

P.R.P

***Platelet-Rich Plasma
therapy***

A technique using the plasma and cells from your own blood to stimulate healing in soft tissues and joints.

A regenerative, non-surgical approach to managing osteoarthritis and musculoskeletal injuries.



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WHAT IS PLATELET-RICH PLASMA?

Blood carries out many important roles, including transporting nutrients and oxygen to cells, and getting rid of waste products and carbon dioxide. It is also essential in the function of the immune system and healing.

Blood is made up of:

- plasma (the liquid part)
- cells (red cells, white cells and platelets)
- proteins
- minerals

Platelets are small cells in our blood which live for 7-10 days. They contain clotting factors and growth factors which trigger the immune system to initiate healing and repair in our tissues.

Certain types of white cells, proteins and minerals are also important in tissue healing and repair.

Some tissues, such as tendons, ligaments and joints, have a poor blood supply, making it hard for enough platelets and nutrients to reach areas needing repair.

In platelet-rich plasma therapy, your blood is centrifuged (spun at high speed) to separate the red blood cells from the plasma and platelets.

The plasma (containing a concentrated number of platelets, proteins and some white blood cells) is then injected to the area needing healing.

The platelets activate once injected and release their clotting factors and growth factors, triggering an inflammatory response that leads to healing and repair.

TREATMENT SCHEDULE

Before treatment is commenced, an initial assessment is done by your doctor to decide if platelet-rich plasma therapy is suitable for you. This involves giving a history and undergoing a physical examination, and sometimes having an x-ray, scan or blood tests.

Please let your doctor know if you are on medication to thin your blood (eg warfarin, aspirin, xarelto or clopidogrel).

You must avoid anti-inflammatory medications for 7-10 days before treatment (including diclofenac, ibuprofen, meloxicam and celecoxib).

If you are unwell with a viral infection or other illness your doctor may advise deferring the procedure until you are well.

PRP is a regenerative therapy so it may take a few weeks before improvement is noted. Depending on the condition being treated, you will usually require between one and three treatments.

WHAT CONDITIONS CAN BE TREATED?

PRP can be used to treat a number of conditions, some of these include:

- ***Osteoarthritis***
 - knee, hip, shoulder, ankle, toe, thumb
- ***Ligament strains and tears***
 - knee, wrist, elbow, ankle
- ***Tendinopathy***
 - achilles, elbow, rotator cuff, gluteal
- ***Bursitis***
 - trochanteric, subacromial

Please talk to your doctor about the suitability of this treatment for your condition.

TECHNIQUE

On the day of treatment, 10-30ml blood is taken from your arm (like for a blood test) and is spun in a centrifuge for 5-15 minutes (depending on the centrifuge used).

The area to be treated is marked and the skin is cleaned with antiseptic solution. If needed, the overlying skin is numbed with an injection of local anaesthetic.

The prepared platelet-rich plasma is injected directly to the injured ligament, tendon or joint, usually under ultrasound guidance.

AFTER TREATMENT

Please avoid anti-inflammatory medications and strenuous activity for 7 days after your treatment.

This is very important to consider when planning the timing of your treatment and scheduling appointments. Your doctor will discuss with you which exercises and activities to avoid after treatment to ensure the best outcome.

Post-treatment discomfort is due to the inflammation caused by the injections to help stimulate the healing process. It is temporary and usually well controlled with simple pain relief medication such as paracetamol or tramadol.

Ice packs can be used on the day of treatment to soothe injection soreness, but should be avoided after that. Heat packs and gentle walking and mobilisation are preferable, to help encourage blood flow to the area and control stiffness and discomfort.

WHAT ARE THE SIDE EFFECTS OF OF TREATMENT?

Side effects are minimised by using careful injection techniques, utilising ultrasound guidance where possible, however side effects can still occur.

The most common side effect of PRP injections is a mild to moderate flare in the pain (dull ache) and stiffness. This usually occurs during the first 48 hours after treatment, but could last just a few hours or up to seven days after the injections.

Once the initial discomfort/pain settles, the treatment is usually very well tolerated, as the substance being injected is not foreign to your body.

Other side effects include bruising or bleeding at the site of treatment, damage to structures such as soft tissues, joints and nerves (minimised by using ultrasound to guide injections) or infection. Please avoid pools and spas for 24 hours to prevent infections.

HOW EFFECTIVE IS PRP?

Many clinical trials have assessed the efficacy of PRP therapy. The outcome of this treatment is influenced by a number of factors, including the quality of each patient's platelets (related to health status, smoking, medications etc), the condition being treated and the preparation of PRP being used (number of platelets and white blood cells). These variables make it challenging to compare results of studies and develop standardised protocols.

Use of PRP in the management of knee osteoarthritis and tennis elbow has been studied extensively, and has been shown to be safe and effective. PRP shows promising results in other conditions. Research is occurring worldwide to help refine protocols.

TREATMENT APPROACH

Platelet rich plasma is ideally part of a whole treatment plan. You can continue your general exercises, strengthening and rehabilitation, and continue massage, acupuncture, mobilisation and manipulation treatment if required, but please talk to your doctor to discuss any modifications that may be required.

Behavioural and psychological therapies can be useful to help you cope with pain and loss of function. Medications such as antidepressants and glucosamine can be taken. Supplements (vitamins and/or collagen) may be recommended.

Your doctor may provide PRP therapy in conjunction with other injection treatments such as trigger point therapy, prolotherapy or perineural injection treatment.



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