

PLATELET-RICH PLASMA (PRP) INJECTIONS

Platelet-rich plasma (PRP) injections have become an extremely popular treatment option for patients with chronic tendon injuries. Although PRP injections have received a significant amount of media attention, most sports medicine experts agree that this treatment is still experimental and at the present time results have been mixed.

Background:

Blood is made up of red blood cells, white blood cells, plasma and platelets. PRP is simply a patient's own blood plasma that has been "concentrated" with platelets.

Platelets are responsible for the clotting cascade and also release growth factors which promote healing and repair of injured tissues.

The concentrated platelets in the PRP solution contain significant quantities of the bioactive proteins and growth factors necessary to initiate the healing cascade and accelerate tissue repair.

Procedure:

PRP procedures are performed as follows—approximately 10 mm of blood is drawn from the patient using standard venipuncture techniques. The blood is then placed in a centrifuge and spun for approximately five minutes. This removes the unwanted components of the blood and helps separate the platelets and plasma from the other components.

Once separated, the PRP concentrate is then easily transferred to a syringe and then readily injected in the area of chronic injury. The procedure can be performed with or without the use of ultrasound guidance. No local anesthesia is usually required.

The injected treated individual tends to typically rest for 5-10 minutes and then is allowed to leave the office setting. It is not unsurprising to have increased pain at the site of injection for approximately 48-72 hours and that quickly abates.

Conditions:

Conditions that are presently treated with PRP include plantar fasciopathy, patellar tendinopathy, Achilles tendinopathy, tennis elbow, as well as chronic medial epicondylitis. The procedure is also being investigated in other tendon injuries.

Potential advantages of PRP, when compared to surgery, are that it is much less invasive, less aggressive, less expensive and should aid tissue healing with minimal or no scarring. In contrast to steroid injections, which have been known to weaken tissue, PRP injections can lead to improved strength and biomechanical properties of the treated tendons.

Promising, but still Experimental:

In theory, PRP injections make perfect sense. That said, to date, there have been no good long term clinical studies that have been performed on humans that demonstrate a clear advantage of PRP injections over other forms of traditional and less expensive nonoperative treatment.

Research is ongoing. It is expected that further data will be available in the next several years which will help clarify if and when PRP injections are most helpful. For now, this procedure must still be considered experimental.

CORTICOSTEROID INJECTIONS

Corticosteroid injections cause a nonspecific dampening of the inflammatory response produced by chronically inflamed tissues.

Corticosteroid injections do generally result in a transient diminution of pain in the injected area. The pain relief is caused by a transient decrease in the body's inflammatory response. The pain relief, however, is usually temporary, and not a permanent solution.

Pros and Cons:

When used judiciously, corticosteroid injections can be an effective method to decrease pain and hopefully allow other more effective treatments such as exercise and stretching to stimulate the healing cascade. Rarely are multiple injections indicated and the potential pain relief must be balanced with the potential risk of tendon rupture.

Rather than “kick-starting” the healing response, corticosteroid injections can actually repress the healing response. Corticosteroid injections can weaken tendons and set the stage for future tendon injuries such as rupture.

Other potential side effects of corticosteroid injections include thinning of the skin, bruising, pain at the injection site, and atrophy of the tissues that have been injected.