

Tarsal Tunnel Syndrome

Tarsal tunnel syndrome is a type of condition that occurs when there is an abnormal amount of pressure on the nerves within the foot. The condition is similar to that of carpal tunnel syndrome within the wrist. Since the condition is relatively uncommon, it can be quite difficult to diagnose.

The tibial nerve runs into the foot in behind of the medial malleolus, which is the bump found on the inside part of the ankle. As the nerve enters the foot, it runs underneath of the flexor retinaculum, which forms a tunnel. Several of the tendons, as well as the artery, nerve and veins, travel through the tunnel and to the bottom part of the foot. The tunnel is referred to as a tarsal tunnel.

Tarsal Tunnel Syndrome Anatomy

The tarsal bones are called the calcaneus, talus, cuboid, navicular and three cuneiforms. They are the main bones in the foot, located mostly towards the middle and back of the foot.

The toes and the forefoot are composed of several bones. All of the four smaller toes begins with a metatarsal bone in the forefoot. As you move down the foot from the metatarsal, there are three smaller bones (phalanges). First, is the proximal phalanx. The middle phalanx comes next. Last is the distal phalanx.

The bones of the toes connect to form the toe joints. The MTP joint is the first one connecting the foot and the toe together. The MTP joints form the ball of the foot. The second joint is the PIP joint, while the last one of the DIP joint. All of the joints are surrounded by a capsule that is composed of ligaments holding the bones together. Two tendons run down the base of each toe, which allows you to curl your toes. A tendon running along the top of the toe helps to raise it.

How to Treat Tarsal Tunnel Syndrome:

1. Anti-Inflammatory Medication

An anti-inflammatory medication can help to reduce swelling and inflammation of the tissues that surround the tibial nerve in the tunnel, as well as help to ease irritation of the nerve. Discuss with your doctor how long to use NSAIDs for, before trying therapy.

2. Physical Therapy

Manual therapy or podiatric treatment can help to alleviate pain and improve mobility of the foot. This can have a positive impact at reducing nerve compression, and normalizing gait mechanics. Therapists may also prescribe exercises or advise orthotics (see below).

3. Orthotics

For those who have issues with pronation, specialized inserts might be required. Pronation is a condition where the foot rolls inward, which causes the arches to flatten. Whenever this happens, the tibial nerves within the tunnel can become stretched. To help relieve the problem, orthotics might be the answer you seek. Wearing these devices inside of your shoes can help to support the arch and relieve tension on the tibial nerve.

Tips:

- Cortisone injections might be able to provide you with temporary relief of your symptoms. It works to decrease swelling and inflammation of the tissues in the tarsal tunnel, as well as reduce irritation along the nerve.
- If your symptoms aren't getting any better with traditional treatments, surgery might be the only option to relieve pressure on the nerve. But first try an intensive course of manual therapy such as physiotherapy, osteopathy or chiropractic.
- An anti-inflammatory medication should only really be used in the short term.
- Physical therapy has been shown to help a number of patients improve flexibility and encourage movement of the tibial nerve.
- Soft tissue massage might help to alleviate some of the pain and discomfort you are feeling.