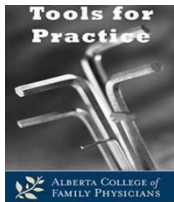


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September 30, 2019
(en français)

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Injecting Evidence into Platelet-Rich Plasma Injections

Clinical Question: How effective is platelet-rich plasma for treating Achilles tendinopathy, lateral epicondylitis, and rotator cuff tendinopathy?



Bottom Line: The best quality evidence shows no difference in pain, function, or return to sport between platelet-rich plasma, dry needling, or saline for patients with Achilles tendinopathy, lateral epicondylitis, or rotator cuff tendinopathy.

Evidence:

- Only patient-important outcomes from randomized, placebo-controlled trials (RCTs) were included.
 - Chronic Achilles Tendinopathy:
 - 3 RCTs of platelet-rich plasma (PRP) injections versus saline.¹⁻³
 - Highest quality, double-blind, RCT: 54 patients randomized to one injection of PRP or saline.¹
 - Outcomes at 6, 12, and 24 weeks: No significant differences in pain, function, return to sport, or patient satisfaction.
 - 2 smaller, unblinded RCTs (24-38 patients) had inconsistent results.
 - Single injection of PRP versus saline (24 patients):²
 - No difference in pain at 12 weeks.
 - Four injections (one every 2 weeks) of PRP or saline (38 patients):³
 - PRP statistically significantly improved pain on 100-point scale:
 - At 6 weeks: PRP (37 points), saline (23 points).
 - At 12 weeks: PRP (41 points), saline (30 points).
 - At 24 weeks: PRP (37 points), saline (18 points).
 - Systematic review found similar.⁴
 - Chronic Lateral Epicondylitis:
 - 2 RCTs:^{5,6}

- PRP versus saline (60 patients, one injection).⁵ At 12 weeks:
 - Pain or function: no difference.
- PRP plus dry needle insertion versus dry needle alone (28 patients, two injections 1 month apart).⁶ At 24 weeks:
 - Pain: no difference.
 - Limitations: Treating physician not blinded⁵, high dropout rate⁵, small numbers⁶.
- Rotator Cuff Tendinopathy (at least 3 months of symptoms), 2 RCTs^{7,8} compared to saline (40 patients) or dry needling (39 patients):
 - No difference in pain or disability scores.
- Adverse events (including tendon rupture): none reported.
- Other systematic reviews included observational studies or other types of tendinopathy.⁹⁻¹¹

Context:

- Up to 90% of lateral epicondylitis heal within a year with conservative management.¹²
- Other evidence-based options include:
 - Corticosteroid injections for lateral epicondylitis or rotator cuff tendinopathy show only short-term benefit.^{12,13}
 - Physiotherapy and topical nitrates.¹⁴
- PRP injections require specialized equipment and training.¹⁵
 - Each injection costs ~\$500, not normally covered by insurance.¹⁶

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Disclosure: Authors do not have any conflicts of interest to declare.

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