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Platelet Rich Plasma (PRP)

Platelet Rich Plasma (PRP) injections are a method to enhance the body's healing response. This is different in intent and biology from an injection of corticosteroid. Corticosteroids are powerful anti-inflammatories, and can often provide dramatic short-term pain relief, but studies have shown that corticosteroid injections weaken soft tissues, and may cause secondary problems. Rates of achilles and plantar fascia rupture are significantly higher after corticosteroid injection. Steroid injections continue to be commonly used, and play a significant role in orthopedic related pain relief treatment, but as new research alters our understanding of disease processes, we institute new treatment as a result of this understanding; PRP is one of these relatively new treatment options.

Much basic science research has been done on the "healing response" in injured and degenerative tissues. A wide variety of growth factors are naturally released in injured tissue, in some instances this healing response is inadequate. Many of these growth factors are found in the platelets circulating in the blood stream. The technique of PRP involves drawing a patients blood, centrifuging the blood to concentrate the platelets, and injecting this concentrate with a "high" level of growth factors into diseased tissue in attempt to illicit adequate healing.

Growth Factors found in Platelet Rich Plasma¹

- Platelet Derived Growth Factor (PDGF)
- Vascular Endothelial Growth Factor (VEGF)
- Transforming Growth Factor β 1 (TGF- β 1)
- Fibroblast Growth Factor (FGF)
- Epidermal Growth Factor
- Hepatocyte Growth Factor
- Insulin-Like Growth Factor-1 (IGF-1)

PRP has been used for several decades in various health fields, but clinical orthopedic use is relatively new, and early clinical studies are promising. However, no long-term follow-up studies have been performed.

¹ Hall M, Band P, et al. Platelet rich plasma: Current concepts and application in sports medicine. J Am Acad of Orthop Surg 2009;17:602-608.



Many questions remain unanswered in the use of PRP as in many fields of medicine. We do not yet know the ideal concentration, the ideal sequence, or duration that each growth factor should be used for. The commercial devices used to concentrate and deliver the PRP vary in amount of blood used, concentration of growth factors and other variables that may be clinically relevant, but that have not been well studied. PRP has been used successfully for conditions such as tennis elbow, patellar tendinopathy, achilles tendinopathy, plantar fasciitis, and muscle injury. In addition, intra-operative use of PRP and use of PRP for arthritis is evolving and continues to be studied.

The addition of PRP to our available treatment options provides many patients who would otherwise require surgical intervention with an additional non-surgical option.

How is PRP administered?

In the office, blood is drawn similar to any blood lab work. This blood is “spun down” (centrifuged), the PRP component is transferred sterilely into a syringe, and injected into the site of injury during the same office visit often under ultrasound guidance. The process from start to finish should take less than 45 minutes, with the injection taking only seconds.

Special Instructions

- You should not take any NSAIDs (over the counter pain relievers: Advil, Aleve, Ibuprofen, etc.) starting 1 week before the injection and should not take NSAIDs after the injection until advised that it is OK to do so (commonly 4-6 weeks).
- The procedure can cause some discomfort as the desired effect is an inflammatory response, you may take acetaminophen (Tylenol).
- Heavy labor and physical activity should be avoided for several weeks after PRP injection. Depending on the condition treated you may be placed into a walking boot with a subsequent course of physical therapy. Speak with Dr. Feinblatt about when you can return to full activities.