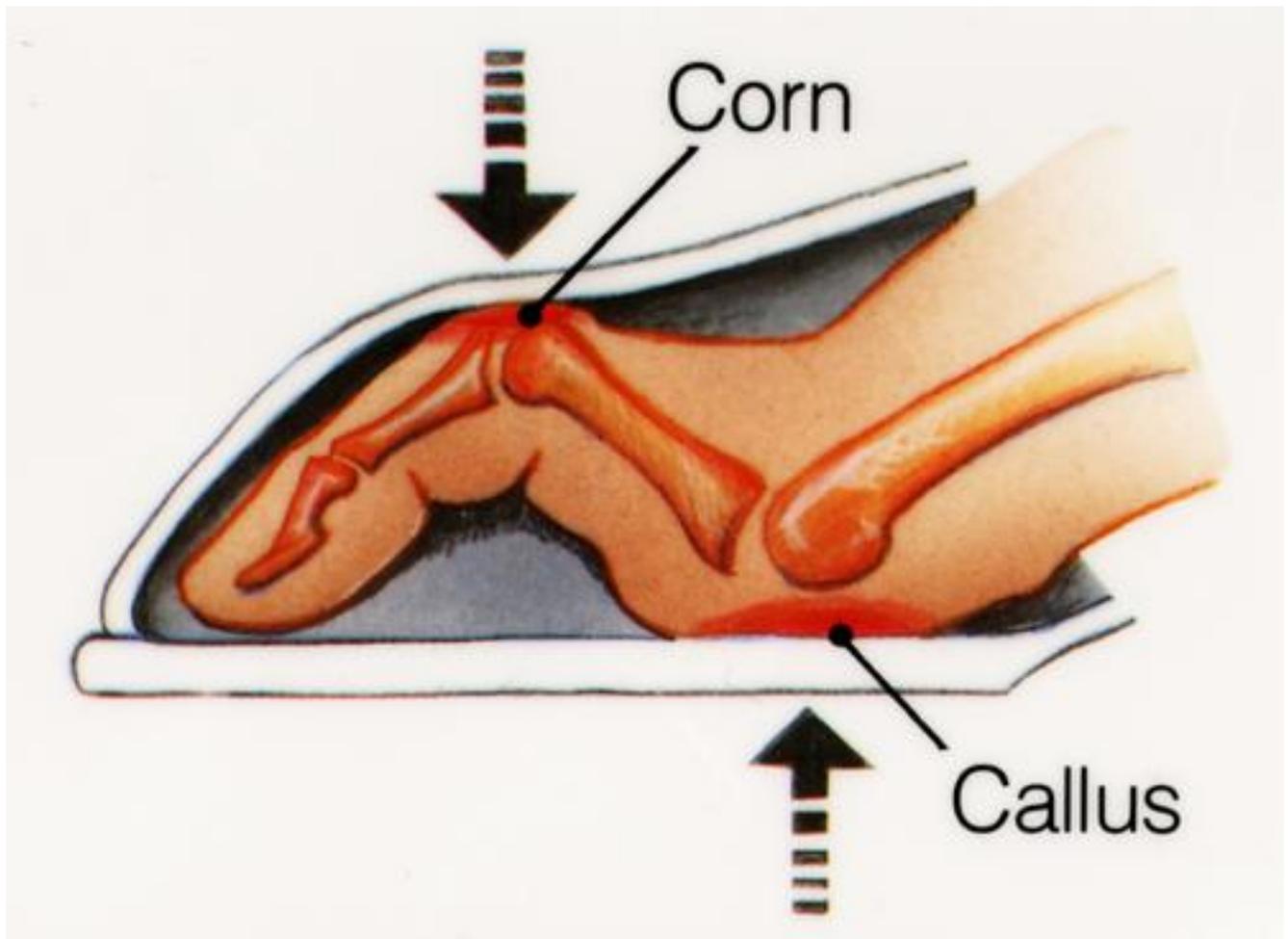

Treatment Choices For Contracted Toes



Hammertoes, Mallet Toes, Claw Toes

What are hammertoes, mallet toes and claw toes?

Often the words are used interchangeably to mean an abnormally contracted toe like the drawing above. But technically speaking, a "[hammertoe](#)" is the name for a toe that is contracted at the first toe joint, like the picture above. If it's contracted at

the second toe joint it is called a "mallet toe", and if it is contracted at both toe joints, it is called a "claw toe". They can be quite uncomfortable and are cosmetically unappealing.

What kind of troubles do contracted toes give you?

Some people never have troubles with contracted toes. In fact, some people don't even know they have them. But they can become uncomfortable, especially while wearing shoes. Many people who develop symptoms with contracted toes will develop corns, blisters and pain on the top of the toe, where it rubs against the shoe--or between the toes, where it rubs against the adjacent toe. You can also develop calluses on the balls of the feet, as well as cramping, aching and an overall fatigue in the foot and leg.

Why do people get contracted toes?

Hammertoes are most common in women, and a big part of this is poor shoe choices, which are a big factor in the development of many foot problems. Tight toe boxes and high heels are the biggest culprits. Genetics certainly plays a role in some cases of hammertoes, as does trauma, infection, arthritis, and certain neurological and muscle disorders. But most cases of contracted toes are associated with various biomechanical abnormalities in how a patient walks.

What kind of biomechanical abnormalities?

Flexor Stabilization is the most common cause. This occurs in patients who excessively pronate (exhibit too much flattening of the arch) in stance. In this case, the long flexor muscle (Flexor Digitorum Longus) is recruited to stabilize the foot, and in the process, the small muscles (Interosseous muscles) that balance that tendon are overpowered and the toes contract. **Adductovarus** rotation of the fourth and fifth toes (where they rotate on their sides) is commonly seen with this condition.

Extensor substitution occurs from weak muscles on the front of the leg. In this case, the Extensor Digitorum Longus muscle is recruited to raise the foot in the swing phase of stance, which overpowers the small muscles (Lumbricales) that balance the Extensor muscle, and hammertoes develop.

Flexor substitution occurs when there is a weakness in the major calf muscles (Gastrocnemius and Soleus muscles), and other tendons, including those that flex the toes (Flexor Digitorum Longus tendons) are recruited to help the foot in heel-off. Because of their overuse, the flexor tendons to the toes overpower the extensors, and hammertoes may develop.

How can contracted toes be treated?

Many people start by treating the problem themselves when they have a painful corn or callus. They try to remove the corn by cutting it off or by applying strong acids, and they try to cushion the toe by applying cushioned pads. But because these treatments can be difficult to perform by oneself (and should never be done by oneself when the patient is diabetic or circulation is poor), and because these treatments only treat the symptom, not the structural deformity that causes their symptom, these treatments can often provide only limited success, and often any success is for only short periods of time. Changes in shoe choices and various types of paddings and other appliances may help, too.

For longer-lasting help, we must examine the cause of the deformity. The reason for knowing the cause is that the type of treatment will vary, depending upon the cause of the complaint. [Orthotics](#) help control the causes of certain types of contracted toes, (those caused by flexor stabilization, for example), but not other types. When conservative measures fail, surgical correction is sometimes necessary, with very different surgeries indicated for each of the causes described above. This is why it's important to know your surgeon has a good understanding of the cause of your hammertoe or the surgery may not be successful.

What is involved with surgery to correct contracted toes?

Any surgery must be carefully considered and approached in a serious manner, as any procedure is serious for the patient. But in most cases the procedure is relatively straight forward.

The surgery can be done in the office operating room, using local anesthetic. The patient goes home in a special post-operative shoe and in most cases can walk immediately.

That's not to say that the patient is walking or functioning normally immediately after the procedure. The patient must take some time off work to rest the foot and allow it to heal.

What kind of procedure is performed?

A small incision is made, and the deformity is corrected in a variety of ways. There are actually a large number of procedures described in the literature, but below are the most common procedures:

- The simplest procedure would involve a [Tenotomy](#), the cutting of the tendon causing the deformity or a [Tendon Lengthening](#) procedure. These procedures are infrequently done, though, as the structural deformity (the arthritis and joint adaptation) is not addressed with these surgeries.
- Other soft-tissue procedures involve rebalancing the tendons around the joint. There are several techniques to do this, but the most common is probably the [Girdlestone-Taylor](#) procedure, which involves rerouting the tendons on the bottom of the toe up and over the toe where it sticks up, so that the tendon helps pull the toe downwards into proper alignment.
- Probably the most frequent procedure performed is one called a [Post](#) or an [Arthroplasty](#). In this case a small piece of bone is removed from the joint to straighten the toe. The toe is shortened somewhat, but there is still motion within the toe post-operatively.
- In other cases, an [Arthrodesis](#) is performed. This involves fusing the abnormally-contracted joint. The [Taylor](#) procedure fuses only the first joint in the toe, whereas the [Lambrinudi](#) procedure fuses both joints within the toe. Toes which have had these procedures are usually perfectly straight, but they take longer to heal and don't bend afterwards.
- A [Hibbs](#) procedure is a transfer of the toe's long extensor tendon to the top of the metatarsal bone. The idea of this procedure is to remove the deforming cause of the hammertoes (in this case, extensor substitution), but to preserve the tendon's function in dorsiflexing the foot by reattaching it to the metatarsals.

- Fortunately, the [Gotch](#) (or [Gotch and Kreuz](#)) procedure, removal of the base of the toe where it attaches to the foot, is done less frequently than in years past. The problem with this procedure is that it doesn't address the problem at the level of the deformity, and it causes the toe to become destabilized--often contracting up and back onto the top of the foot.
- You can even have an [Implant Arthroplasty](#) procedure, where a small, false joint is inserted into place.
- There are several other procedures, as well.

How do I know which surgery is best for me?

This is your podiatrist's job. What we do is examine the cause of the contracted toe (a topic reviewed above), the degree of the deformity and arthritic involvement and design a procedure on a case-by-case basis.

For example, an arthroplasty procedure and a functional orthosis might work fine for a hammertoe caused by flexor stabilization, but neither would work for a hammer toe caused by extensor substitution. A hammertoe caused by this biomechanical abnormality would require an arthrodesis procedure, and orthoses would be useless. A hammertoe caused by flexor substitution, though, would do better with a tendon transfer and an arthrodesis procedure.

Although these procedures are considered relatively easy to perform, it's very important that you have a surgeon with a great deal of understanding about the biomechanical causes of your hammertoes perform the surgery so that the procedure is successful in the long term.

When it is time to consider surgery?

If you find you cannot comfortably fit in your shoes, if you get little or no relief from having your corns removed, if padding and the other treatments described above provide you no comfort, then you may wish to consider surgical correction. You will need to have adequate circulation and be in adequate health to proceed with the surgery.