

## Platelet Rich Plasma Therapy

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

Platelet Rich Plasma is a concentrated portion of human blood that contains potent growth factors and biologically active molecules. Human blood is a specialized fluid the body uses to maintain and heal the body. It is comprised of four main components: plasma, red blood cells, platelets, and white blood cells. Plasma is the liquid portion composed of mostly water; but, it also contains dissolved proteins and electrolytes. The red blood cells, white blood cells, and platelets are suspended in the plasma as it flows through your blood vessels. PRP is the portion of the plasma that contains the highest concentration of platelets.

### What is PRP being used to treat?

PRP is currently being used to decrease pain and stimulate healing in chronic, painful conditions. There are numerous studies showing treatment with PRP can help improve both pain and function. In fact, it also appears that there can be longer lasting relief than from a corticosteroid (also known as cortisone or steroid) injection alone. This increased effectiveness may be due to the idea that PRP therapy works by accelerating the normal, natural healing processes in the body. Typically, after an injury to the body, the healing processes begin with platelets and proteins at the site of the injury. Both plasma and platelets have been shown to contain biologically active proteins and potent growth factors. Because of this, PRP is successfully being used to treat painful injuries and conditions, such as: tennis elbow, rotator cuff strain, plantar fasciitis, Achilles tendonitis, knee injuries, osteoarthritis, joint pain, and pain related to nerve injuries.

### How is PRP obtained?

Your own blood is collected for preparation of PRP. The word used to describe this type of treatment is "autologous". This means using one's own body tissues to treat oneself. The PRP is obtained much in the same way as donating one's blood or having a sample of blood taken for a laboratory test. First, the blood is collected in a sterile tube. Then, the tube is placed in a centrifuge. The centrifuge spins and multiplies the effect of gravity by many times, which causes the denser elements in the blood, such as the red and white blood cells, to quickly fall to the bottom of the tube. The lighter portion of the blood, including the desirable plasma and platelets, remains in the upper portion of the solution allowing them to be easily collected in a syringe for re-injection treatment.

### How is the procedure performed?

After successful collection and preparation of the PRP, it is ready for injection. Some injection locations may require the use of imaging for optimal placement of the PRP. You may experience some mild to moderate discomfort with the procedure. Because of this, a local anesthetic may be injected prior to the PRP therapy in certain locations.

### What does it feel like after the procedure?

After the procedure, it is normal to feel some soreness at the site of the injection. This soreness can last anywhere between a few days to several weeks after the treatment. This is an indication that the treatment is successfully underway. During this time the tissues are healing under the effect of the PRP therapy. For post-procedure discomfort, it is acceptable to use Tylenol or specific pain medications as directed by your doctor before or after the treatment. You may also use cold packs, warm packs, or elevate the area of discomfort to reduce swelling.

### How long does it take for effect?

Autologous PRP therapy requires patience and time to allow the regenerative effect to occur. In published medical studies, it has been shown that the relief gained from PRP treatment begins to outpace corticosteroid injections at about 8 weeks. The additional good news is that several studies demonstrate that the improvement continues up to and beyond 1-2 years after the injection. Additional PRP injections may be applied to further accelerate healing.

### Is there any benefit from multiple treatments?

Some people benefit from repeat PRP therapy. Your physician can help you determine if repeat treatments will be necessary.

### How do I prepare for the procedure?

It is very important that you have a healthy supply of platelets in your bloodstream prior to the procedure. Certain medications and foods may inactivate or harm your platelets. Because of this, you should avoid these for a period of time prior to the treatment. To achieve the optimal results, you should avoid anti-platelet medications and supplements for 2 weeks prior to your planned treatment date. Some of the generic-names for these medications that need to be avoided include: ibuprofen, naproxen, aspirin, diclofenac, oxaprozin, flurbiprofen, meloxicam, piroxicam, indomethacin, ketorolac, clopidogrel, ticlopidine, dipyridamole, anagrelide, ticagrelor, cilostazol, prasugrel, eptifibatide, cangrelor, abciximab, vorapaxar, and certain types of antibiotics. It is especially important that you should consult with your doctor about any of these medications before attempting to discontinue them prior to this procedure. There are also several herbal supplements that should be discontinued before the procedure, as well. These include: alcohol, garlic, ginkgo, ginseng, ginger, saw palmetto, black cohosh, chamomile, feverfew, fish oil, flaxseed oil, borage oil, omega-3 supplements, turmeric, curcumin, cranberry juice, St. John's wort, green tea, coffee, tobacco, primrose oil, vitamin E, and large amounts of chocolate.

### Are there any restrictions on what I can do after the treatment?

Avoid application of warm or cold packs if there is any sensation of numbness. You should continue to avoid any antiplatelet medicines or supplements for an additional two weeks after the procedure, unless directed otherwise by your treating physician. You may continue with light activity; but, you should avoid any strenuous activity or heavy lifting until cleared by your doctor at your follow up appointment, or for the next 2 weeks. Immediately following the treatment, avoid soaking in bathtubs, pools, or hot tubs for 48 hours after the procedure to decrease the risk of infection at the needle puncture site. Showering or cloth bathing is permissible.

### What are the risks?

As with any injection there are some risks of which you should be aware. These may include, but are not limited to: infection, bleeding, nerve damage, medication allergy (local anesthetic), paralysis, and death. Although these are exceedingly rare, you should notify your physician should you have any injection site redness, swelling, drainage, fevers, chills, extreme pain, or any new loss of strength or sensation. Treatment using regenerative medicine techniques, such as PRP, are not yet covered by most insurance companies. These companies may consider the procedures as experimental in nature, despite a growing body of evidence in peer-reviewed, published medical studies showing relief of pain and improvement in function with PRP therapy. Nevertheless, with any emerging treatment there is a risk of unknown or unforeseen adverse effects. However, platelets and plasma naturally occur in your body, the risk from sterile preparation and reinjection for treatment of chronic painful conditions is likely to be very low.

### How much does it cost?

We offer PRP therapy at an aggressively low price per injection site. This cost includes the process and personnel involved in drawing your blood, the use of disposable sterile medical supplies, the proprietary centrifugation and collection of your platelets, and the injection procedure performed by your physician. Please call our office for additional information or to set up a consultation with our doctor to answer any of your questions about this treatment and help you determine what are the best treatment options for you.