

## **PLATELET-RICH PLASMA (PRP)**

### ***What is Platelet-Rich Plasma (PRP)?***

PRP is generated from your own blood; the process for harvest and preparation first includes intravenous access to draw approximately 60 mL of blood from a vein in your arm. The blood is then centrifuged per the recommendations of the manufacturer being utilized. This will create an autologous (from your own body) concentration of your platelets within a small volume of plasma – termed the “buffy coat” – as well as separate layers of your red blood cells and platelet-poor plasma (PPP). After processing, the red blood cell and PPP layers are discarded to isolate the platelet-rich layer. The final product is then injected back into your body – either blindly, with localization (via X-ray or ultrasound) or with direct visualization at the time of surgery.

### ***How do we believe PRP works?***

With the administration of PRP, basic science study suggests that we are able to deliver numerous cytokines (substances secreted by cells in our body’s immune system which have an effect on other cells in the body) and growth factors in physiologically relevant proportions to provide positive effects at the site of injection by augmenting the body’s natural healing factors. PRP may derive benefit from encouraging cell proliferation, angiogenesis (new blood vessel formation), and tissue maturation/remodeling. However, the composition of the PRP generated can vary depending on the time of day that it is obtained, the preparation system and manufacturer that is used, and on the host’s age and body mass. Your healthcare provider will also specifically determine whether a concentration rich or poor in white blood cells will be of benefit, depending on the pathology being treated.

### ***Is PRP safe?***

Numerous publications suggest that treatment with PRP is safe, given that it is autologous tissue (processed from blood drawn from your own veins). There is a low risk of local irritation at the site of injection or the location of the blood draw for harvest, or infection at the site of administration or harvest.

## ***What is PRP useful for?***

Currently, available evidence suggests efficacy of PRP formulations in the nonoperative treatment of the following acute or chronic musculoskeletal conditions:

- Knee osteoarthritis
- Overuse tendonopathy
  - Lateral epicondylitis ('tennis elbow')
  - Patellar tendonitis ('jumper's knee')
- Acute muscle injury
  - Hamstring
  - Quadriceps
  - Adductors

The use of PRP as a surgical augment to the following procedures remain in current investigation, with early studies suggesting potentially benefit effects:

- Rotator cuff tendon repair
- Achilles tendon repair
- Anterior cruciate ligament reconstruction
- Meniscus repair

## ***What does PRP cost?***

The costs of a single treatment with PRP is variable, and often depends on the setting of administration (i.e. the clinic vs. operating room), use of analgesia/sedation, and image guidance (i.e. ultrasound or X-ray). It is considered "experimental" by insurances which means it is not routinely covered, and payment is out-of-pocket.