**Krogh T, Bartels E, et al. Comparative effectiveness of injection therapies in lateral epicondylitis: a systematic review and network meta-analysis of randomized controlled trials. Am J Sports Med. 2013;41(6);1435-46.**

PMID: 22972856

Design: systematic review and network meta-analysis of randomized trials

Purpose of study: to assess the comparative effectiveness and safety of injection therapies in patients with lateral epicondylitis

Summary of results and reasons not to cite as evidence:

* The authors examined the results of 17 trials with 1381 participants assessing injections of glucocorticoid, botulinum toxin, autologous blood, platelet rich plasma, glycosaminoglycan, prolotherapy, and hyaluronic acid
* Most of the studies were at high risk of bias; only 3 had a low risk of bias
* The authors concluded that there was a paucity of evidence from unbiased randomized trials on which to base treatment recommendations regarding injection therapies for lateral epicondylitis
* No functional outcomes were extracted; only pain and adverse event outcomes were examined
* The authors concluded that there was no difference between glucocorticoid and placebo with respect to changes in pain scores, but the time frame is not clear
	+ The authors planned to divide the studies into three groups on the basis of trial duration: short term (baseline to 3 months), intermediate term (3-6 months), and long term (over 6 months)
	+ There is evidence from previous studies that steroid injection is more effective than placebo in the short term, but not in the intermediate or long term
	+ Figure 3, which shows the lack of pain effect of steroid injection, is unspecified with respect to the timing of the outcome measurement, clouding the distinction between short and longer term effects of steroid injection
* A very small study of prolotherapy is credited with showing evidence of its effectiveness based on a low risk of bias; however, the study is so small (10 patients per group) that it is better regarded as a pilot study than as a study which can form the basis of an evidence-based recommendation for prolotherapy
* The authors came to a reasonable conclusion, consistent with what has been reported by other authors who have tried to find unbiased evidence supporting particular treatments for tennis elbow, that the existing published literature is not of sufficient quality to support evidence-based recommendations