What is Platelet-Rich Plasma (PRP) Therapy?

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Platelet-rich plasma (PRP) therapy has been around since the early 1990s, but is relatively new to orthopaedics and sports medicine. Commonwealth Orthopaedic Centers physician, Matthew DesJardins, M.D., has been treating patients with PRP for several years. He is the only physician in Northern Kentucky using PRP for sports medicine. Dr. DesJardins explains PRP Therapy as he answers the questions below:

How is PRP used?
It was initially used by oral surgeons and plastic surgeons to stimulate healing in procedures. In the mid-2000s, orthopedists and sports medicine doctors like me started using it for our applications. We’re using it in tendon issues like tennis elbow, patellar tendonitis, Achilles tendonitis, certain groin and hip injuries, and even plantar fasciitis. Most commonly, I’m using it for tendon problems, but have also used it to treat ligaments in the elbow and ankle.

Why use PRP?
All of our tissues require blood supply or circulation from our body to heal. The native blood supply in tendon structures is low, so once there is tendon breakdown, the body’s natural healing process tends to be very slow. PRP allows us to do two things:
- It allows us to inject some of those blood products directly into the tissue.
- Those cells will recruit more help to heal it.

What is the process for PRP?
PRP is basically concentrating the platelets which are involved in healing out of the normal blood. We do a normal standard blood draw, spin it in a centrifuge and separate it into layers. That concentrates the platelets about five to ten times the body’s normal concentration.

PRP is an image guided procedure; we localize the tissue under ultrasound. This allows us to target the tissue that is specifically damaged and improves our accuracy. The other part of the procedure that I typically do when I’m treating chronic tendon problems is what’s called a needle tenotomy. With a needle we scuff up and penetrate the tendon and the bone to which it’s attached in order to stimulate bleeding mechanically. After that’s done, the PRP is injected. The platelets come into contact with the tendon tissue
and structures that we are treating, and release growth factors that initiate the healing process, just like your body naturally does when it is injured.

**How long does the procedure take?**
Patients are generally in the office about one to two hours. It takes about 30 minutes to process the blood, and then we numb the body part with a local anesthetic. We then scan with ultrasound to target the right area. I will spend 5-10 minutes doing the needle part of the procedure and then inject the PRP. Total procedure time is about 15 minutes.

**What are the risks/advantages of PRP?**
Because PRP is done in the office under local anesthesia, there is less procedural risk. The reported complication rate is minimal. One advantage of PRP is that patient recovery is quick. Using tennis elbow as an example, most people do it on Friday, do some icing and general stretching over the weekend, and are back to work on Monday with some manageable soreness in the elbow.

**What kind of results do you see from PRP?**
Our results are good, but not perfect. Since we are using all the body’s tools to stimulate healing, two months later, people who are really happy with it may still have some discomfort. Typically that will gradually abate with time.

**What were treatment options before PRP?**
We are still using all of the other treatment options every day. We do not jump into PRP if symptoms are manageable. There are exercise programs, stretching, strengthening, icing or anti-inflammatories. There is still surgical treatment available. Traditionally most people would not recommend operating unless you’ve had symptoms at least 9-12 months and you’ve failed all other treatments. If conservative treatments aren’t doing enough for your symptom control, you can certainly try PRP sooner than surgery. It gives you another option.

**What else is important to know about PRP?**
Here are some thoughts that may be of interest to physicians considering referring patients for PRP: We are starting to use PRP earlier in the course of injury with athletes. There have been some studies with the athletic population returning to sports in a shorter period, so we are being a little more aggressive if we have the right patient. PRP is not a magic elixir, but it’s definitely a promising new technology with a good safety profile that is another option for a lot of people.