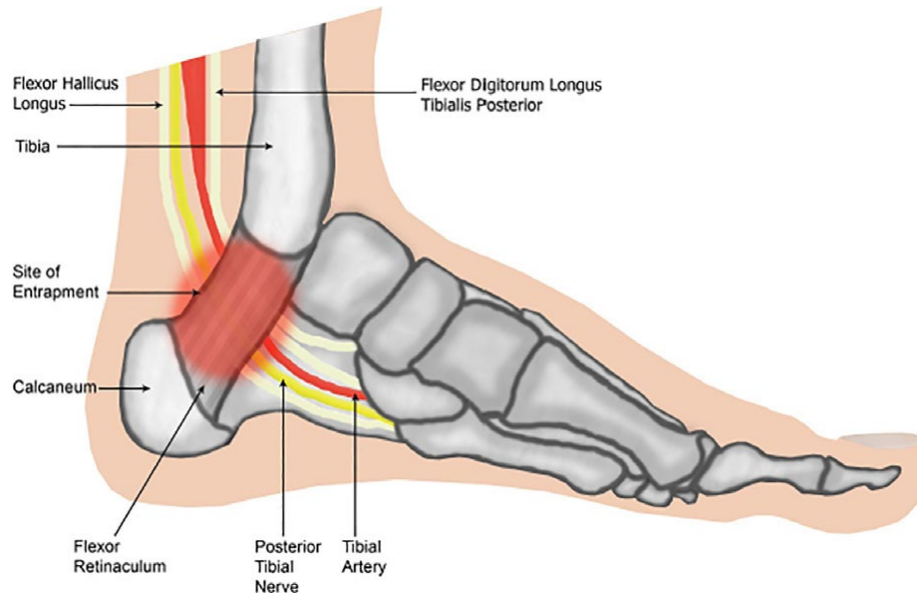


Tarsal Tunnel Syndrome



Nicole Williams, Jake Willet, Damian Clark, David Ketteridge, [CC BY 4.0](#) via [Wikimedia Commons](#)

What's the problem?

Tarsal tunnel syndrome is a chronic injury caused by compression, or squeezing, of the nerve that travels to the bottom of your foot. This nerve is called the **posterior tibial nerve**. It passes through a tunnel located behind the bone on the inside of your ankle, called the **tarsal tunnel**.

This syndrome is similar to **carpal tunnel syndrome**, a painful condition which affects the wrists of many computer typists.

How does it feel?

Your nerve is very sensitive to pressure once it becomes compressed or squeezed. You may feel pain, “pins and needles” or intense tingling, burning, or numbness.

How did this happen?

Your posterior tibial nerve is located behind the inside ankle bone, in the tarsal tunnel formed by your heel bone and a band of connective body tissue (the **flexor retinaculum**). The tarsal tunnel is a very tight space and the posterior tibial nerve inside of it is very sensitive. When the tunnel is compressed, it irritates the nerve and leads to tarsal tunnel syndrome over time.

Tarsal tunnel syndrome may be caused by:

- An injury to your foot or ankle, such as an ankle sprain or fracturing certain foot bones.
- Certain illnesses such as diabetes or rheumatoid arthritis.
- Varicose veins in the tarsal tunnel that compress the posterior tibial nerve.
- Too much of a motion called pronation of the foot. **Pronation** is when your feet roll toward each other, and the arch of your foot flattens and stretches out. This flattening of the arch stretches the nerve too much and squeezes the tarsal tunnel tighter.

How is it diagnosed?

To diagnose tarsal tunnel syndrome, your doctor will take a detailed history and do a physical exam of your foot. Your doctor may touch the nerve with a vibrating tuning fork, or tap the nerve gently with a rubber percussion hammer, to see how it responds.

Your doctor may also order the following tests:

- A nerve conduction velocity test (NCV), which measures the speed of nerve signals as they pass through the tight tarsal tunnel. In the case of

tarsal tunnel syndrome, the nerve signals pass through the tunnel more slowly than normal.

- An MRI (magnetic resonance imaging), which provides an accurate picture of the nerve in the tunnel.

How will my doctor care for me?

Your doctor will give you a care plan based on the cause of your nerve compression. Your doctor may prescribe medication or give you a cortisone injection to reduce inflammation (swelling) and provide pain relief. If the cause is abnormal motion of the foot, your doctor may provide you with a custom-made foot device (**orthotic**).

If your pain does not get better, your doctor may recommend surgery called **tarsal tunnel release**. This surgery relieves tissue pressure around the posterior tibial nerve and creates more space in the tarsal tunnel.

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