

INJECTING THE ARTHRITIC KNEE — WHAT THE EVIDENCE SUPPORTS

A summary of the better randomised evidence for four commonly offered treatments in knee osteoarthritis. None modifies the disease; the question in each case is symptomatic benefit over placebo.

TREATMENT	BEATS PLACEBO?	BEST AVAILABLE EVIDENCE	PRACTICAL POSITION
Corticosteroid single injection	Short-term yes (low certainty)	Cochrane review: benefit moderate at 1–2 wks, small–moderate 4–6 wks, small 13 wks, none at 26 wks. Certainty rated LOW; reviewers state clinical importance after 1–6 wks "remains unclear". ¹	Best-supported injectable for short-term control. Reasonable for a genuine flare or to create a window for rehabilitation — with realistic expectations about duration.
Corticosteroid repeated 3-monthly	No	RCT, 2 years, triamcinolone vs saline every 12 weeks. Cartilage thinning 0.21 mm vs 0.10 mm (difference –0.11 mm, 95% CI –0.20 to –0.03). Pain difference –0.6 (95% CI –1.6 to 0.3), NS. ²	No demonstrated symptomatic advantage and a small structural cost. Avoid as a standing programme.
Hyaluronic acid viscosupplementation	Statistically yes, clinically no	169 trials / 21,163 patients; primary analysis 24 large placebo-controlled trials (n=8,997). Pain SMD –0.08 (95% CI –0.15 to –0.02) ≈ 2 mm/100 mm, vs MCID SMD –0.37. Serious AEs RR 1.49 (95% CI 1.12–1.98). ³	Effect real but well below the threshold of perceptible benefit; trial sequential analysis indicates the question is settled. Authors do not support broad use.
Platelet-rich plasma	No	Australian RCT, n=288, 3 weekly injections PRP vs saline, 93% retention. Pain –2.1 vs –1.8 (difference –0.4, P=.17). Medial tibial cartilage –1.4% vs –1.2% (P=.81). 29/31 secondary outcomes NS. ⁴	No advantage over saline at 12 months. Note both arms improved — a useful point for the consultation, and why uncontrolled series mislead.
Cooled RFA genicular nerves	Yes (small trials)	Double-blind sham-controlled RCT, n=40: responder rate 76.5% vs 33.3% sham at 3 months (p=0.018), maintained to 6 months. ⁵ Extension cohort: mean NRS 3.4 at 24 months, 63% with ≥50% reduction (n=27 at final follow-up). ⁶	The only one here with positive sham-controlled data. Modulates pain, does not modify disease; nerves regenerate. Small samples — promising, not settled. A large head-to-head pragmatic trial is recruiting.

TIMING BEFORE ARTHROPLASTY — THE PRACTICAL POINT

Observational data associate intra-articular injection within ~3 months of arthroplasty with increased periprosthetic joint infection. **Corticosteroid before TKA:** OR 1.52 (95% CI 1.37–1.67) within 3 months;⁷ pooled OR 1.26 (95% CI 1.06–1.50).⁸ **Hyaluronic acid:** OR 3.00 (95% CI 1.29–6.47) for PJI at 3 months where given within 1 month of surgery.⁹

Elevated odds also reported after aspiration and non-corticosteroid injection, suggesting the needle contributes.¹⁰
Qualifications: one series found no TKA association (though it did for THA);¹¹ all observational; absolute event rate low.

Implication — sequencing, not prohibition. Where a knee is plausibly heading for replacement, avoid injecting in the 3 months beforehand, and note the date of the last injection in the referral.

THREE QUESTIONS MORE USEFUL THAN CHOOSING A PRODUCT

1. **What is this injection meant to achieve?** Settling a flare is a defensible aim. Halting progression is not an aim any of these has been shown to achieve.
2. **What happens after it?** An injection that buys a window for exercise and load management is worth more than one given in isolation.
3. **Is the knee actually ready for replacement?** Some patients are offered a fourth or fifth injection when they need an arthroplasty discussion; others are offered surgery before a fair trial of non-operative management. Either way an opinion is reasonable — including when the answer is "not yet".

Unchanged by all of the above: structured exercise, weight management where relevant and appropriate analgesia remain the measures with the strongest support. None of these injections replaces them.

REFERRALS WELCOME

HealthLink EDI **drbroadh** · Phone **(02) 9052 1883** · reception@drmatthewbroadhead.com.au

Consulting — Camperdown (RPA, IRO, Chris O'Brien Lifehouse) · North Sydney · Coffs Harbour

Operating — RPA · IRO · East Sydney Private · Prince of Wales Private · North Shore Private · Baringa Private · Coffs Harbour Health Campus

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