Weights, resistance bands and rest days are best for tendinopathy.

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2024

NIHR ALERTS

Weights, resistance bands, and rest days are best for tendinopathy

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THE STUDY

Pavlova AV, Shim JSC, Moss R, et al. Effect of resistance exercise dose components for tendinopathy management: a systematic review with meta-analysis. Br J Sports Med 2023;57:1327-34.

To read the full NIHR Alert, go to: https://evidence.nihr.ac.uk/alert/weights-resistance-bands-rest-days-best-tendinopathy/

Why was the study needed?

Tendinopathy (tendons becoming painful, stiff, and swollen) affects adults and children. It usually occurs in the back of the lower leg (Achilles), shoulder, elbow, knee, or hip. Research suggests that exercise is often recommended for most common tendinopathies, but it is unclear exactly how much exercise is most effective, and no specific guidelines are available. Researchers assessed how much exercise was needed to improve disability, function, pain, movement, and quality of life in people with tendinopathies.

What did the study do?

The analysis included 110 studies (both randomised and non-randomised trials) from Europe, Australia, and the US. Studies involved almost 4000 people. They evaluated exercise regimens for tendinopathy in the Achilles, shoulder, elbow, knee, and hip. Most interventions were delivered or prescribed by physiotherapists.

What did it find?

The team found that people with tendinopathy in the Achilles, shoulder, elbow, knee, and hip improved more if they:

- Used weights (dumbbells, loaded backpacks, or resistance bands, for example) rather than bodyweight-only in resistance exercises.
- Took rest days between sessions (lower frequency).

The analysis found no consistent trends for exercise volume (the number of repetitions of each exercise per session). The findings were the same for Achilles, shoulder, elbow, knee, and hip tendons.

Why is this important?

The findings inform physiotherapists about the frequency of exercise that is most effective for people with tendinopathy. The authors suggest that exercising less frequently than once a day might allow the tendons time to recover. This could explain why people who took rest days improved more than those who exercised every day. The studies confirmed that higher intensity resistance exercise was more effective than bodyweight-only exercise. The most effective

number of repetitions per session remains unclear. The researchers note a lack of clear reporting in the studies included. They call for future research to follow guidelines to standardise reporting. They stress that this study considered the main exercise prescribed in the studies; other recommended exercise was not considered.

What's next?

This study is part of a larger project examining the evidence on exercise therapy for tendinopathies. Its goal is to make recommendations for clinical practice and future research.

- Competing interests: The BMJ has judged that there are no disqualifying financial ties to commercial companies. The authors declare the following other interests: none.
- Further details of The BMJ policy on financial interests are here: https://www.bmj.com/about-bmj/resources-authors/forms-policies-and-checklists/declaration-competing-interests
- All authors contributed to the development and review of this summary, as part of the wider NIHR Alerts editorial team.
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