

Platelet Rich Plasma (PRP)

What is PRP?

PRP stands for platelet rich plasma. Blood, in addition to red and white blood cells, contains platelets, which are rich in growth factors. Growth factors promote normal healing by restoring the normal architecture and strength of the damaged tissue. In a PRP injection, the patient's own blood is processed at high speeds, resulting in higher concentrations of the patient's own growth and healing factors, which are then injected into the injured area promoting a more potent healing response.

Is PRP new?

No, the technology has been used for years in surgical applications and wound care, initially as a healing adjunct to open heart surgery. The use of PRP for musculoskeletal injuries is fairly new and evolving into a promising treatment for both acute and chronic injuries. It is generally accepted that there is a significant response rate to PRP of approximately 70-80% in certain regions of the body, although our data mainly involves multiple studies with small population groups.

Do I have to worry about the use of blood products?

No, the patient's own blood is used for the PRP procedure so there is no transfusion risk.

What do I have to do prior to the procedure?

Once the diagnosis is made and the PRP injection is scheduled, the patient should avoid all anti-inflammatory medications for 7 days prior to procedure. This includes prescription anti-inflammatory medications as well as over the counter naproxen, aspirin, and ibuprofen (*cardiac patients should continue taking aspirin*). Those patients on blood thinners (Coumadin/warfarin/Plavix/Pradaxa) are not candidates for PRP injections.

How long does it take?

The entire process takes 20-30 minutes. The majority of the time involves drawing and processing the patient's blood for the injection. The patient is then seen at 4-6 week follow-ups to assess for healing and complications.

What can I expect during the procedure?

An assessment of the affected region will be made prior to the injection. Using sterile equipment, approximately 12 cc of the patient's blood is drawn from a vein and placed in a specialized tube to be centrifuged; this step takes around 10 minutes. The specially designed syringe is then removed from the centrifuge and the plasma (with concentrate of platelets) is separated from the red blood cells. Then 4-5 cc of concentrated PRP is injected into the affected/injured area. Since local anesthetics can inhibit the PRP, no local anesthetics are used.

Complications/Risks:

After the procedure, pain and stiffness of variable intensity and length is common. It may be mild and respond to simple analgesics (*Tylenol up to 3gm per day*) or be more severe and require strong painkillers (*Hydrocodone*). It usually peaks at 3 days post procedure and may limit ability to work or use the affected area; light duties or complete rest may be required for a short period of time. Occasionally the pain may be very severe or last for several weeks. It is frequently seen in those with severe tendon problems and may be part of the normal healing response.

- Bruising is usually minor and is usually related to the injection itself
- Infection is very rare as sterile equipment and techniques are used.
- Tendon rupture is a significant complication, but is very uncommon. It is thought that this may be due to symptom improvement following injection (*and subsequent overuse*), or progression of advanced tendon disease despite the injection.
- Non-response to injection may occur in 20% (*or more*) of patients based on the current data.

Post-injection Protocol:

Non-steroidal anti-inflammatory medications (NSAIDs such as naproxen, aspirin, and ibuprofen) should be ceased for 14 days after your PRP injection, unless you are taking aspirin for cardiac reasons. For the first two days (*or until the injection pain subsides*), rest of the affected region is advised. A post-PRP rehabilitation protocol may be provided for a supervised return to activity

If there is little or no change following one injection, a second injection may still result in significant improvement. There are many factors that may influence a patient's response to the injection. These include, but are not limited to, a patient's platelet levels, age, current tobacco use, general health, as well as adherence to the post-PRP rehabilitation protocol and overuse of the affected area after the injection.

Cost:

Currently, insurance companies do not cover PRP injections. However, this may change as more data supporting the efficacy of PRP is published. If you are interested, we can provide you with a detailed breakdown of the out-of-pocket cost for a PRP injection