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Information About Platelet Rich Plasma (PRP)

What is PRP?

PRP stands for platelet-rich plasma, which is taken from a person's own blood and delivered into an injured area of bone or soft tissue. Bone and soft tissue injuries heal in many stages, which is initiated by inflammation and an increase in cells essential for healing. Platelets are specialized cells that circulate through the blood as a source of both growth and cellular signaling factors that are required for healing. For this reason, the use of PRP treatment in sports medicine is becoming a more popular option for non-healing or chronic injuries given its potential to give a biological boost to the healing process using only one's own blood.

Who is a candidate for PRP?

PRP is a second line treatment for chronic injuries, usually in patients who have pain for more than several months. These injuries can include tennis elbow, hamstring strains, Achilles tendinits, rotator cuff tears, and plantar fasciitis.

How is PRP performed?

PRP can be done in the office during one visit. A sample of blood is obtained from the patient, and the blood is put into a centrifuge, which is a tool that separates the blood into many components. The portion of concentrated platelets is then injected into the site of injury with ultrasound guidance if needed.

What happens after PRP?

It is usually necessary to avoid strenuous exercise at the site of injection for a short period of time after PRP, after which physical therapy or a rehabilitation exercise program is started to strengthen the muscles around the injury. Patients usually return to normal activity within 3-4 weeks. Anti-inflammatory medications (motrin, advil, aleve, ibuprofen) should be stopped a week before and after PRP treatment because they block the initial inflammatory response that PRP is designed to stimulate and optimize. Most patients respond well to only one treatment, but there are rare cases that require multiple treatments.

Is PRP effective?

Studies in animal models suggest that PRP treatment can improve healing in soft tissue and bone, noting increased number of healing cells and improved tendon strength after injection. Overall, more studies are needed to prove the effectiveness of PRP treatment, but because PRP is created from the patient's own blood, it is considered a relatively low-risk treatment with the potential to improve or speed healing.

Sources: Kenneth Mautner, Ricardo E. Colberg, Gerard Malanga, Joanne P. Borg-Stein, Kimberly G. Harmon, Aisha S. Dharamsi, Samuel Chu, Paul Homer, Outcomes After Ultrasound-Guided Platelet-Rich Plasma Injections for Chronic Tendinopathy: A Multicenter, Retrospective Review, PM&R, Available online 8 February 2013, ISSN 1934-1482, 10.1016/j.pmrj.2012.12.010. (http://www.sciencedirect.com/science/article/pii/S1934148213000038)