

It is all in the calves!

Anatomy Basics

The calf is predominantly made up to 2 main muscles, the Gastrocnemius and Soleus. Interestingly the Soleus is largest and an endurance beast.

The Achilles tendon is the link between the calf and the heel. It is an incredible spring, that has the capacity to elongate, store energy then recoils at propulsion.



Calf function during running

The Soleus experiences extremely high forces (around 6-8 x bodyweight) from low to high speeds. The calf (but especially Soleus) is the main muscle that drives our forward propulsion.

As speed increases during running

As we run faster, especially going from slower running to faster running, runners typically take longer strides. This requires greater propulsion, increasing the demands on the calf. However, in top end sprinting, whilst the calves still need to work very hard, the hip muscle start to work much harder.

“Old Man Calf Syndrome”

As we age the following occurs to our calves:

- Increase risk of injury
- Reduced muscle size
- Reduced strength
- Reduced force generation

Key messages

- Calf (especially Soleus) is a key contributor to propulsion in running
- Calf demands are high at all speeds of running
- Aging runners become more vulnerable to calf injury

Next: Building stronger calves!