Tibialis Posterior Tendon Dysfunction

**What is Tibilias Posterior Tendon Dysfunction?**

The Tibialis Posterior is a muscle located on the inside of the lower leg. The muscle forms a tendon that runs behind the inside bone of the ankle (called the medial malleolus), across the instep and attaches to the bottom of the foot. The Tibialis Posterior muscle and tendon is responsible for turning the foot inwards (inversion), pointing the toes down (plantarflexion) and is also the main tendon giving support to the arch of the foot.

Sometimes the tendon can become painful if excess stress is placed through it such as through injury/ trauma, an unaccustomed increase in activity levels or through degenerative changes. Sometimes there is no known specific cause.

**How is it caused?**

Usually, there is no single injury or event which will trigger the pain, as it tends to develop over time. However contributing factors can include;

* Being overweight
* Having ‘flat feet’
* Wearing inadequate/unsupportive footwear
* Increasing Age
* Inflammatory arthritis

Research suggests there is a strong link between flat feet and Tibialis Posterior Tendon Dysfunction (PTTD) however it is unclear whether the muscle-tendon dysfunction is a result of foot deformity or whether it is the cause.

**What are the symptoms?**

* Pain and sometimes swelling on the inside of the ankle often behind or below the ankle bone.
* You may have difficulty walking, running or standing on tip toes
* Change in foot shape: As the tendon weakens it is unable to support the arch of your foot. When this occurs, the arch in your foot flattens and a flatfoot deformity occurs, presenting as a change in foot shape.

**How is it diagnosed?**

Tibialis posterior tendon problems can usually be diagnosed clinically following an assessment by a healthcare professional. Sometimes you may require imaging or blood tests if the diagnosis is unclear, but this is not always needed.

There are four stages of PTTD. Stages 1 & 2 are earlier stages of the condition where the foot remains flexible despite often being painful. Patients often respond very well to conservative management in these early stages. Stages 3 & 4 involve the foot becoming more stiff/rigid and sometimes this can make treatment more challenging.

**How long will it last?**

Conservative treatment has been shown to be successful in more than 80% of cases in those with stage 1 & 2 PTTD. It is important to try to be patient during your rehabilitation as symptoms can take 3-6 months to settle.

**What can I do?**

Physiotherapy/Exercises

Research has shown specific exercises are important to gradually improve the strength of the tendon and improve the tendons tolerance to load which will then help you to return to your normal activities.



Repetitions should feel hard, and there may be some pain. This should improve after 24 hours.

If the pain continues reduce the weights used or go back to the easier exercises.

Aim to complete the strengthening exercises every other day.

Pain relief

* Over-the-counter analgesia, such as paracetamol or anti inflammatories such as ibuprofen may also help to reduce your symptoms. If you require further information on pain relief, speak to your GP or pharmacist.
* If the tendon is inflamed, using ice may help (ten minutes, 2-4 times a day. Remember not to apply the ice to the directly to the skin but wrap in a towel). Do not use ice if you have any circulatory problems or poor skin sensation.

Footwear

The tendon usually becomes strained when the arch is excessively stretching. To stop this stretching, supportive shoes that are comfortable are recommended for daily use. Running shoes or walking boots can give most support, and slip-on shoes and sandals should be avoided.

Lifestyle changes

If you are overweight, losing weight may help as it will reduce the load going through the tendon as you walk. If you think you need more help with weight loss, please discuss this with your healthcare professional or GP.

Load reduction

While the tendon is painful, you should temporarily reduce weight-bearing activities such as running and strenuous walking but as symptoms begin to settle it is vital you start to strengthen the tendon through a graded exercise program.

**Factors influencing pain and recovery**

Whilst you are experiencing acromioclavicular joint pain a number of other factors can influence your pain levels. Keep the following factors in mind to help move the healing process along:

Look after yourself

Pain is not usually simply a physical problem. Your general well-being can make you vulnerable to pain and your wellbeing can also be made worse by pain. Looking after your general health and well-being will help recovery. There is helpful advice on this website: [https://www.nhs.uk/oneyou](https://www.nhs.uk/oneyou/)

Reduce stress and anxiety

It is normal for people with pain to have stress, anxiety and change in mood. This may affect your ability to cope with the pain and may influence your pain levels. Help is available if you are being affected by stress, anxiety or low mood – see the links below or discuss with your practitioner.

It is important that your whole nervous system is in a healthy state to aid recovery. If your brain is stressed or overworked this may slow recovery. Relaxation is an important part of your recovery. Simple relaxation techniques may help manage pain and stress. Try to set aside some time each day to relax – you can use relaxation techniques as linked below, or simply an activity you enjoy – reading, deep breathing, sitting in the garden, singing – whatever relaxes you.

Find help and support here: <https://www.nhs.uk/oneyou/every-mind-matters/>

<https://www.northessexiapt.nhs.uk/west-essex>

Physical Activity

Exercise improves fitness, confidence with movement and strength. It can also help reduce your stress and tension and improve your mood and quality of sleep, helping support you to return to normal activities. Perhaps you could simply start by trying to walk for 10 minutes per day.

Alcohol

Avoid alcohol in the early stages of healing (first three days). Evidence has shown this can slow down recovery and increase the chances of re-injury. <https://www.drinkaware.co.uk/>

Sleep

Sleep is very important for your wellbeing. Poor sleep quality, and lack of sleep can make managing pain more difficult. Consistently getting 6-9 hours is recommended. Get help and tips here:

<https://www.nhs.uk/live-well/sleep-and-tiredness/>

Smoking

Smoking can also impact how quickly tissues can heal and affect pain levels. For help with stopping smoking <https://www.essexlifestyleservice.org.uk/stop-smoking/> <https://www.nhs.uk/better-health/quit-smoking/>

**What other options are there?**

Orthotics/Bracing

Your physiotherapist or healthcare professional may advise you to wear insoles to help reduce the strain on the tibialis posterior tendon and support the arch of your foot. These can usually be brought in most chemists. If necessary a referral to a podiatrist may be completed for more custom made orthotics. An ankle brace may be required if support cannot be achieved through insoles or orthotics alone.

Immobilisation

In very stubborn cases, an ankle boot/ moonboot may be recommended to wear for 4-6 weeks in order to rest the tendon completely. This may be necessary if the tendon remains painful despite previous treatment.

Steroid Injection

These are usually not recommended because they increase the risk tendon rupture (7)

Surgery

If symptoms remain unchanged or worsen despite appropriate conservative management you may be referred for further investigations such as an xray, ultrasound or MRI scan. Depending on the results you may then be referred for a surgical opinion. The three main types of surgery are debridement of the tendon, tendon transfer and corrective hindfoot fusion. The type and choice of surgery will be discussed with you in more detail by your surgeon depending on the stage of the condition and the desired outcomes.