

# Tennis Elbow Responds to New Injections

Elbow pain from using a strong grip or repeated wrist movements is called lateral epicondylitis or tennis elbow. This type of pain responds well to a new injection treatment that may replace steroid injections.

Plasma taken from the patient's own blood with high concentrations of platelets is used. The platelet-rich plasma (PRP) releases growth factors into the soft tissues. The result is a faster, more effective healing response.

In this study from the Netherlands, researchers report on the two-year results of a group of 100 patients with elbow pain. Treatment was with either a steroid injection to the elbow or platelet-rich plasma injection. The one-year results were previously published using pain and physical function as the main measures of change.

Platelet-rich plasma may or may not include leukocytes. Leukocytes are better known as white blood cells. There are five different types of leukocytes in the human body. Each one has its own unique function but the overall effect is to fight bacteria and jump-start healing. Some platelet-rich plasma is prepared without leukocytes. The platelet-rich plasma used in this study did have leukocytes.

Daily use of the elbow was assessed using a well-known tool (the DASH or Disabilities of the Arm, Shoulder, and Hand). The DASH is a self-report questionnaire with 30 items including symptoms, social and psychologic effect of symptoms, and physical function. Pain and daily use of the elbow had to improve by at least 25 per cent for either injection treatment to be considered successful.

The group of patients who received platelet-rich plasma injections had better overall results. And the improvements in pain and function were still present two years later. The steroid group experienced some improvement but the positive results didn't last. By the end of this study, the steroid group was back to their baseline (pretreatment) level of pain and disability.

The authors conclude that platelet-rich plasma (PRP) injection for lateral epicondylitis is easy, safe, and effective. Patients given PRP have an initial response of increased pain as the tissues respond with an inflammatory flare-up but then progressively improve. Benefits last up to two years. The recurrence rate was much lower for the PRP group.

When the standard recommended treatment of physical therapy and bracing is not successful, PRP should be considered before steroid injections or surgery. Only one injection of either type was used in this study.

Previous studies have repeatedly shown that steroid injections only provide temporary pain relief for most patients. The results of this study are very favorable for a single injection of PRP. Future studies should study the results when using more than one PRP injection.

Reference: Taco Gosens, MD, PhD, et al. Ongoing Positive Effect of Platelet-Rich Plasma Versus Corticosteroid Injection in Lateral Epicondylitis. In *The American Journal of Sports Medicine*. June 2011. Vol. 39. No. 6. Pp. 1200-1208.