Platelet Rich Plasma Therapy

One of the most recent cutting edge advancements in the world of regenerative medicine involves PRP therapy, which is platelet rich plasma injections. These injections are showing a lot of promise in musculoskeletal injuries, and they are low risk as they use the patient's own blood as a source of the medicine.

The History of PRP therapy

For quite a few years, platelet rich plasma has been used in numerous other specialty areas of medicine besides pain management or orthopedics.
These have included urology, cardiovascular surgery, wound care and ophthalmology. Over the last few years, the usage of PRP in musculoskeletal disorders has soared due to studies showing its effectiveness.



What is Platelet Rich Plasma?

Essentially what the medicine consists of is taking the patient's own blood and spinning it down in a centrifuge to provide certain growth factors, along with platelets to use as an injection into the injured areas.
The centrifuge spins the blood very fast and turns whole blood into plasma. The plasma contains platelets and growth factors That can help regenerate damaged tissue.
Additionally, PRP has an intense ability to call in stem cells from the rest of the body, which can further enhance the regenerative and reparative ability.

What conditions benefit from PRP?

To date, platelet rich plasma therapy is most commonly being used for tendinitis areas. This includes golfer's elbow and tennis elbow, which are also called epicondylitis. Additional areas of tendinitis that have shown excellent results with PRP include the rotator cuff area of the shoulder, plantar fasciitis, achilles tendinitis, and patellar tendinitis which is also known as Runner's knee.
Ligament injuries have also shown satisfactory results with PRP use, such as the knee collateral ligaments. Tendons and ligaments inherently have a poor blood supply, so placing the platelets and growth factors right in the area of injury has shown excellent regenerative results.
Most recently, PRP is being used for degenerative osteoarthritis conditions, such as for knee arthritis, hip arthritis, ankle, shoulder and elbow arthritis.

How is PRP therapy performed?

Treatment is performed as an outpatient and can be done right in the Los Angeles pain clinic if it has the centrifuge device. The simple blood draw is performed with between 30 and 60 milliliters taken from the patient's arm.

The tubes of blood are then placed into the centrifuge machine and spun around for a period of time. There are actually two separate spin cycles. Once completed, the whole blood is separated into three layers.

The bottom layer contains the red blood cells and is discarded. The middle layer is called the buffy coat and contains white blood cells along with some other components. This is discarded as well. The part that is used is the top layer, which contains the platelets and the growth factors. Out of the 60 milliliters taken from the patient's arm, approximately 5 to 10 milliliters will be the result of usable platelet rich plasma.

At that point, the platelet rich plasma is ready to inject in to the injured area. If it is the knee for example, the area is sterilized and the injection is carried out similar to a steroid injection. Numbing medicine is often included along with the PRP.

What are the results of platelet rich plasma therapy?

Although thousands of research studies have been performed on PRP in areas outside of pain management and orthopedics, there are only small studies looking at pain management conditions. Along with the World Anti Doping agency three of the major professional sports teams (NBA, MLB and NFL) have decided that platelet rich plasma is a reasonable treatment to undergo for musculoskeletal injuries such as tendinitis, ligament injury and osteoarthritis.

At a recent American Academy of Orthopedic Surgeons meeting, multiple studies were presented in favor of PRP for tendinosis and osteoarthritis. In one study, PRP actually showed better results for arthritis than Synvisc injections (reference). Multiple well known athletes such as Tiger Woods, Hines Ward and Troy Polamalu all have had excellent results with platelet rich plasma therapy.

What are the risks of PRP therapy?

Since the blood used comes from the patient, the risks are exceptionally low. There is a tiny risk of infection, nerve injury, or bleeding. If the patient is on blood thinners, they should be stopped 5 to 7 days prior to the therapy. Ask your Los Angeles pain management doctor the specific timeframe.

One thing to be aware of is that typically, platelet rich plasma causes increased pain for the first couple of days after the injection. The platelets and growth factors can spark up an inflammation reaction, which is helpful in long-term regenerative healing, but does cause some short-term pain. This typically subsides after a couple days as the longer term healing “kicks in” the pain will subside.