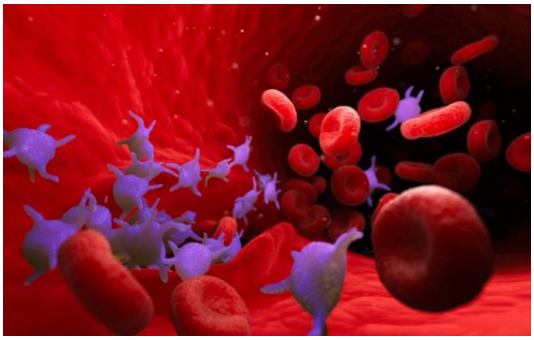
TWIN CITIES ORTHOPEDICS

Platelet Rich Plasma

Dr. Jonathan Reid

BACKGROUND

Platelet-Rich Plasma, or PRP, is a type of orthobiologic treatment that is an autologous concentrate of platelets derived from your own blood used as a minimally invasive modality to treat a wide array of musculoskeletal injuries.

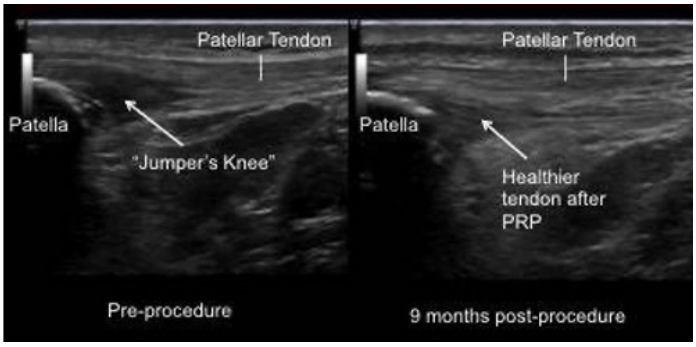


Platelets are the cells in our body that contain growth factors, which stimulate the normal wound healing process, such as when your skin heals after a cut. During the PRP treatment, supra-therapeutic levels of your own platelets (greater than 1800% more platelets than normal blood) are used to heighten the healing of an acute or chronically injured tissue.

PROCEDURAL DETAILS

Procedurally, a blood draw is first performed that is subsequently spun within a proprietary centrifuge that separates and concentrates the platelets. The platelet concentrate is extracted and mixed with platelet activators as it is placed into a syringe. Diseased or injured tissue is identified by musculoskeletal ultrasound, at times cross-referenced with available MRI and plain film x-ray images. In most cases, we need to remove scar tissue from the injured site first by performing a percutaneous needle fenestration or debridement prior to delivery of the PRP. All PRP injections are done under musculoskeletal ultrasound guidance to ensure optimal placement of the PRP.

Patients on average report more than 50% improvement in six weeks and up to 100% improvement in 12 weeks. Most patients achieve successful outcomes with only one injection. In some cases, a series of three injections is required to achieve significant results. This may eliminate the need for more aggressive and expensive treatment options such as a long-term medication or surgery. In addition, PRP Therapy is a minimally-invasive procedure that is done in the clinic; therefore, you go home the same day. PRP therapy is indicated for injuries that have failed to heal despite traditional treatment options. It can be performed in most musculo-skeletal structures, including muscles, tendons, joints and ligaments all over the body. Some examples include partial tendon tears, muscle strains, ligament sprains/partial tears, articular cartilage injuries, and chronic tendon injuries. Speak with your doctor or meet with Dr. Reid to see if PRP is indicated for you.



PRE-PROCEDURE INSTRUCTIONS

1. Stop anti-inflammatory (NSAIDs) medications five days prior to procedure (e.g. ibuprofen, naproxen, celebrex, etc.). If you have questions, please call Rhodora Leverentz, 952-456-7209.
2. In some cases, you may need to stop blood thinners (e.g. Aspirin, Plavix, Coumadin, etc.) seven days prior to procedure. You must discuss this with Dr. Reid, as well as your cardiologist or primary doctor and obtain approval. Other daily medications may be taken normally as directed.
3. Schedule physical therapy to begin within a week of your PRP treatment.

POST-PROCEDURE INSTRUCTIONS

1. We recommend having someone drive you home after the procedure.
2. Blood thinners (e.g. Aspirin, Plavix, Coumadin, etc.) may be resumed 24 hours after the procedure.
3. Avoid anti-inflammatory medications for eight weeks after the procedure (e.g. ibuprofen, naproxen, celebrex, etc.).
4. Increased irritation in the affected area may occur after your PRP injection. This is part of the healing process. Ice the affected area 3-4 times per day for 15 minutes for the next three days. You may take Extra Strength Tylenol as needed for pain or the prescribed pain medication.
5. If you develop fever, persistent redness, or swelling at the site of injection, call Dr. Reid's office at 952-456-7209. These may be a sign of infection.
6. The most important part of the PRP Therapy is that you follow the post-procedure instructions in order to optimize the healing of the tissue and decrease the risk of causing further damage. Limit any movement of the treated area for the first three days after the procedure. Avoid lifting or any strenuous activity for the first seven days. If a splint was provided, you should wear it during the first seven days. A post-PRP rehabilitation program will be provided to you to complete with your physical therapist. On average, sports-related drills are begun at eight weeks from the procedure, and return to play of sports without restrictions usually occurs at 12 weeks from the procedure.

POST-PRP REHABILITATION PROTOCOL

PHASE	LENGTH OF TIME	RESTRICTIONS	REHABILITATION
ONE Tissue Protection	Days 0-7	• Consider NWB, especially if in pain • No weight training • Avoid NSAIDs • Limited Ice	• Relative rest • Gentle AROM • May wear sling • May take pain medication
TWO Early Tissue Healing; Facilitation of Collagen Depostition	Days 8-14	• Progress to FWB without protective device • Avoid eccentric exercises • Avoid NSAIDS • Limited Ice	• Aerobic exercise, avoiding loading of the treated area • Provide motion to area treated with gentle stretching • Begin treatment on kinetic chain through adjacent regions *Ex. Core strengthening*
	Weeks 2-6	• Avoid eccentric exercises • Avoid NSAIDS • Avoid Ice	• Progress weight bearing activities • Low weight, high repetition isometrics (pain scale <3/10) with open kinetic chain exercises • Soft tissue work to area treated with CFM, IASTM, and "Dynamic" stretching
THREE Collagen Strengthening	Weeks 6-12	• Avoid NSAIDS • Avoid Ice	• Eccentric exercises as long as pain scale <3/10 *Two sets of 15 repetitions* • Closed kinetic chain exercises • Plyometrics, proprioceptive training and other sport-specific exercises
	Months 3+	• Assess improvement. If not >75%, consider repeat injection and return to Phase I.	• Progress back to functional sport-specific activities with increasing load on area treated as pain allows • "Max out" on eccentric exercises • May return to sport if pain <3/10