

CALF MUSCLE TEARS

Calf muscle tears are fairly common in runners and can result in pain and an inability to run or walk comfortably. They often strike at inopportune times – such as during the sprint finish of a race, and can leave the runner unable to run for weeks, or even months. With correct care, healing time can be reduced, safely returning you back to running.

Important note, any pain behind the knee that is also swollen and hot should be investigated immediately by a medical professional to rule out deep vein thrombosis (DVT).

Anatomy

The calf comprises of two main muscles – the Soleus and the Gastrocnemius. The Soleus has a long, wide muscle belly that extends the length of the back of the shin. The Gastrocnemius is the muscle on the top half of the calf and consists of a medial and lateral head which both overlie the Soleus. Together the Soleus and Gastrocnemius form the Achilles tendon which attaches to the heel allowing us to push off when we walk, run and stand on tip toe.

Acute muscle tears

Small muscle tears occur nearly every time that we run, however they are usually so small that they heal by the next time that we run. More substantial acute tears can happen when there's insufficient healing time between running sessions, or more stress is put on the muscle than it can handle – often during sprinting and running uphill/stairs.

Frequently runners will get calf muscle tears when they use minimalist/barefoot shoes and/or try to change their running style away from heel striking to landing their forefoot (usually on advice that it reduces injury).

Risk factors for acute muscle tears include:

- Inadequate warm up
- Incorrect or worn out shoes
- Running on a steeply cambered road
- Tight and/or fatigued calf muscles
- Running with increased speed or power

The tear may feel like a burning sensation, intense tightness and is sometimes accompanied by a 'pop' sound as it tears. Depending on the severity of the injury, normal walking may feel slightly uncomfortable to near impossible. The medial (inside) head of the Gastrocnemius is a common site for acute muscle

tears, but can occur in either of the calf muscles.

Chronic muscle tears

Poorly healed acute muscle tears are likely to continue causing pain due to scar tissue which forms during the healing process. Scar tissue is less flexible and can pull on surrounding healthy muscle tissue creating further damage. Running with pain in a muscle will mean that it doesn't function properly and can expose you to risk of other injuries.

In addition to the risk factors for acute muscle tears, the following may contribute to a chronic muscle tears:

- History of poorly healed calf muscle or Achilles injury
- Leg length difference
- Muscle strength imbalance
- Poor foot biomechanics (excess or insufficient pronation)
- Training program errors

Treatment

Immediate treatment for calf muscle tears involves use of calf compression, intermittent ice packs, and ceasing pain provoking activities for 2-3 days. After the first few days, massage is useful to help encourage faster healing and reduce scar tissue in the muscle. Seeing a physiotherapist at this point is necessary to help judge the severity of the injury and begin a rehabilitation program. The goal of rehabilitation is to help strengthen and regain flexibility in the muscle in order to return to running and avoid injury reoccurrence.

In cases of chronically reoccurring muscle tears it is useful to see a podiatrist at inTraining to have your biomechanics, footwear and gait assessed as potential causes of injury.

If you have a running injury, contact the inTraining running injury to schedule an appointment today.



Doug James

Runne Podiatrist and Pyshiotherapist