

Platelet-Rich Plasma (PRP) Injection

What is Platelet-rich Plasma (PRP) and how does it work?

Blood consists of mostly liquid (called plasma) with some solid components (red cells, white cells, and platelets). Platelets help your blood clot, but also contain hundreds of proteins called growth factors which are important in healing injuries. These growth factors include basic fibroblast growth factor, vascular endothelial growth factor, platelet derived growth factor, epidermal growth factors, and many others. These factors have been shown to stimulate stem cells to rebuild fibrocartilage and muscle. PRP is plasma with a much higher concentration of platelets than what is normally found in blood and therefore a higher concentration of the growth factors.

What injuries and areas on the body can be treated?

Injuries that can be treated with PRP include:

- Joint injuries
- Tendon injuries
- Tendon sheath injuries
- Muscle injuries
- Nerve injuries

How should I prepare before my treatment?

You should avoid non-steroidal anti-inflammatory drugs (NSAIDs) such as Motrin®, Aleve®, or Advil® 48hrs prior to your appointment. For pain control during this period Tylenol® may be used or other pain medication provided by your referring clinician as long as it does not contain a NSAID. If you are on corticosteroids (Prednisolone, Medrol dose pack or similar drugs), please contact our office as soon as possible as these particular medications will need to be stopped prior to coming for your procedure. Consumption of food and beverage is permitted prior to the procedure. An escort/driver is not required as sedation will not be used. A parent/legal guardian is required to be present and remain throughout the entire appointment for patients that are minors.

What can I expect before and during my treatment?

Upon arrival, you may need to change into a gown to expose the area(s) that will be injected if we cannot easily access it. You will be taken to an area where your consent for the procedure will be obtained before the process begins. Thereafter, a small amount of blood (approximately 15-30 mL) will be drawn by a skilled nurse or technician. This blood will be prepared into a PRP concentrate by way of spinning it in

a special machine called a centrifuge. This process takes approximately 10-20 minutes. You will then be directed to a different room where there is imaging equipment, such as an ultrasound or fluoroscopy machine. Your vital signs will be assessed along with a pain assessment. You will then be positioned appropriately on an exam table. Thereafter, aseptic precautions will be taken. The area(s) to be injected will be cleansed with betadine or chloraprep, and sterility will be maintained throughout the remainder of the procedure in order to minimize the risk of infection. A local anesthetic will be injected in the area(s) to minimize pain throughout the procedure. Then under image guidance, the prepared PRP will be injected into the targeted region to be treated. Afterwards, the injection site is thoroughly cleaned and covered with a band-aid/dressing.

Your vital signs will be assessed once more along with your pain level. Most patients experience their pain level to be the same or slightly increased immediately following the procedure.

What can I expect after my treatment?

The pain at the area of injection may increase for the first few days. Generally patients start feeling an improvement in symptoms in about a week or two, but it may be several weeks before you feel a significant beneficial effect. Depending on your response, you may need more than one treatment to reach the maximal beneficial effect. Strength and endurance slowly improve with time. Many patients notice improvement for as long as 6 to 9 months.

Post procedure care:

We recommend that you limit your physical activity for the first 48-72 hours after your procedure. This includes physical therapy as well. After this period of time you may return to your regular physical activities as tolerated. You should avoid NSAIDs such as Motrin®, Aleve®, or Advil® for 48hrs after your treatment. For pain control during this period Tylenol® may be used or other pain medication provided by your doctor as long as it does not contain a NSAID. You may also use ice, elevation and compression for pain relief.

You may experience some discomfort for 3-7 days following the procedure. Occasionally, more severe or sporadic pain is experienced by some. This discomfort will gradually subside. However, if it continues beyond 2 weeks and/or you develop any new symptoms at any time following your procedure please contact your referring clinician.

Because your own blood is used, there is a very low risk of infection and a very low risk of allergic reaction to the treatment. If you notice any redness, swelling, and/or

unusually significant pain at the injection site at any time following your procedure—especially within the first 24-48 hours--please contact your referring clinician as soon as possible.

You will be contacted by a radiology nurse 2 weeks after your procedure as well as 4 weeks after your procedure. The purpose of these calls is to assess your pain level following the injection as well as address any questions or concerns you may have. Please note that the nurse will not be able make medical recommendations regarding your care as any concerns you have regarding your plan of care would need to be discussed with your referring clinician.

For questions and/or concerns you may contact either of our nurses, Mon-Fri, 8am-5pm at 713-704-9850.

References

- 1 American Academy of Orthopedic Surgeons: Platelet-Rich Plasma (PRP).
<http://orthoinfo.aaos.org/topic.cfm?topic=A00648>
- 2 Xie *et al.*: Biology of platelet-rich plasma and its clinical application in cartilage repair. *Arthritis Research & Therapy* 2014, 16:204