



Tarsal Tunnel Syndrome

What's the problem?

Tarsal tunnel syndrome is a chronic injury caused by compression or squeezing of the nerve that provides sensation to the bottom of your foot. This nerve is called the Posterior Tibial Nerve. It passes through a fibrous tunnel located behind the bone on the inside of your ankle, known as the Tarsal Tunnel. This syndrome is similar to the Carpal Tunnel Syndrome, a painful condition which affects the wrists of so many computer typists.

How does it feel?

This nerve is very sensitive to pressure once it becomes compressed or squeezed and can cause a variety of sensations or feelings. Often times, the feeling of "pins and needles", burning, or numbness may be felt.

How did this happen?

The Posterior Tibial Nerve, along with the artery and vein, course behind the inside ankle bone, in a tunnel formed by bone (your heel bone) and a fibrous band (the Flexor Retinaculum). This tunnel is called the Tarsal Tunnel. Since the Posterior Tibial Nerve is very sensitive, especially to pressure, it can become compressed within this tunnel. Tarsal Tunnel Syndrome may occur after an injury to your foot or ankle. Such injuries include ankle sprains or fractures of certain foot bones. The compression of the Posterior Tibial Nerve may also occur with certain illnesses such as diabetes or rheumatoid arthritis. Varicose veins in the Tarsal Tunnel may also compress the nerve. An excess of a certain otherwise normal motion of your foot, called pronation, where your feet roll towards each other, stretch and flatten, may also compress or stretch this nerve.

How is it diagnosed?

To diagnose Tarsal Tunnel Syndrome your doctor will take detailed history and do a physical examination. She may touch the course of the nerve with a vibrating tuning fork, or tap the nerve gently with a rubber percussion hammer. Your doctor may order a Nerve Conduction Velocity Test (NCV), which measures the speed of conduction of nerve signals as they pass through the tunnel. In the case of Tarsal Tunnel Syndrome, the nerve impulses pass through the tunnel more slowly than normal. The doctor may also order Magnetic Resonance Imaging (MRI), to provide an accurate image of the nerve in the tunnel.

How will my doctor care for me?

Your doctor will carefully examine the cause of compression of the nerve and direct the treatment accordingly. Your doctor may give you prescription strength anti-inflammatory medication or give you a cortisone injection to provide relief. If the cause is abnormal motion of the foot, your doctor may provide you with custom molded orthotics. If all conservative treatments fail, your doctor may recommend surgery to release the Posterior Tibial Nerve.

Disclaimer: This document contains information and/or instructional materials developed by the University of Michigan Health System (UMHS) for the typical patient with your condition. It may include links to online content that was not created by UMHS and for which UMHS does not assume responsibility. It does not replace medical advice from your health care provider because your experience may differ from that of the typical patient. Talk to your health care provider if you have any questions about this document, your condition or your treatment plan.

Author: Crystal Murray Holmes, DPM

Patient Education by [University of Michigan Health System](#) is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License](#). Last Revised 01/2016