

Posterior tibial tendon dysfunction

Trauma and Orthopaedics

Information for patients and carers

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What is posterior tibial tendon dysfunction (PTTD)?

The posterior tibial tendon is a muscle attached to the back of the leg bone. It runs behind the inside bone of the ankle and attaches to a bone in the middle area of the foot. It holds the arch of the foot up and helps to support movement.

PTTD (also known as adult acquired flatfoot) happens when the tendon becomes stretched, inflamed or torn. This leads to a loss of stability and support, leading to the development of a flatfoot.



Common symptoms

The main symptom of PTTD is pain running along the tendon from the inside of the ankle to the instep of the foot. Some people also experience swelling. Pain can prevent high impact activities, such as running, walking or standing.

The arch of the foot is lost as the tendon stretches, with weakening of the ligaments, leading to the development of a flatfoot. The heel bone gradually moves outwards.

If the deformity progresses, it can lead to arthritis of the hindfoot joints and the ankle. Diagnosis is usually confirmed by a doctor and supported by radiological investigations.

How is PTTD treated?

The treatment for PTTD depends on how bad the pain and deformity is. Early treatment of PTTD can help to reduce pain, stop the deformity getting worse and help to correct the deformity.

Non-surgical treatment

- Change activities that make your symptoms worse
- Over-the-counter anti-inflammatory medications (e.g. ibuprofen) along with cold packs
- Special orthotic arch supports or insoles can help to improve the stability of the foot and reduce strain on the tendon
- Physiotherapy exercises to strengthen and protect the tendon



Insole



Does PTTD need surgery?

If the above treatment options do not help, then surgery may be offered. This is usually for severe cases or mild to moderate cases that have not got better with more than 3 to 6 months of non-surgical treatment.

The type of surgery depends on the location and how bad the damage to the posterior tibial tendon and the foot deformity is. Surgical procedures include:

- **Tenosynovectomy** – clearing the inflamed tissue around the tendon
- **Tendon transfer** – another tendon of the foot is transferred to recreate the function of the damaged posterior tibial tendon
- **Osteotomy** – cutting and moving bones to create a more normal arch. This involves the heel bone or the midfoot and is held by screws or plates
- **Arthrodesis** – in severe cases joint preservation is not possible and complete fusion (stiffening) of the joint is needed. This may involve selective or multiple joints of the hindfoot or ankle
- In some cases, an additional lengthening of the Achilles tendon is needed

After surgery, you will be in a plaster cast and will be non-weight bearing on the leg for 6 weeks. You will then move into a boot for another 6 weeks.

Long sessions of physiotherapy are needed and you may need to continue using orthotics even after you have completely healed.

Are there any risks to the surgery?

There are general risks relating to all surgery of the foot, including:

- infection
- scarring
- swelling
- nerve damage

- chronic pain
- blood clots

It is also possible that surgery may lead to over or under-correction, recurrence and / or bones that do not heal. You will be given medication to lower your risk of blood clots.

How can I help with recovery?

It is important to stop smoking and excessive drinking to support with recovery. A healthy balanced diet and good control of other medical conditions, such as diabetes and rheumatoid arthritis, are also important.

How is the outcome after surgery?

Most patients have good results from surgery. The severity of flatfoot and amount of movement in the foot and ankle before surgery primarily determines the surgical outcome. Longer recovery time is observed in more advanced stage of the disease and is far less likely to return to sports.

Further information

Please let staff know of any concerns or questions you may have. We will do our best to answer your queries quickly.