RAPID RESEARCH

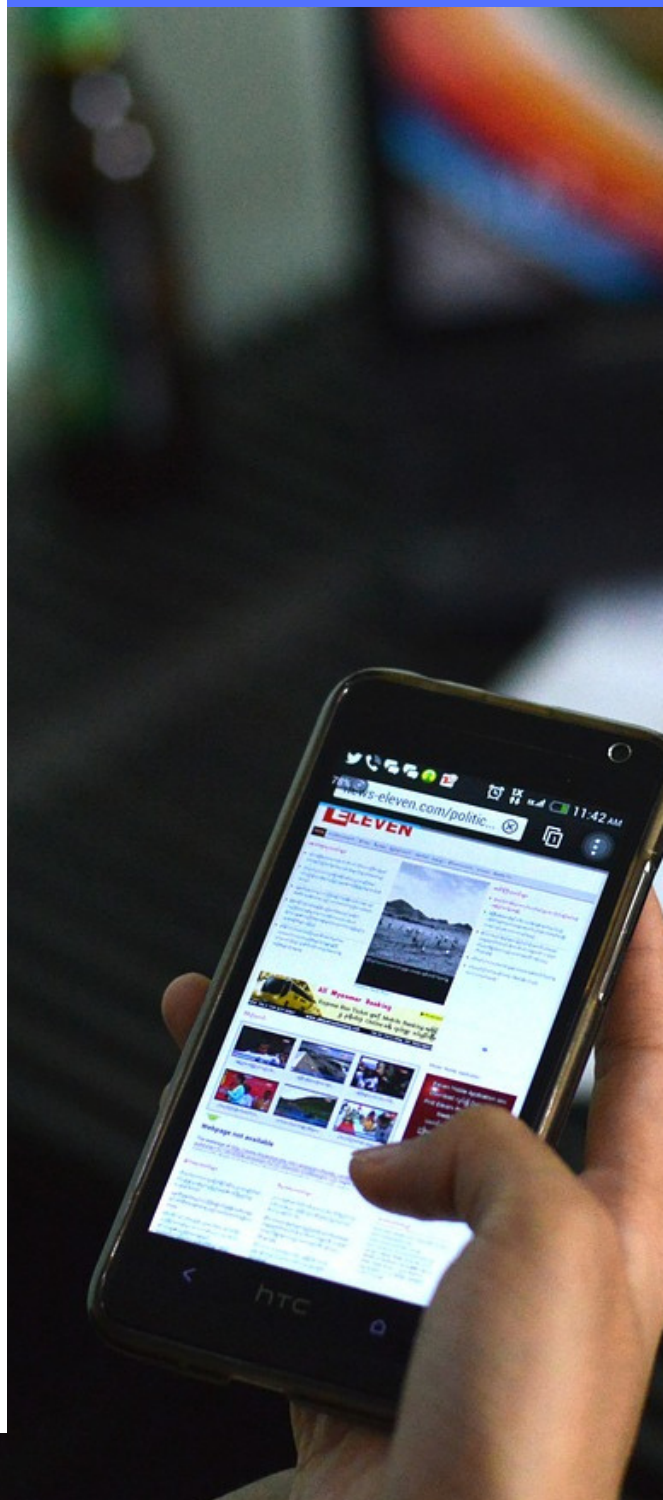
@physicaltherapyresearch

July 2021

Inside This Week:

Fixing Plantar Fasciitis (PF)

- Stretch, Strengthen or Both? Foot and Hip Exercise for PF
- Correlation of Calf Tightness and Pain Severity in PF
- Strength Training for PF and the Intrinsic Foot Musculature



JULY 2021

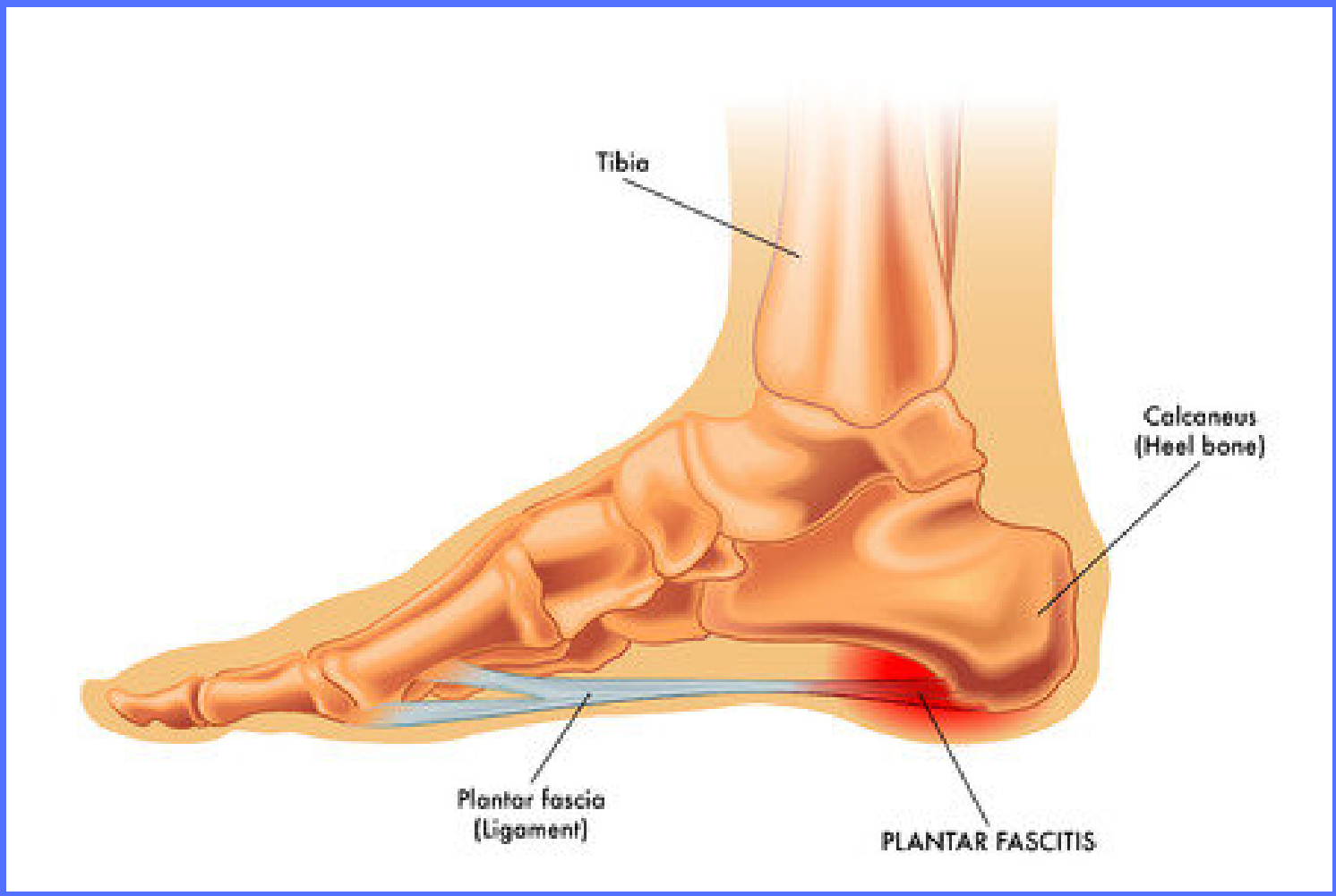
STRETCH, STRENGTHEN OR BOTH? FOOT & HIP EXERCISE FOR PF

Full Text

Kamonseki et al. 2016

(Click to Open)

This study compared stretching & strengthening of foot and hip to stretching alone on patients with plantar fasciitis.



KEY FINDINGS

8**3 patients** were randomly included.

I**mprovements** were found in **all groups** for:
Pain reduction
Activities of daily living
Sports & recreation
Quality of life
Foot and Ankle Outcome Score
Star Excursion Balance Test.

No time-group interactions were found for any of the variables or difference between groups.

MAIN TAKEAWAYS

3 different exercise protocols achieved similar improvements in **pain, function and dynamic stability of the lower limbs in patients with PF.**

The non-significant differences among the groups suggest:
Daily stretching is effective.
Protocols that combine stretching with strengthening do not achieve better results than stretching alone.

JULY 2021

CORRELATION OF CALF TIGHTNESS & PAIN SEVERITY IN PF

Full Text

Pearce et al. 2021

(Click to Open)

This study determined the correlation between gastrocnemius tightness and the severity of heel pain in 33 people with plantar fasciitis.

KEY FINDINGS

Average gastrocnemius tightness (Maximal ankle dorsiflexion):
22 degrees at baseline vs. 9 degrees at final followup.

Average pain on the first steps in the morning:
6.3 at baseline vs. 1.9 at the final follow-up.

Average worst pain felt during the previous week:
7.6 at baseline vs. 2.5 at the final follow-up.

Correlation of Gastrocnemius Tightness and Severity of Heel Pain:
First steps in the morning was ~76%

Worst pain felt during the previous week ~78%

MAIN TAKEAWAYS

In the small sample group, there was a **strong, statistically significant correlation between calf tightness and severity of pain.**

Treatment for plantar fasciitis should **include gastrocnemius stretching exercises.**

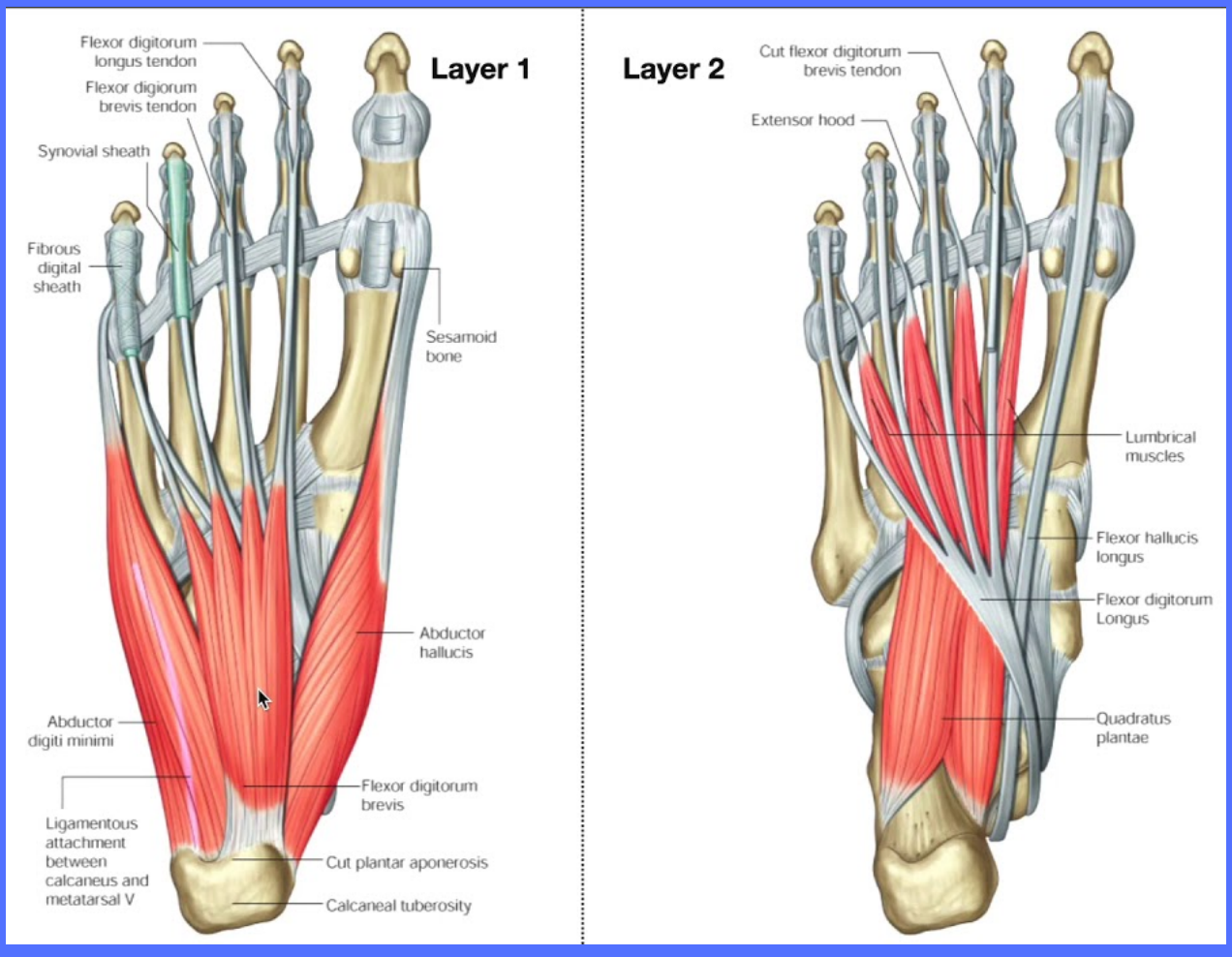
JULY 2021

STRENGTH TRAINING FOR PF & THE INTRINSIC FOOT MUSCULATURE

Full Text

Huffer et al. 2017
(Click to Open)

This study aimed to critically evaluate the literature investigating strength training interventions in the treatment of plantar fasciitis and improving intrinsic foot musculature strength.



KEY FINDINGS

Significant differences exist across strength training approaches to treating plantar fasciitis and improving intrinsic foot muscle strength.

It is not clear if strengthening interventions for intrinsic musculature benefit symptomatic or at risk populations to plantar fasciitis.

L**imited external validity** for improved intrinsic foot muscle function from:
Foot exercises
Toe flexion against resistance.
and Minimalist running shoes

No plantar fascia thickness changes were observed through high-load plantar fascia resistance training.

However, it may **aid in a reduction of pain and improvements in function.**

MAIN TAKEAWAYS

There is limited consistency in recommended strength exercises for intrinsic foot musculature to improve PF symptoms.

Though some does exist, the extent of **outcomes cannot be quantified.**

More research is needed to better understand the role of strengthening intrinsic foot musculature in the treatment of PF.

High Load training did improve pain and function.

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