



PRP – PLATELET RICH PLASMA INJECTIONS

PLATELETS

Platelets are small cell fragments in the blood that are the “first responders” for injury. Once they arrive on scene, platelets adhere to damaged structures and release 70% of their chemical messengers in the first 10 minutes to initiate repair. Platelets contain granules that store 3000-4000 different chemicals. These are released to mediate healing and include potent growth factors.

PLATELET RICH PLASMA (PRP)

PRP is produced by collecting a patient’s blood in a special tube and spinning it in a centrifuge for 5 minutes. This separates the useful yellow-coloured plasma (with platelets) from the unwanted blood cells. 9 ml of blood produces approximately 5 ml of PRP.

The PRP solution is then injected back into the patient’s painful tissues where the platelets release the chemical messengers from their granules.

PRP injections have the following actions:

- Attract immune repair cells
- Stimulate local tissue growth and repair
- Stimulate and proliferate local stem cells
- Increase supportive blood vessel growth
- Decrease net inflammation
- Down-regulate pain receptors
- Anti-microbial action.

PRP INJECTION TREATMENT

The key outcomes of treatment are to reduce pain and improve function. The commonest protocol for PRP would be two injections, one month apart.

Examples of musculoskeletal targets for PRP injections:

- Painful, arthritic joints.
 - Especially knees
 - Most patients experience improvement within a few weeks and this tends to persist beyond 12 months.
- Partial-thickness tendon tears or tendinopathy
 - E.g. rotator cuff, tennis elbow, Achilles tendon, plantar fasciitis, glute medius tendinopathy (trochanteric bursitis).
- Lax or injured ligaments
 - E.g. Sacroiliac ligaments of pelvis

CONTRA-INDICATIONS

- Blood disorders
- Recent illness with fever (within 2 weeks); active infections

PREPARATION

- Medications - Best to avoid: Steroids (tablets or injections) and fish oil for 2 weeks prior; Aspirin for 7 days prior; Anti-inflammatories and vit C for 3 days prior.
- Benefit from exercise 20 mins prior to blood collection (can increase platelet numbers by 4 fold)
- Postpone treatment if active skin sores / infection

AFTERCARE

- Expect some increased soreness for first 2 weeks
 - More likely with tendon / ligament injections than joint injections
- Avoid ice / anti-inflammatories for 4 weeks
- Use paracetamol +/- codeine if required for pain
- Activity
 - 0-48 hours: Take things very quietly
 - Day 3-14: Steady increase in activity within pain limits
 - Week 3-8: Normal activity / rehab

EVIDENCE SUPPORTING PRP TREATMENT

- Knee arthritis and cartilage damage ^(1,2)
 - Improved pain and function to 12 months
- Tendon tears and tendinopathy ⁽³⁻⁷⁾
 - Improved pain and function

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