RAPID RESEARCH

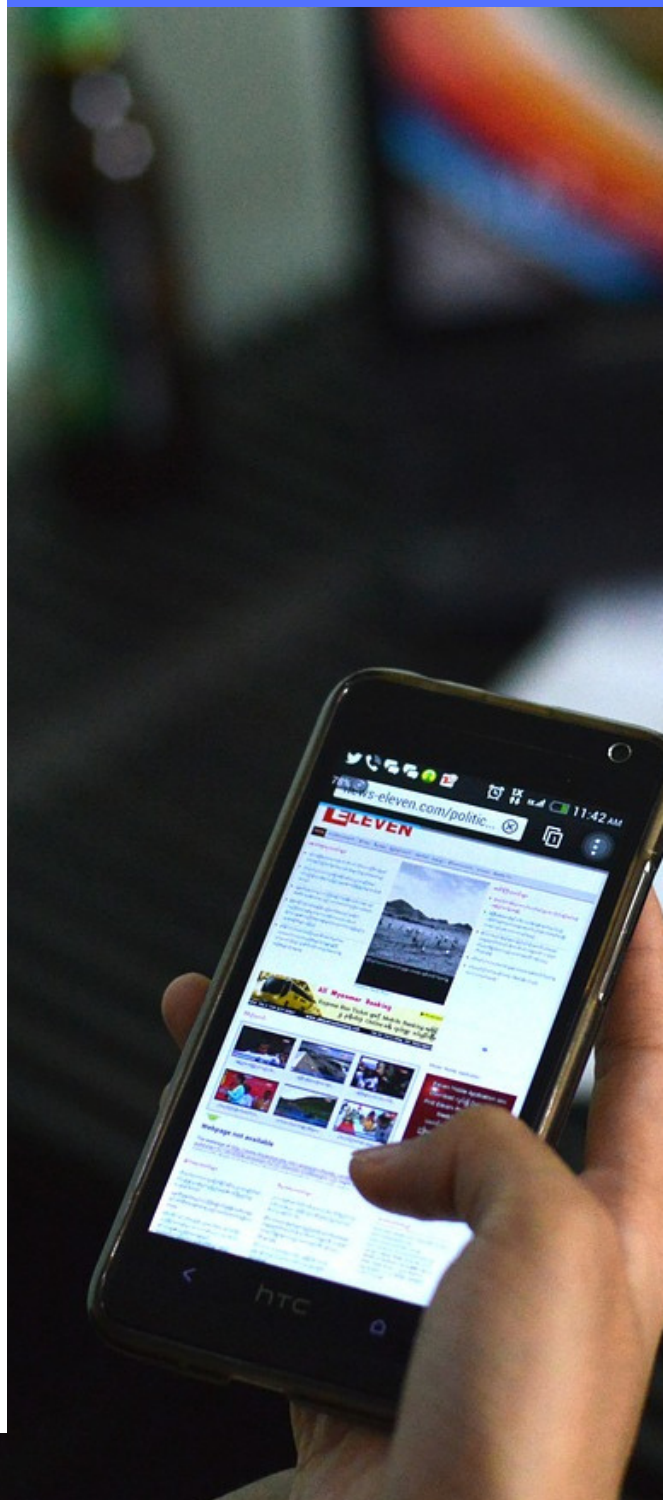
@physicaltherapyresearch

October 2021

Inside This Week:

All About Achilles Tendons

- Risk of Achilles Tendon Rupture with Achilles Tendinopathy
- Treating Mid-portion Achilles Tendinopathy;
  Heel Lifts vs. Eccentrics
- Plantarflexor Muscle Impairments & Achilles Tendinopathy

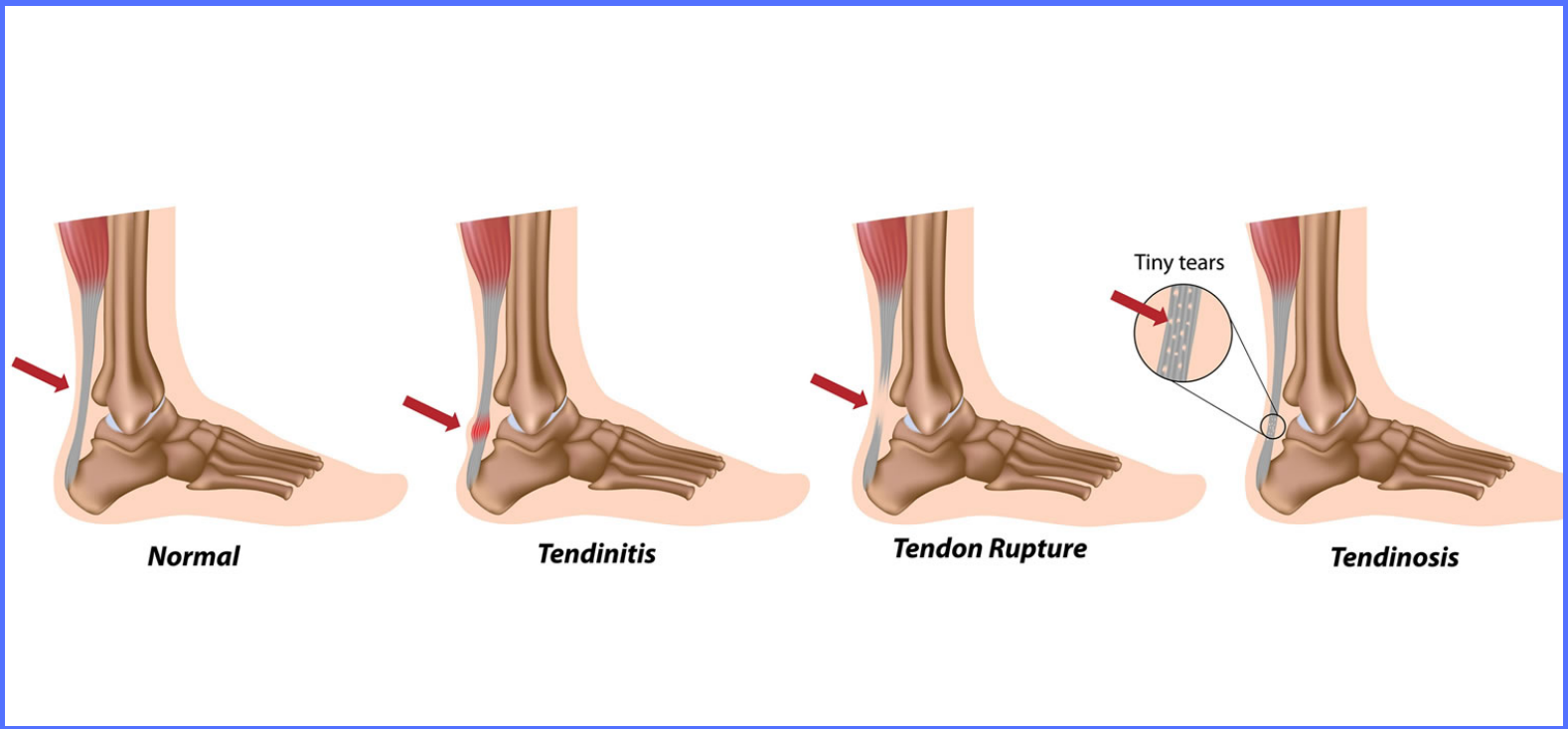


OCTOBER 2021

RISK OF ACHILLES TENDON RUPTURE WITH ACHILLES TENDINOPATHY

Click for Full Text (Yasui et al. 2017)

Through the use of a patient database, this research clarifies the risk of Achilles tendon rupture in patients with a formal diagnosis of Achilles tendinopathy.



KEY FINDINGS

3 subsets of patients, all between 20 and 69 years old, were evaluated.
Group 1: Acute Achilles tendon ruptures **(21,305 patients)**
Group 2: Achilles tendinopathy **(180,421 patients)**
Group 3: Achilles rupture after a diagnosis of Achilles tendinopathy **(7,232 patients)**

Approximately **4.0% of patients with Achilles tendinopathy subsequently sustained a rupture.**

Individuals aged **50–59 years were most susceptible (4.3% incidence).**

The time point between the diagnosis of tendinopathy and subsequent rupture was not ascertainable from current database.

MAIN TAKEAWAYS

In this large cohort database study, approximately 4.0% of patients who were previously diagnosed with Achilles tendinopathy sustained an Achilles tendon rupture.

Older patients with Achilles tendinopathy were most susceptible to rupture.

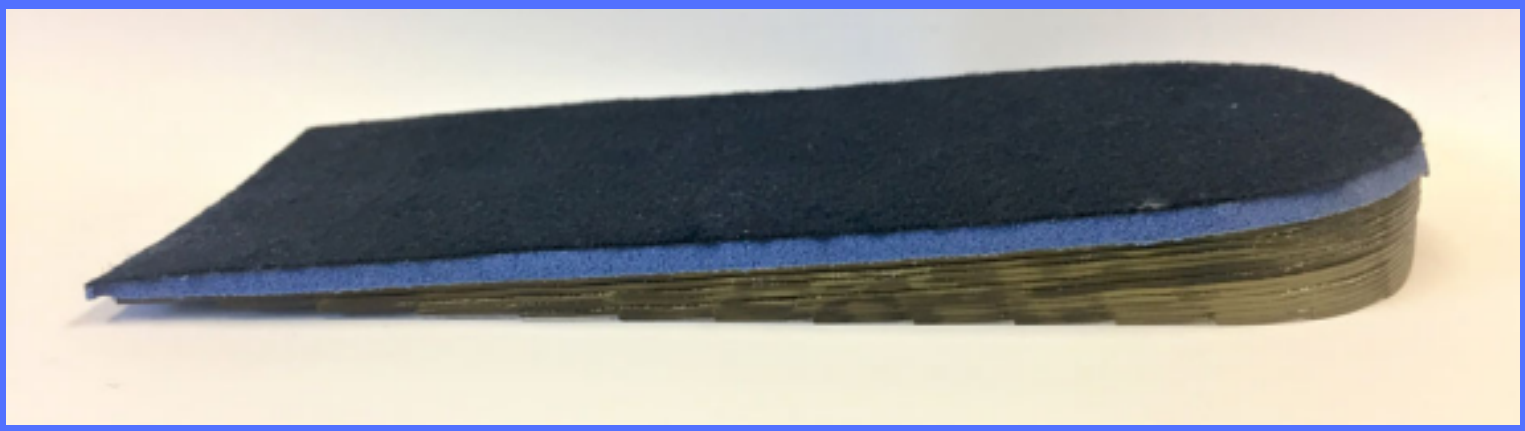
These findings are important as they can help clinicians more objectively council patients following a diagnosis of Achilles tendinopathy.

OCTOBER 2021

TREATING MID-PORTION ACHILLES TENDINOPATHY; HEEL LIFTS VS. ECCENTRICS

Click for Full Text (Rabusin et al. 2019

This research article tested a parallel-group randomized trial comparing the efficacy of heel lifts to calf muscle eccentric exercise for Achilles tendinopathy.



KEY FINDINGS

100 participants (52 women, 48 men) with mid-portion Achilles tendinopathy.
Random allocation to either:
Heel lifts (n=50)
Eccentric exercise (n=50).

80% follow-up of participants at 12 weeks.

The mean **VISA-A score improved by:**
26.0 points in the heel lifts group
17.4 points in the eccentric exercise group.

On average, there was a between-group difference in **favor of the heel lifts for the VISA-A,** which approximated, but did not meet our predetermined minimum important difference of 10 points.

MAIN TAKEAWAYS

In adults with mid-portion Achilles tendinopathy, **heel lifts were more effective than calf muscle eccentric exercise in reducing pain and improving function at 12 weeks.**

However, there is **uncertainty in the estimate of effect for this outcome.**

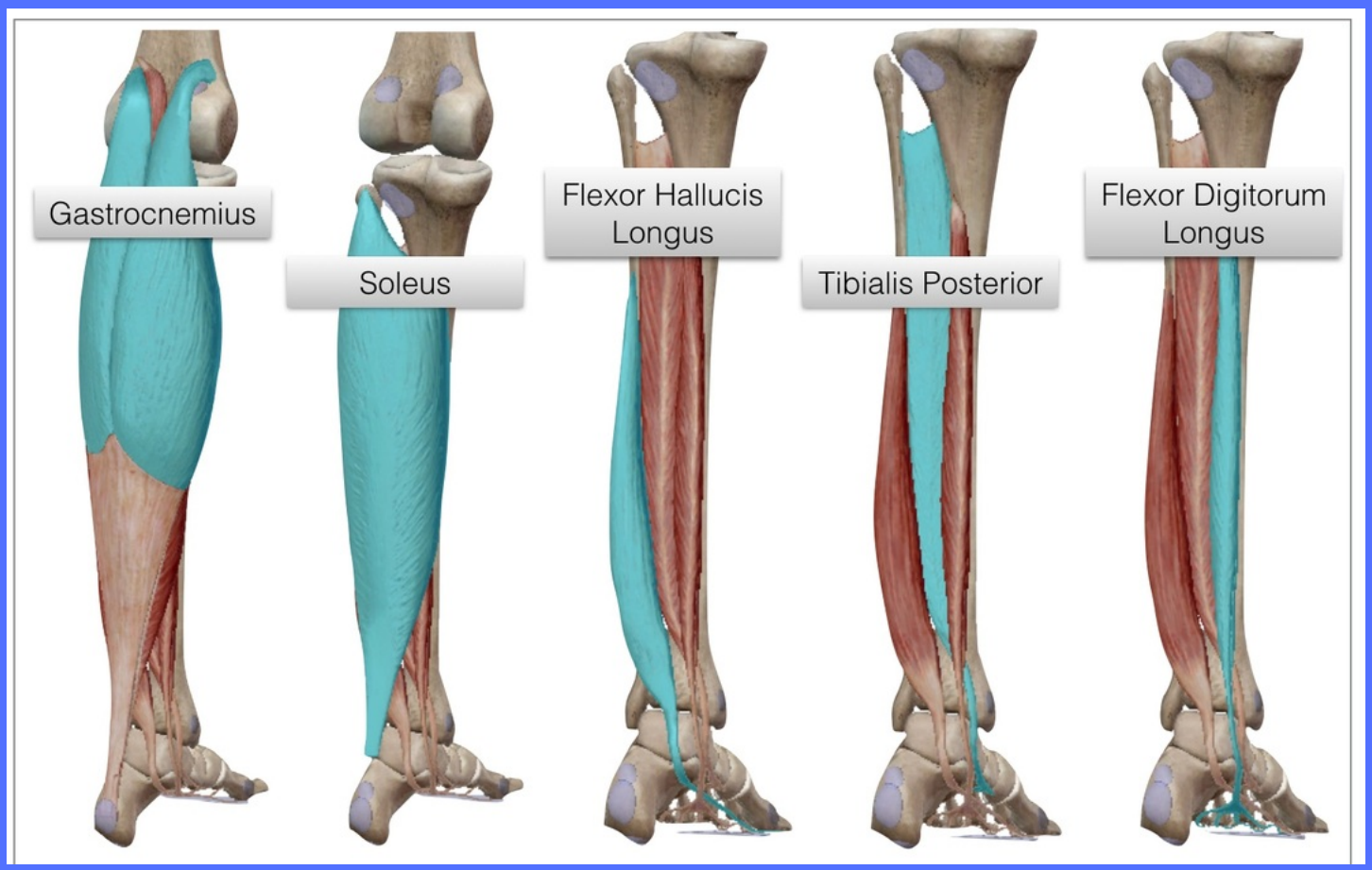
Patients **may not experience a clinically worthwhile difference** between interventions.

OCTOBER 2021

PLANTARFLEXOR MUSCLE IMPAIRMENTS & ACHILLES TENDINOPATHY

Click for Full Text (Hasani et al. 2021)

This systematic review evaluated plantar-flexor muscle impairments among individuals with Achilles Tendinopathy and whether plantar-flexor muscle function changes following resistance training interventions.



KEY FINDINGS

25 studies (545 participants) met inclusion.
6 studies were high quality for all domains, **19 were susceptible to the risk of bias.**

7 studies showed individuals with AT have impairment in maximal plantar-flexor torque on their affected side, compared with the unaffected side.

Impairments were modest (9% and 13%) and of uncertain clinical importance.

5 studies showed **very little evidence of improvement in plantar-flexor endurance (7% and 23%)** but not power or strength over time, despite individuals undertaking several weeks of resistance training.

MAIN TAKEAWAYS

Moderate evidence suggests **individuals with AT have impairments in maximal plantar-flexor torque.**

Also, **limited evidence suggests impairments in concentric endurance on their affected side.**

There was **conflicting evidence for differences in explosive strength and power of the plantar-flexors between sides**, and for all measures when compared with healthy controls.

There was **very limited evidence for improvement in plantar-flexor endurance but not in strength or power after undertaking 12 weeks of resistance training.**

GIVE US YOUR FEEDBACK!

MEMBERS

We are on a mission to make research more accessible, easier to interpret, and quicker to implement.

Help us by giving 1 minute of your time to leave feedback for us.

We would greatly appreciate any feedback you have, as it helps us continually improve!

Leave Review