

Treatment of Plantaris & Achilles Tendinopathy

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[Based on Physio Edge podcast episode 42 with Seth O'Neill](#)

Plantaris attaches to the lateral aspect of the posterior femur, then crosses to run medially. It contains a lot of Golgi tendon organs, so has a proprioceptive role.

The Plantaris seems to exist in everybody, despite previous reports that it may not exist in certain individuals. Patients with a ruptured Achilles often have an intact Plantaris.

What indicates Plantaris involvement and helps you differentiate from mid portion Achilles Tendinopathy

With Plantaris involvement:

- Pain is medial, where Plantaris sits
- Pain is 6-8 cm above the Achilles insertion, where the Plantaris merges with the Achilles tendon and tendon sheath, instead of less than 6cm below where midportion Achilles pain is located
- Affects younger patients
- Often has a sudden onset during a running based activity

Pattern of symptoms eg startup pain is often similar to an Achilles tendinopathy, as the Plantaris tendon may become tendinopathic. The medial portion of the Achilles, where the Plantaris attaches, also becomes tendinopathic on Ultrasound Tissue Characterisation (UTC).

Loading into dorsiflexion (DF) is also associated with pain, so avoiding DF during running and exercises may also be a component of the treatment program.

Objective findings:

- Palpation - palpate the Plantaris tendon, which is approx 3mm in diameter where it exits from the muscle tendon junction (MTJ) between the Gastrocnemius with the Achilles and follow it down on the medial aspect.
- Palpate the location of tenderness
- Bodyweight DF with a straight knee may be painful, more than with a bent knee.
- Single leg calf raise may be painful
- Single or repeated calf raise coming down into DF may be symptomatic

Treatment

Surgery is the only treatment currently studied for Plantaris, although clinically, conservative management is often successful.

- If the patient has pain into DF, avoid loading down into DF
- Treat similarly to an insertional Achilles Tendinopathy by loading to the floor, not off a step
- Use heel raises - 6-12mm
- Reduce DF in running
- Manual therapy may be useful for Plantaris to settle down the tendon
- Taping/strapping similar to the taping used for Tibialis Posterior tendinopathy - to reduce pronation or similar may help them develop awareness of their foot position, and help them to decrease pronation.

Foot pronation may increase the strain on the medial aspect of the Achilles, and cause compression of the Plantaris on the Achilles. If the patient has limited ankle joint DF, they may pronate to achieve their ROM, so you may need to assess talocrural ROM.

With pain of sudden onset, you will need to be particularly careful with Stretch-shorten cycle/faster efforts. You may also need a lower starting point and slower progression. Insidious onset of Plantaris involvement can be progressed at a similar rate to a mid-portion Achilles with strong, heavy loading.