



HAMMERTOES

Hammertoe is a contracture or bending of one or both joints of the second, third, fourth or fifth toes. The contracture of the toes is a result of a muscle/tendon imbalance between the tendons on the top and the tendons on the bottom of the toe. As a result of the deformities the toe resembles a hammer.



ANATOMY

Hammertoes can be flexible or rigid in nature. If they are rigid, it is not possible to straighten the toe out by manipulating it. They tend to slowly get worse with time and often flexible deformities become rigid. Frequently hammertoes develop corns or calluses (a buildup of skin) on the top, side or end of the toe, or even between two toes. These may be soft or hard, depending upon their location. Corns and calluses can be painful and make it difficult to find a comfortable shoe, but even without corns and calluses, hammertoes can cause pain because the joint itself may become dislocated.

CAUSES

Biomechanics: Hammertoes develop mainly from abnormal foot structure and mechanics, both of which are inherited features. There are some inherited foot defects such as flat feet and high arches that will put excessive strain on the muscles and tendons making them more susceptible to hammertoe deformity over time.

Footwear: Certain types of footwear such as high heeled or tight, ill-fitting shoes can contribute to the development of hammertoes. That is why hammertoes are more common in women than men. Improper footwear can exacerbate the problem caused by the original genetic structure. Tight shoes force the toes to stay in a bent position for too long, restricting the muscles ability to

flex, and tendons to shorten over time, causing tightening and making it more difficult to straighten the toe.

Injury: Injuries to the foot can also be a factor in developing a hammertoe. A broken bone in the toe or foot may heal improperly or cause damage to the muscle, tendon or joint, causing a hammertoe.

Physical Conditions: People suffering from diabetes, arthritis, gout, poor circulation, brain, spinal cord or nerve injuries such as stroke, cerebral palsy and degenerative disc disease are at an increased risk of developing a hammertoe.

SYMPTOMS

Pain: The pain could be most prominent when footwear is being worn, but it can also continue once the shoe is removed. The pain may be evident only when the toe is moved as in walking but it can also become constant. Pain in the ball of the foot at the base of the affected toe is also common with hammertoes.

Corns and Calluses: Early signs of hammertoe are often corns or calluses that form on the affected toe. When the toe starts to bend into the hammer shape, a corn or callus can develop on the top of the toe or beneath the toe near its base, where it rubs against the shoe or even between the toes. A thickening of the skin due to undue pressure or constant rubbing causes both corns and calluses.

Restricted Motion: The affected toe or toes may become stiff and hard to move over time.

Redness or Swelling: This can occur at the joint contracture. In severe cases, ulceration and infection can develop. The patient usually seeks treatment of painful and deformed toes, associated with calluses on the affected toe joints.

DIAGNOSIS

Physical Exam: Clinical observation of the hammertoe is typical to make the diagnosis. Dr. Best will ask you questions about the symptoms you are experiencing. The structure and biomechanics of the patient's entire foot is examined.

X-Rays: X-rays are necessary to get a better understanding of the extent of the bone deformity and contracture.

TREATMENT

NON-SURGICAL TREATMENT:

The first method of treating hammertoes begins with accommodating the deforming, and is indicated in mild deformities and functional abnormalities. The goal is to reduce friction and relieve pressure on the painful area.

Padding: Gel pads recommended by your doctor can help prevent irritation to corns and calluses that have developed from the hammertoe.

New Shoes: Avoiding shoes with pointed toes or high heels and shoes that are too short in the toe box will prevent the hammertoes from being forced against the front or top of your shoe. Comfortable shoes with a wide and roomy toe box and short to no high heels will offer more support and comfort to the toes.

Orthotic Devices: A functional orthotic device may be prescribed by your doctor to be worn in your shoes to help control the muscle/tendon imbalance, bringing pain relief.

Injection Therapy: Corticosteroid injections are sometimes used to ease the inflammation associated with hammertoes.

NSAIDS: Over the counter oral non-steroidal anti-inflammatory drugs (NSAIDS), such as ibuprofen may be recommended to reduce pain and inflammation.

Splinting/Strapping: Dr. Best may apply splints or small straps for temporary relief. This is more common with flexible types of hammertoes.

Stretching: Flexing and stretching the muscles and gently massaging may alleviate some of the pain and help relax the muscles and tendons.

Soaks and Moisturizers: Soak the foot in warm water mixed with Epsom salts and apply an appropriate moisturizing cream to help keep the skin soft.

Conservative treatments for hammertoes are often limited because they cannot correct the bone deformities involved. There is no way to stop the progression or reverse the deformity without literally moving the bones back into the correct position and realigning the joint. This can only be accomplished with surgery. If conservative treatment fails or the hammertoes progress to the point where conservative treatment is no longer a viable option, surgical intervention may be needed to correct the deformity.

SURGICAL TREATMENT

Hammertoe Surgery

Both techniques involving performing arthroplasties and correction of the deformity involves working on the bones and soft tissues. In the traditional approach, range of motion is limited or absent due to the fusion of the joints. In the minimally invasive technique, one of the goals is to preserve the joints and as a consequence, range of motion is usually maintained. Because the minimally invasive techniques are less traumatic, and the recovery time shorter, most patients prefer this method of correction. Each patient is unique, however, and Dr. Best will discuss which technique he feels best suits the patient for optimal outcome.

MINIMALLY INVASIVE HAMMERTOE CORRECTION

Incisions used in minimally invasive or minimal incision percutaneous surgery are much smaller, usually a few millimeters in length. Dr. Best uses instructions specifically developed for these techniques which enable them to do all of the work through these small incisions. Surgery is performed under Fluoroscopic viewing. There is generally less trauma to the tissue and surgical times are lessened with this technique, reducing pain and recovery time. Less suturing is necessary and often times no sutures are used. MIS surgeons are able to rely on a compression dressing for stabilization immediately after surgery, eliminating the need for pins or screws. It is unnecessary to fuse the toe joints. Postoperative patients ambulate immediately and are often placed in a surgical shoe or boot to aid ambulation.

Getting back into regular type shoes depend on rate of healing and amount of swelling, which is very individual. You will have a bulky dressing the first week. Dr. Best usually likes to see you back at the clinic after two to three days for redress, if physicality allows, or 5 days after surgery for our out-of-town patients. In one week your dressing is changed to Band-Aids or bandage strips which you yourself change daily. This dressing is worn three to four weeks. No dressing is usually required after this.

PLEASE CALL DR. BEST AT 260-499-0888 TO DISCUSS YOUR FOOT CARE NEEDS.