

## Platelet Rich Plasma Therapy - PRP

You should read this leaflet carefully before consenting to treatment. The treatment involves preparing and injecting platelet-rich plasma extracted from your own blood to heal the painful tendon or joint tissue in your body.

It is recommended that you do not take any anti-inflammatory medications for a week before the procedure and for up to 4 weeks after.

No sedation is required for the procedure. Local anaesthetic is used to numb the area. Blood is then taken from you, usually from your arm, and is placed in a machine that spins at high speed to separate the different types of blood cells. The doctor then extracts the platelet-rich part of your blood - the plasma - and injects this part (the PRP) into the area of your injury. This increases the concentration of platelets and growth factors at the site of injury by up to 200-300% (2-3 times the usual number of platelets/growth factors in your blood). The aim of the PRP injection is to stimulate your body's ability to heal chronic conditions like tennis elbow.

The process to prepare your blood takes about 15 minutes. The blood is spun in the centrifuge for approximately 10 minutes. Prior to this, the pre-intervention assessment and taking of blood will add to the consultation time. It is also advised that you remain in the waiting room for 20-30 minutes following the procedure to ensure that you feel well enough to leave the clinic and travel home.

### Alternative treatments

1. Non-steroidal anti-inflammatory drugs, such as Ibuprofen, Naproxen and Celecoxib can be taken by mouth and through topical application. These have often been tried by individuals with variable results and can still have a place in the combined treatment. However, with PRP injections, it is recommended that you do not take any anti-inflammatory medications a week before the PRP procedure and for up to 4 weeks after as this can interfere with the healing process.
2. PRP and corticosteroid injections both are effective in the treatment of tendinopathy and enthesal conditions such as tennis elbow. However, PRP is currently seen to be a superior treatment option with effects that last for longer.
3. PRP is superior overall to autologous whole blood (AWB) injections and placebo/dry needling procedures.
4. Surgery offers good results for chronic lateral epicondylitis, with a recent study reporting over 90 % good to excellent outcomes at 10-year follow-up. However surgery is not without risk in terms of scar, infection and neurovascular problems. PRP therapy presents a safer option and a more cost-effective alternative.

For more information, the NICE guidance for patients gives information on when PRP can be used in an NHS setting (see link below under 'Sources'). However, it does have relevance for anyone considering the treatment, although it may bring up more questions than it actually answers! For any further information, I am happy to offer this in consultation, when we can decide together on the best treatment option for you given your current circumstances and full assessment with clinical examination.

### **What is PRP?**

PRP is Platelet-Rich Plasma treatment. During PRP treatment, the doctor extracts the platelet-rich part of your blood and injects this into the area of your injury, increasing the local concentration of platelets and growth factors. To make sure the injection is in the right place, you may have an ultrasound scan. This produces images of the inside of your body. The aim of the PRP injection is to stimulate your body's own ability to heal chronic conditions, including tendinopathies.

### **How does PRP work?**

As yet, doctors don't fully understand how PRP works. The aim of PRP is to stimulate your body's own ability to heal chronic conditions by increasing the local concentration of platelets and growth factors.

### **What is PRP used for?**

The body of evidence supporting PRP covers:

- painful mild to moderate osteoarthritis
- tennis elbow (lateral epicondylitis)
- plantar fasciitis
- golfer's elbow (medial epicondylitis)
- biceps tendinopathy
- patellar tendinopathy (jumper's knee)
- supraspinatus tendinopathy
- Achilles tendinopathy
- trochanteric pain syndrome

### **How do I prepare for having PRP?**

Your doctor will explain how to prepare for your procedure. This is your chance to understand what will happen, so if you're unsure about anything, just ask. Wear comfortable clothes on the day of your treatment as you'll be lying down for the procedure. It is a good idea to bring shorts if you're getting treatment for your leg.

### **What should I expect after having PRP?**

You may have some pain during and after your procedure. If you're in pain, let the healthcare professional treating you know. PRP isn't a major procedure compared with other treatments, such as surgery, so you should recover more quickly.

You may feel slightly sore after your treatment, so it's important to rest the area you had treated for around 5-6 days. In addition, make sure you don't need to drive on the day of your treatment.

### **What are the risks?**

PRP is considered to be safe, but you may have some transient side-effects, the majority of which should self-resolve in a few days. Your doctor will discuss these with you prior to treatment. These include:

- Pain, numbness and or swelling in the area treated
- Bruising, reddening, petechiae (red spots) to your skin
- Infection due to the needle being placed under the skin's natural barrier
- Lack of effectiveness of treatment

Depending on the condition you're having treated, there's a chance your symptoms may get worse after your procedure. On the other hand, you may find that the procedure doesn't help. Your doctor will explain the risks and benefits of PRP before your treatment and how these apply to you. It's important that you understand these so you can be sure about going ahead with the treatment or not.

### **When shouldn't I have PRP?**

There are certain conditions where PRP treatment is not appropriate. If any of these are applicable to you please notify your doctor.

- Haemophiliac disorders
- Joint replacements
- Taking anticoagulant therapy
- Local infection
- Malignancy

### **Sources**

1. Smith AJSM 2016, Cerza et al. AJSM 2012
2. Deans et al. JFAS 2012
3. <https://www.nice.org.uk/guidance/ipg438/resources/treating-tendinopathy-by-injecting-a-patients-own-blood-into-and-around-the-painful-tendon-pdf-364581613>

## **Patient Information on Platelet-Rich Plasma (PRP) for Tennis Elbow**

The natural history of tennis elbow (lateral epicondylitis) has been shown to be self-limiting in the majority, with most recovering within 1 year with conservative management. The most effective treatment for chronic lateral epicondylitis, however, is still disputed and controversial amongst experts.

Tennis elbow is common, with a variety of treatment options. PRP injections from autologous blood have been used around the world for the treatment of tennis elbow. PRP injections have an important and effective role in the treatment of this debilitating condition, in cases where physiotherapy alone has not been successful. PRP has very few complications. However, there is a consistently reported adverse effect of an increase in pain at the injection site compared to other injection types in the first few weeks following treatment. This is kept at a minimum by keeping the volume of injection low, which reduces the pain of injection without compromising efficacy.

Best practice is to use low volume PRP using a peppering technique in conjunction with recommendations for physiotherapy that include an eccentric loading regime for the muscle-tendon unit. A review of similar techniques has demonstrated an 85% success rate at 3 months after injection in patients who had failed other treatments.