ACHILLES TENDON DISORDERS

What is Achilles Tendonitis?

The Achilles tendon is the largest tendon in the body and can withstand enormous forces. Unfortunately, it has a poor blood supply which predisposes it to problems. Inflammation and swelling of this tendon is known as Achilles tendonitis which is a common problem due to overuse. The other terms used for the se disorder include- Achilles tendinosis or tendinopathy.

Achilles Tendonitis is of two types:

1) **Mid-substance Tendonitis**: The Achilles tendon is thickened and swollen. In acute stages it is tender to touch. This is due to degenerative changes in the Achilles tendon. This might be associated with partial tear.
2) **Insertional Tendonitis**: This involves the insertion of Achilles in the heel bone. It might be associated with calcification of tendon or an enlarged and prominent heel bone (Haglund's deformity) which rubs against the tendon producing irritation and inflammation.

What is the Treatment of Achilles Tendonitis?

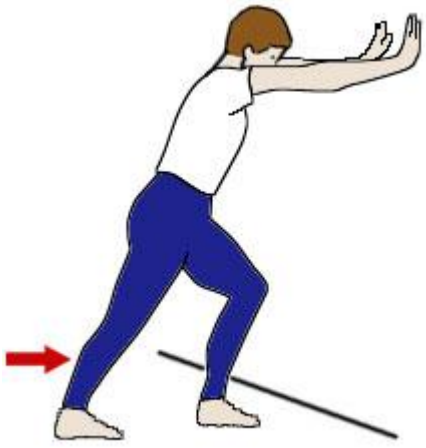
Most cases of Achilles tendonitis can be treated without operation. The duration of symptoms is proportionate to the success of treatment. The following are the treatment measures:

1) **Anti inflammatory** tablets, gel for local application and ice.

2) **Eccentric stretching** of the Achilles tendon: This is the mainstay of treatment.

A) Calf/Achilles Stretch

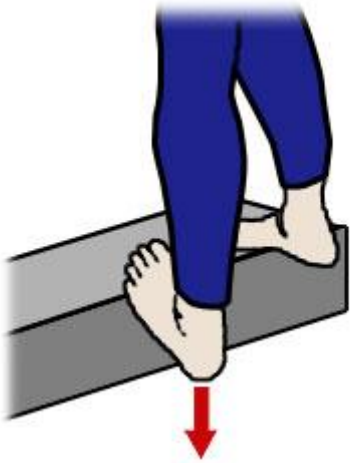
Face the wall, put both hands on the wall at shoulder height, and keep one foot in front of the other. The front foot should be approximately 30 cm (12 inches) from the wall. With the front knee bent and the back knee straight, lean into the stretch (i.e. towards the wall) until a tightening is felt in the calf of the back leg, and then ease off. Repeat 10 times. Now change the position of feet & bring the back foot in front & front foot back. Repeat these stretches 10 times. These must be done twice a day.



B) Stair Stretch

Holding the stair-rail for support, with legs slightly apart, position the feet so that both heels are off the end of the step. Lower the heels, keeping the knees straight,

until a tightening is felt in the calf. Hold this position for 20–60 seconds. Repeat 5 times, at least twice a day.



3) **Modification of activities**.
4) Medial arch support (**Insoles**)
5) **Shock wave therapy (ESWT):** ESWT delivers focused shock waves to the area of application. Shock wave therapy is thought to work by inducing micro trauma to the tissue that is affected by inflammation. This micro trauma initiates a healing response by the body. This healing response causes blood vessel formation and increased delivery of nutrients to the affected area. The micro trauma is thought to stimulate a repair process and relieve the symptoms.
6) **Ultrasound guided dry needling and saline infiltration**
7) **Surgery:**
    a. In **non-insertional tendonitis** the overlying layer (paratenon) is separated from the underlying tendon. The damaged tendon is excised. The tears are repaired. If there is extent of involvement of damaged

tendon is more than 50% then a tendon transfer might be required.

b) In **insertional tendonitis** there is often rubbing of the tendon by a prominent part of the heel bone. This bone is removed. In removing the bone the attachment of the tendon to the bone may be weakened. In these cases the attachment of the tendon to the bone may need to be reinforced with sutures and bone anchors.

Post operatively a plaster is applied. The duration of the plaster depends on the extent of surgery & varies between 2-8 weeks. The overall recovery can take up to six months.

What are the complications of Operation?

The vast majority of patients (85%) who have surgery for Achilles tendonitis recover well, without complication. However, as with any surgery there is always a small chance of problems. These include:

1. Wound healing problems an infection particularly in smokers
2. Residual pain or recurrence
3. Tendon swelling can persist
4. Tendon rupture
5. Nerve damage
6. Swelling
7. Blood clot (deep venous thrombosis) or pulmonary embolism (clot travels to lungs).