

Appraisal

Critically appraised paper: Education plus exercise, and corticosteroid injection, are superior to a wait-and-see approach for gluteal tendinopathy

Synopsis

Summary of: Mellor R, Bennell K, Grimaldi A, Nicolson P, Kasza J, Hodges P, Wajswelner H, Vicenzino B. Education plus exercise versus corticosteroid injection use versus a wait and see approach on global outcome and pain from gluteal tendinopathy: prospective, single blinded, randomised clinical trial. *BMJ*. 2018;361:k1662.

Question: Is education plus exercise, and corticosteroid injection, more effective than wait and see on global changes in hip conditions and pain in people with gluteal tendinopathy? **Design:** Multicentre, three-arm randomised controlled trial with concealed allocation. **Setting:** Two university departments in Australia. **Participants:** Community-dwelling participants from Brisbane and Melbourne. Inclusion criteria were age 35 to 70 years, lateral hip pain (> 3 months) of intensity at least 4/10 on a numerical rating scale, and gluteal tendinopathy confirmed by clinical diagnosis and magnetic resonance imaging. Low back, sciatic, or groin pain, corticosteroid injection (previous 12 months), and current physiotherapy treatment were exclusion criteria. Randomisation of 204 participants allocated 66 to corticosteroid injection, 69 to education plus exercise, and 60 to wait and see. **Interventions:** Education plus exercise comprised 14 sessions with a physiotherapist over 8 weeks (60 minutes initial, otherwise 30 minutes) and involved education on tendon care and loading, and daily home exercises (hip abductor strengthening; dynamic control of hip adduction). The corticosteroid injections were ultrasound-guided by a radiologist. The wait-and-see approach included one session with a physiotherapist for information about gluteal tendinopathy, risk factors, advice regarding continuation of activity, and reassurance. **Outcome measures:** Primary outcomes were: global change in hip condition (numerical rating scale),

dichotomised, with success defined as 'moderately better' to 'very much better'; and hip pain intensity on a 0-to-10 numerical rating scale. Numerous secondary outcomes were also included. **Results:** A total of 189 (93%) participants completed the study. At 8 weeks, both education plus exercise and corticosteroid injection showed higher success rates on global improvement than wait and see: risk difference 49% (95% CI 35 to 64) and 29% (95% CI 13 to 45), respectively. Education plus exercise showed higher success than corticosteroid injection (20%, 95% CI 5 to 35). Both interventions reduced pain intensity at 8 weeks compared to wait and see: MD -2.2 (95% CI -2.9 to -1.5) and -1.2 (-1.9 to -0.5), respectively. At 52 weeks, the 79% success rate in global improvement for education plus exercise was better than 58% with corticosteroid injection (risk difference 20%, 95% CI 5 to 36), and better than 52% with wait and see (risk difference 27%, 95% CI 11 to 42). Both interventions showed less pain than the wait-and-see approach: MD -1.1 (95% CI -1.9 to -0.3) and -0.9 (-1.7 to -0.1), respectively. Pain intensity did not differ significantly between education plus exercise and corticosteroid injection at 52 weeks. **Conclusion:** Both education plus exercise and corticosteroid injection resulted in higher rates of global improvement and lower pain intensity than a wait-and-see approach at 8 weeks. At 52 weeks, education plus exercise was more effective on global improvement, but not pain, than corticosteroid injection.

Provenance: Invited. Not peer reviewed.

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<https://doi.org/10.1016/j.jphys.2019.01.006>

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Commentary

Newer treatment approaches for tendinopathy, typically for the achilles and patellar tendons, have emphasised loading management and strength training as the most important content of treatment, due to promising clinical results.¹ Management of gluteal tendinopathy has usually included corticosteroid injection, exercise, shock wave therapy, or surgery.² A favourable response to education plus exercise over corticosteroid injection means that clinicians and patients can opt for a low-risk treatment approach.³ In addition, active rehabilitation has further benefits for the patient. An education plus exercise program offered within a supportive environment, where patients understand the reasons for performing the exercises, can increase self-efficacy. This may partly explain the reported improvements in functional outcomes and quality of life (secondary outcomes) observed over the first 6 months with education plus exercise compared to corticosteroid injection. Unfortunately, Mellor et al did not measure return to previous activity levels. Future research could include more functional/sport-specific exercises in later stages of rehabilitation, and evaluate the impact on return to activity/sport. Evidence to support the effects of rehabilitation on return to activity/sport is limited, and including such measures in the trial would have been of importance to patients and clinicians.⁴ Nonetheless, the results of this trial are of great clinical relevance, supporting the use of load management

education and exercise over corticosteroid injection, providing a safe and practical treatment approach for patients with gluteal tendinopathy. On average, participants completed over 80% of the prescribed exercises each week, which illustrates that it was feasible. The article's supplementary file provides clear instructions for the exercise program, which can be readily implemented in clinics today and with little need for expensive equipment. Therefore, this is clinically relevant research, which encourages evidence-informed practice for physiotherapists.

Provenance: Invited. Not peer reviewed.

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<https://doi.org/10.1016/j.jphys.2019.01.002>

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