

What is PRP? Platelet Rich Plasma, also known as PRP, is derived from the patient's own blood in the following manner. A fraction of blood (approximately 60cc, or 4 tablespoons) is drawn from the individual patient into a syringe. The blood is spun in a special centrifuge to separate its components (Red Blood Cells, Platelet Rich Plasma, Platelet Poor Plasma and White Blood Cells).

The Platelet Rich Plasma containing monocytes and various plasma proteins are collected into a syringe. A sterile Calcium Chloride 10% and sterile Bicarbonate 8.4% solution is added in 5% volume to the syringe containing PRP. Calcium Chloride and Bicarbonate both work to activate the platelets, thus leading to liberation of growth factors and healing elements. The activated platelets are then injected with in the next few minutes as a medical intervention. As the platelets organize in the clot, they release enzymes to promote healing and tissue responses including attracting stem cells and growth factors to repair damaged tissue and cause regeneration and rejuvenation.

The full procedure may take between 15-45 minutes. Often 2-3 treatments are advised, however, more or less may be necessary for some individuals. It is often recommended that treatments be done once a year after the initial group of treatments to continue regeneration and maintain or enhance the results. The use of PRP for anything other than mixing with bone marrow is considered "off label" and EXPERIMENTAL.

PRP'S safety has been established for over 20 years for its wound healing properties and its theoretical effectiveness has extended across multiple medical specialties including cardiovascular surgery, orthopedics, sports medicine, podiatry, ENT, neurosurgery, dental and maxillofacial surgery (dental implants and sinus elevations), urology, dermatology (chronic wound healing), and ophthalmology, cosmetic surgery.

BENEFITS of PRP: PRP is autologous (using your own blood) therefore eliminating allergy potential. PRP has been shown to have tissue regenerating effects. Other benefits include: minimal down time, safe with minimal risk, short recovery time, and no general anesthesia is required.

CONTRAINDICATIONS: PRP use is safe for most individuals between the ages of 18- 80. There are very few contraindications, however, patients with the following conditions are not candidates:

1. Systemic use of corticosteroids within two weeks of procedure
2. Pregnancy or Lactation
3. Anti-coagulation therapy (Coumadin, Warfarin, Plavix, Aspirin, Lovenox)
4. Abnormal platelet function (blood disorders, i.e. Hemodynamic Instability, Hypofibrinogenemia, Critical Thrombocytopenia)
5. Acute and Chronic Infections
6. Skin diseases (i.e. SLE, porphyria, allergies)
7. Chemotherapy treatments
8. Cancer
9. Chronic Liver Disease i
10. Severe metabolic and systemic disorders
11. Underlying Sepsis

RISKS & COMPLICATIONS: Some of the Potential Side Effects of Platelet Rich Plasma include:

1. Pain at the injection site
2. Bleeding, Bruising and/or Infection as with any type of injection
3. Short lasting pinkness/redness (flushing) of the skin
4. Allergic reaction to the solution, an/or topical anesthetic
5. Injury to a nerve and/or muscle as with any type of injection
6. Itching and swelling at the injection site(s)
7. Minimal or no effect from the treatment

ALTERNATIVES to PRP: Alternatives to PRP elective procedures are:

1. Do Nothing
2. Surgical intervention may be a possibility
3. Administration of approved medications
4. Physical Therapy
5. Laser or other ablative technology

Risks in addition to those mentioned above with **JOINT PRP:**

- No improvement of pain
- Injection site infection/hematoma
- Nerve Damage
- Joint space infection and destruction
- Worsening of pain
- Temporary weakness or numbness