



@physicaltherapyresearch

RAPID RESEARCH

August 2022

Inside This Week: Achilles Tendon Rehab

-
- ✓ Alfredson Eccentric Program vs. Silbernagel

 - ✓ Partial Achilles Rupture: Diagnosis & Treatment

 - ✓ Most Effective Treatment for Achilles Tendinopathy



ALFREDSON ECCENTRIC PROGRAM VS. SILBERNAGEL

[Click for Full Text
\(Habets et al. 2021\)](#)

JB1 12/13 [92%]



This randomized controlled trial aimed to test for differences in clinical effects between the Alfredson isolated eccentric and the Silbernagel combined loading program in recreational athletes with mid-portion achilles tendinopathy.



KEY FINDINGS

40 athletes randomized to Alfredson (AG) or Silbernagel group (SG).

Outcomes:

Victorian Institute of Sports Assessment–Achilles (**VISA-A**) at **1-year follow-up.**

Pain during activities of daily living (**VAS-ADL**) & sports activities (**VAS-sports**)

EuroQol 5 Dimensions instrument (**EQ-5D**) & Global perceived effect score.

The VISA-A score improved for both at 1 year:

AG 60.7 ± 17.1 at baseline to 89.4 ± 13.0

SG 59.8 ± 22.2 to 83.2 ± 22.4

VAS-ADL & VAS-sports had non-significant differences

The EQ-5D sub-scales improved in both groups.

After 1 year, significantly more SG participants considered themselves improved (77.3% [SG] vs 50.0% [AG]).

MAIN TAKEAWAYS

Both programs were effective in terms of improvement of clinical symptoms.

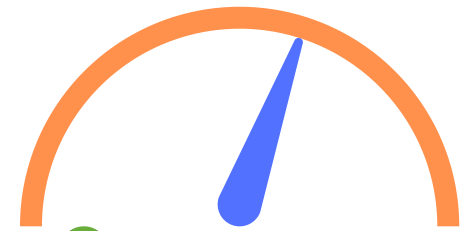
However, no differences were found in clinical effects between the Alfredson isolated eccentric and the Silbernagel combined concentric-eccentric loading program at up to a 1-year follow-up.

Given the high adherence rates, both the Alfredson or the Silbernagel programs appear to be an effective treatment strategy for mid-portion AT.

PARTIAL ACHILLES RUPTURE: DIAGNOSIS & TREATMENT

[Click for Full Text](#)
(Gatz et al. 2020)

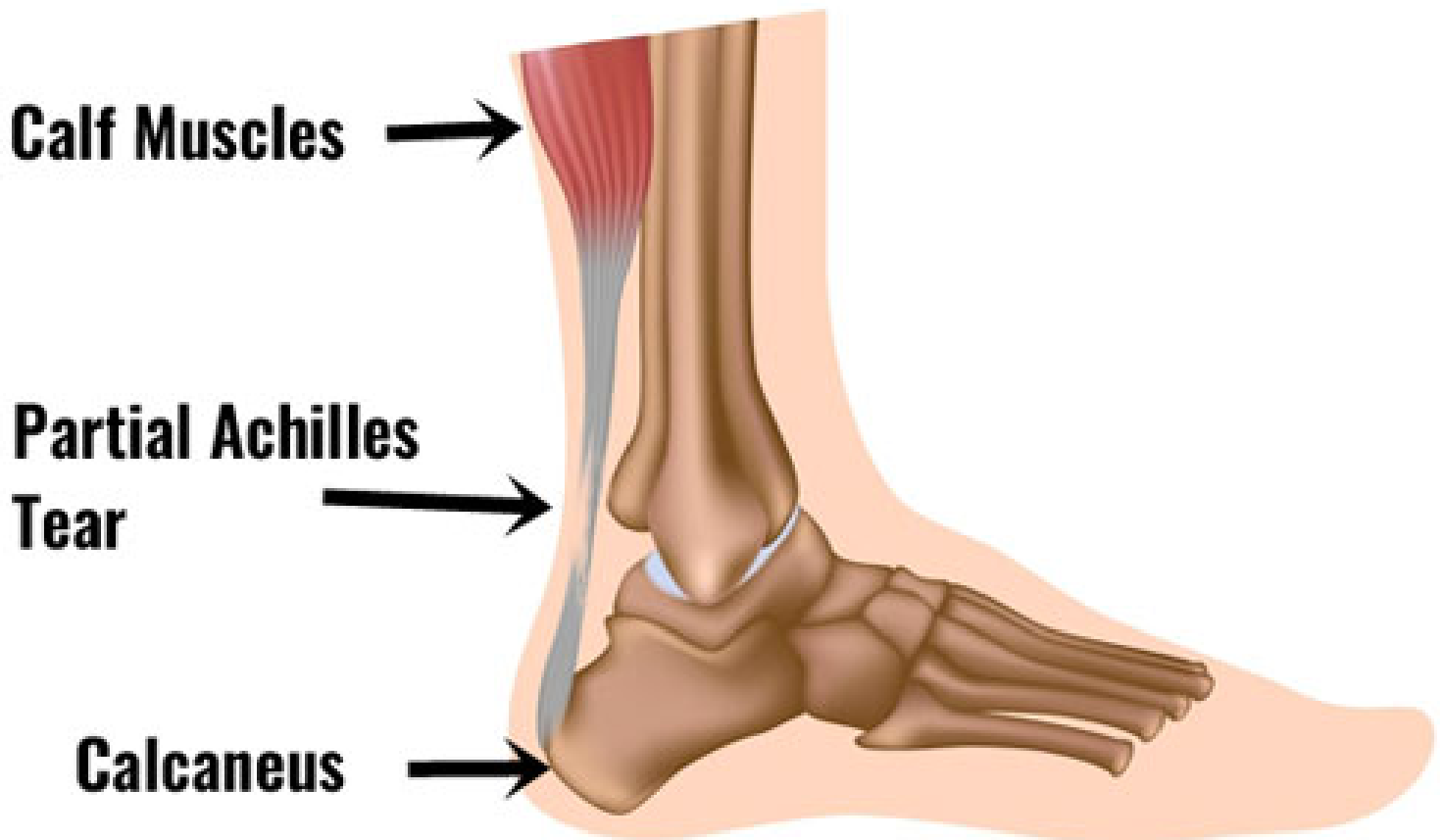
JB1 6/10 [60%]



Quality Check

*see appx

The aim of this literature review is to characterize typical symptoms of partial achilles rupture and provide an overview of available diagnosis and treatment options, and to give reference points for future research.



KEY FINDINGS

Most partial tears are **acute and caused by an overload of the tendon** tissue in areas afflicted with tendinopathic tissue changes.

Previous intra-tendinous cortisone injection have been observed in **nearly 50% of partial ruptures**.

Partial tears are distinguished by the **damage to the periphery of the tendon**.

Differentiation can be **adequately assessed with ultrasound (Accuracy 92%, Sensitivity 100%, and Specificity 83%)**.

Studies on **conservative treatments** on patients with partial Achilles tendon tears are rare, but show **good outcomes with a progressive 12 week program**.

There is no consensus for the optimal time for surgery, but in the majority of the studies **operative treatment was initiated after a conservative approach**

MAIN TAKEAWAYS

For partial Achilles tendon ruptures:

Diagnosis should be based on a patient's history

Clinical findings incl:

- Sharp onset of pain & inability to fully load the tendon.
- Localized tender region & weakness during heel raises.
- Greyscale US has irregular & bulging superficial tendon line.
- MRI has hyper-intense signal on T1 & T2-weighted sequences.

First-line therapy should be a conservative approach:

[Wk 1-6] 2 cm heel lift, avoiding tendon stretching

[Wk 7-12] Heel lifts at 1 cm & progressive tendon loading

[Wk 12+] Heel lifts removed, start eccentric exercises.

If conservative fails, surgical options may be warranted.

MOST EFFECTIVE TREATMENT FOR ACHILLES TENDINOPATHY

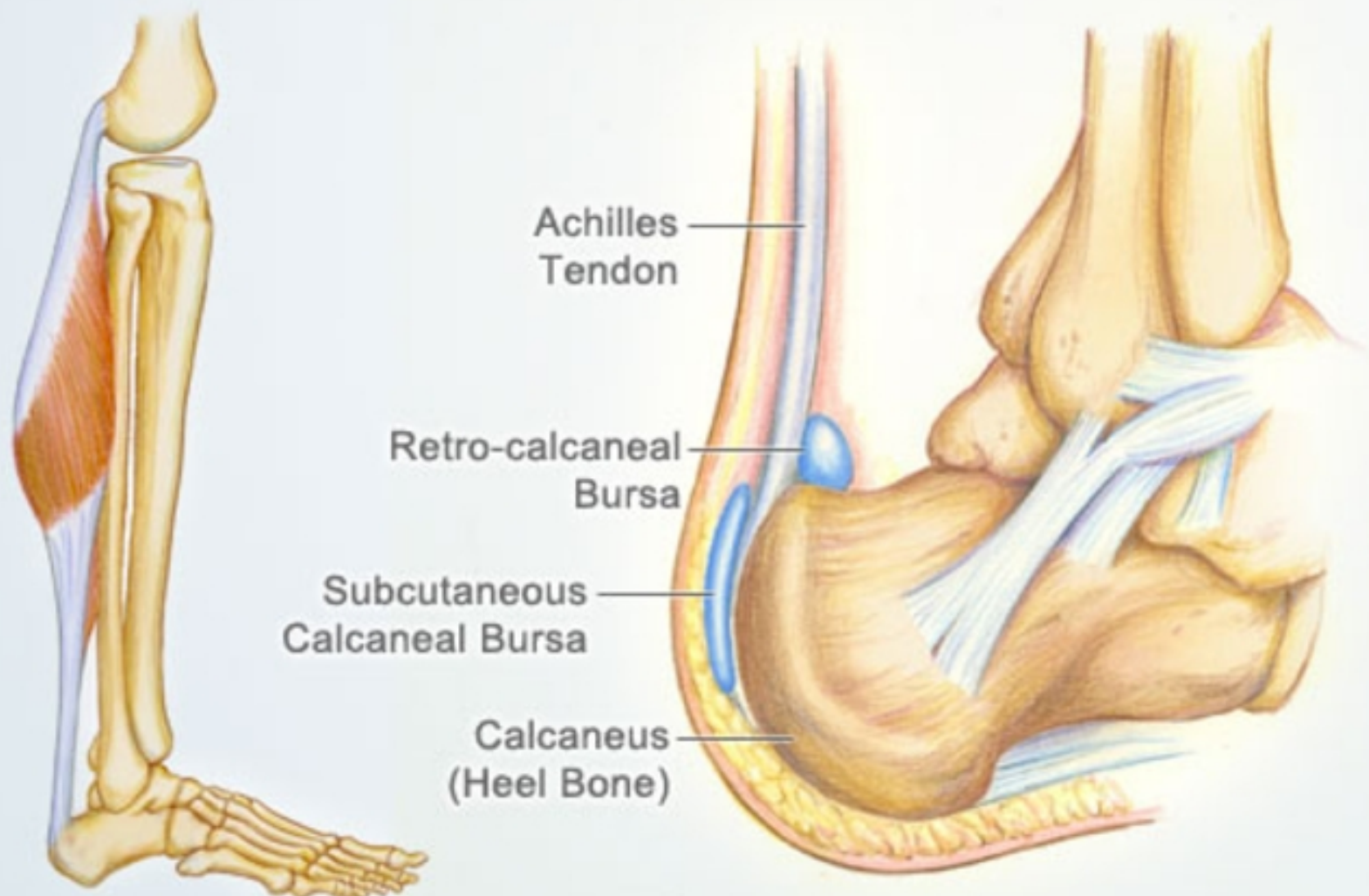
AUGUST 2022

[Click for Full Text](#)
(Vlist et al. 2020)

JBIC 10/10 [100%]



This systematic review aimed to evaluate the comparative effectiveness of all available treatments for Achilles tendinopathy in a regularly updated ('living') systematic review using NMA.



329 trials investigating 42 different treatments were included.

22 trials (76%) were at high risk of bias and 7 (24%) had some concerns.

Most trials included patients with mid-portion tendinopathy (86%).

Any treatment class was superior to wait-and-see for mid-portion Achilles tendinopathy at 3 months (very low to low certainty of evidence).

At 12 months, exercise therapy, exercise+injection therapy and exercise+night splint therapy were all comparable with injection therapy for mid-portion tendinopathy (very low to low certainty).

No network meta-analysis could be performed.

MAIN TAKEAWAYS

This review analyzed 42 different treatments.

No trials were at low risk of bias, most had only short follow-up, and there was large uncertainty in the comparative estimates.

For mid-portion Achilles tendinopathy, active treatments seem superior to wait-and-see at 3-month follow-up.

There was no evidence of a clinically relevant difference in effectiveness between different active treatments at 3-month and 12-month follow-up.

Calf-muscle exercise therapy is easy to prescribe in practice, is widely available, and is regarded as safe and cheap. Consequently, clinicians should consider starting this as initial treatment.

GIVE US YOUR FEEDBACK!

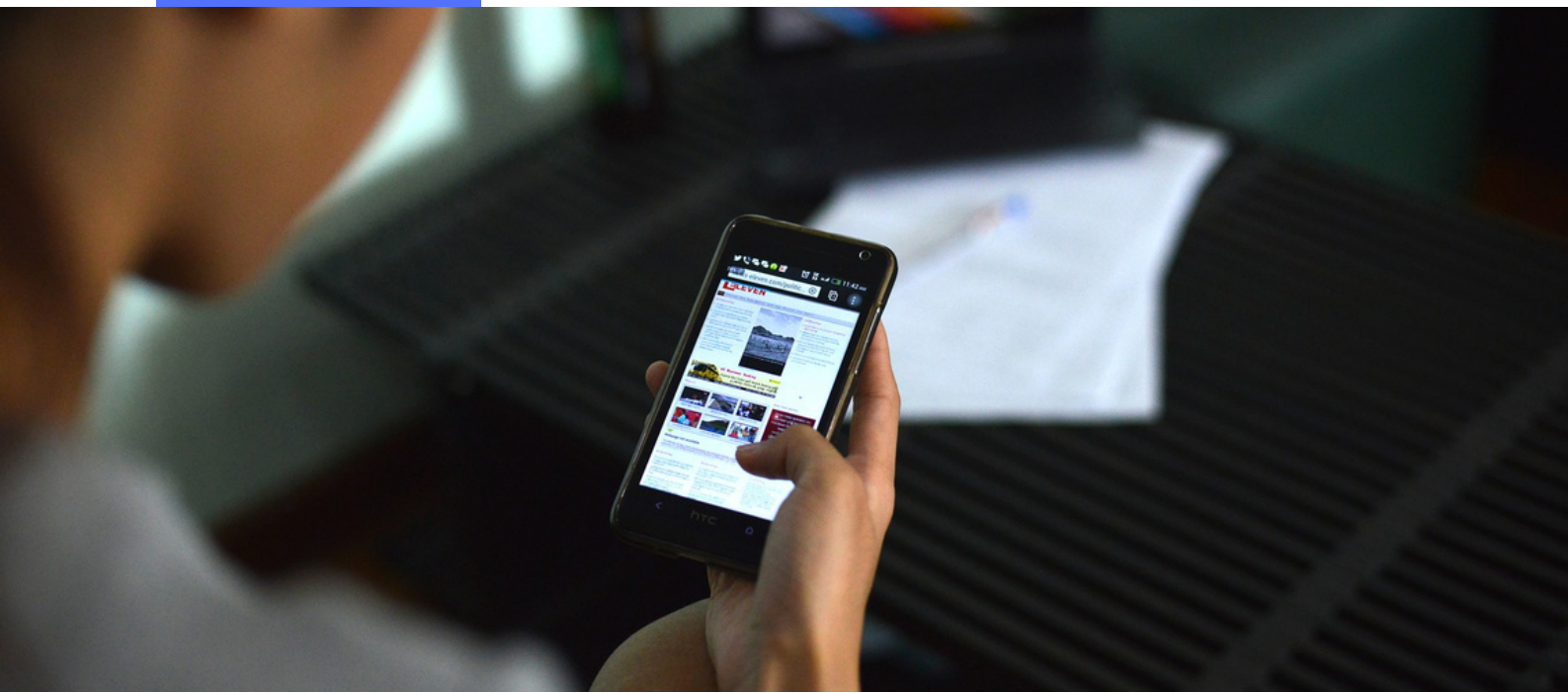
MEMBERS

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](#)



JBI CRITICAL APPRAISAL CHECKLIST FOR RANDOMIZED CONTROLLED TRIALS

Author Habets et al Year 2021

	Yes	No	Unclear	Not applicable
1. Was true randomization used for assignment of participants to treatment groups?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Was allocation to treatment groups concealed?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Were treatment groups similar at the baseline?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were participants blind to treatment assignment?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Were those delivering treatment blind to treatment assignment?	<input type="checkbox"/>	+	<input type="checkbox"/>	<input type="checkbox"/>
6. Were outcomes assessors blind to treatment assignment?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were treatment groups treated identically other than the intervention of interest?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analyzed?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Were participants analyzed in the groups to which they were randomized?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Were outcomes measured in the same way for treatment groups?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Were outcomes measured in a reliable way?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Was appropriate statistical analysis used?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Was the trial design appropriate, and any deviations from the standard RCT design accounted for?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

This was a well ran study, comparing two protocols. Findings are sound with a good clinical takeaway

JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES

Author: Gatz et al. Year: 2020

	Yes	No	Unclear	Not applicable
1. Is the review question clearly and explicitly stated?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were the inclusion criteria appropriate for the review question?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was the search strategy appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were the sources and resources used to search for studies adequate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Were the criteria for appraising studies appropriate?	<input type="checkbox"/>	+	<input type="checkbox"/>	<input type="checkbox"/>
6. Was critical appraisal conducted by two or more reviewers independently?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
7. Were there methods to minimize errors in data extraction?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
8. Were the methods used to combine studies appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
9. Was the likelihood of publication bias assessed?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
10. Were recommendations for policy and/or practice supported by the reported data?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Were the specific directives for new research appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: 6/10 (60%)

Comments:

Overall, this is a helpful narrative review, pulling together known information and evidence on an under-reported condition. The methods could have been more robust as there was no reporting on the quality of the studies included, however the takeaways were sound and clinically useful.

JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES

Author: Vlist et al. Year: 2020

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11. Were the specific directives for new research appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: 10/10 (100%)

Comments:

Well conducted study with a strong assessment of study quality. Although the studies found were of low to medium quality overall, |