



DR VANESSA SAMMONS
NEUROSURGEON



Guide to
TIBIAL NEUROPATHY

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KEY FACTS

- Tibial Neuropathy is a treatable condition that occurs when the tibial nerve in the leg and ankle is compressed
- Tibial Neuropathy can be the result of swelling from an injury, flat feet, a high arch, previous injury, an abnormal growth or cyst, or an underlying disease process
- Symptoms include pain in the toes and bottom of the foot, numbness, tingling, weakness, and other abnormal sensations.
- Therapies include rest, orthotics, steroid injections, and surgery
- Surgery requires a minimum of two weeks recovery time with full recovery in a year

WHAT IS THE TIBIAL NERVE?

The tibial nerve is a branch of the sciatic nerve, the largest nerve in the body. It travels down the back of the leg with branches at various points. It then progresses next to the Achilles tendon to enter the foot through a structure known as the tarsal tunnel. It divides again into additional sensory branches in the foot. The tibial nerve sends both sensory and motor impulses to the lower leg and foot.

WHAT IS TIBIAL NEUROPATHY?

Tibial neuropathy is a treatable condition where a compressed nerve causes loss of movement and/or sensation in the lower leg and foot. Injury may harm the nerve or destroy the myelin sheath that protects the nerve, resulting in a disruption of sensory and movement impulses.

WHAT ARE THE SYMPTOMS OF TIBIAL NEUROPATHY?

Symptoms of this condition are localised to the legs and feet. They include:

- Burning, tingling, and numbness on the bottom of the foot
- Weakness in foot and calf muscles
- Weakness in the ankles and toes
- Difficulty walking

WHAT CAUSES TIBIAL NEUROPATHY?

Anything that leads to pressure (compression) of the tibial nerve can cause this neuropathy. Common causes include:

- Ankle injury
- Bone spurs
- Diabetes
- Flat foot
- Ganglion cysts
- High arch
- Osteoarthritis
- Rheumatoid arthritis
- Tendon injury
- Underlying inflammatory disease

Sometimes, the cause of Tibial Neuropathy goes unidentified.

WHEN SHOULD I CONSULT A DOCTOR?

Tibial neuropathy should not be ignored. If untreated, it can lead to serious problems including pain/sensory impulse disruption and muscle atrophy. “If you experience weakness, tingling, numbness or a total loss of feeling in a limb, see your doctor to determine the cause,” advises the [Mayo Clinic](#). “It’s important to treat peripheral nerve injuries early,”

Schedule a consultation even if your symptoms are mild and do not interfere with your daily activities. There may be an underlying cause that is worsening. Early diagnosis is the foundation of a beneficial treatment plan.

HOW IS TIBIAL NEUROPATHY DIAGNOSED?

A discussion of your medical history is the first step. This will be followed by a physical examination, including an assessment of your neurological health with:

- **Electromyography (EMG)** – With electromyography, an ultra-thin electrode is inserted to record muscle activity in motion and at rest

- **Magnetic Resonance Imaging (MRI)** – Magnetic resonance imaging uses radio waves and a magnetic field to create detailed images of the affected area
- **Nerve biopsy** – A piece of the tibial nerve may be removed and examined to confirm a specific diagnosis through an assessment of nerve degeneration
- **Nerve Conduction Study** – Uses topical electrodes to measure the strength of electrical signals in the nerves

Most of the tests are minimally invasive and are essential to creating a custom treatment plan to alleviate nerve and motor dysfunction in the leg and foot.

WHAT ARE THE TREATMENTS FOR TIBIAL NEUROPATHY?

Treatments focus on alleviating pain and restoring strength and mobility. If the nerve has simply been injured, rather than cut, it may heal spontaneously or with non-surgical treatments such as:

- Braces
- Corticosteroid injections
- Custom orthotics for shoes
- Pain medication
- Physical therapy
- Rest
- Splints

Your doctor will monitor your progress at regular follow-up appointments. When conservative treatments do not resolve symptoms, surgery may be required to relieve the pressure. Studies have found 75% of patients enjoy appreciable pain relief after surgery.

WHAT IS TIBIAL NERVE DECOMPRESSION SURGERY?

The goal of nerve decompression surgery is to release the pressure and pinching on the tibial nerve. When the pressure is alleviated, nerve pain is reduced and normal sensory and motor function can return.

The surgery can be performed under general or local anaesthesia. A small incision is made at the region of the problem to give the surgeon access to the injured or trapped nerve. After assessing the problem, tissue around the nerve may be cut to create more room for the nerve. If a bone spur or cyst or tumour is the cause of the problem, it will be removed. The procedure time is variable according to the specific problem. Dr Sammons will discuss this in your consultation. Most patients are discharged home the same day.

WHAT CAN I EXPECT AFTER TIBIAL NERVE SURGERY?

When your surgery is complete, you will still be under the effects of anaesthesia. You will be taken to a recovery room and observed by a nurse. When you wake up, you may be aware of numbness or pain at the surgical site. When you are fully awake, you will be released to your family or carer.

WHAT SHOULD I DO AFTER TIBIAL NERVE DECOMPRESSION SURGERY?

What you do at home following surgery is a critical component of your recovery. You will be provided with discharge instructions that should be followed as well as possible. If you have any questions, discuss them with Dr Sammons at any time.

Among the things you may be asked to do:

- Monitor your pain progress. Should you experience an increase in swelling, pain, or a spike in temperature, contact Dr Sammons immediately.
- Wear a bandage, and possibly a splint
- Keep your leg elevated to reduce swelling
- Stay generally off your feet for one to three weeks

The symptoms of tibial neuropathy resolve immediately after surgery, though some pain due to the procedure may continue for a few weeks. Nerve recovery is a slow process and full recovery may take a year or more.

DO I FOLLOW UP WITH DR SAMMONS?

Yes. Dr Sammons will meet with you repeatedly during your recovery. A practice nurse will reach out to you during the first week after surgery to schedule a follow-up appointment approximately six weeks after surgery and to answer questions. Should you have any questions or need guidance at any time prior to your follow-up, do not hesitate to contact Dr Sammons.

WHAT IS THE PROGNOSIS AFTER TIBIAL NERVE DECOMPRESSION?

A full recovery from tibial nerve dysfunction is possible when the condition is diagnosed early and can be treated successfully. Studies found 75% of patients enjoy appreciable pain relief following decompression surgery, and an increase in pain after surgery is extremely rare. Patients with severe nerve damage may experience a partial or complete loss of movement and sensation.

Please call our rooms if you have any additional concerns or questions.



Hello!

I'm a Neurosurgeon at North Shore Private Hospital, Gosford Private Hospital, Brisbane Waters Private Hospital and the Sydney Adventist Hospital. I treat all neurosurgical conditions, but with a particular interest in Peripheral Nerve Surgery. I pride myself on providing personalised and thoughtful patient care and utilising my skills to achieve the best outcome possible.

I believe that a great neurosurgeon will ensure you feel listened to, will ensure that you understand what your surgery involves, and should also work together with your GP to achieve the best outcome for you.

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