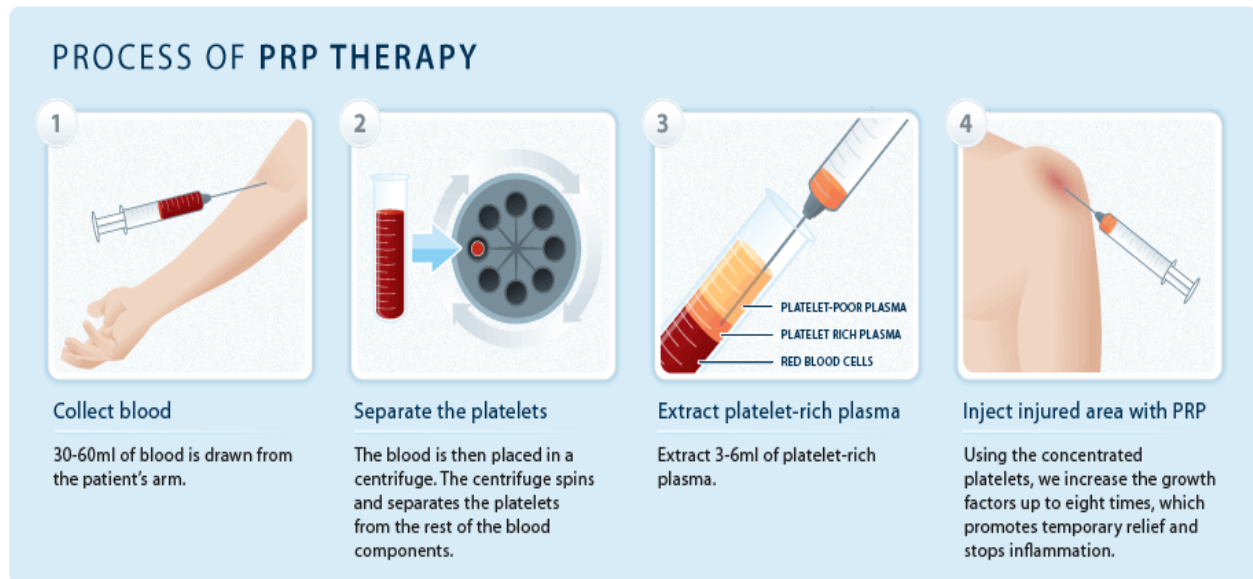


Platelet-rich plasma (PRP) therapy:

- uses injections of a concentration of a patient's own platelets to accelerate the healing of injured tendons, ligaments, muscles and joints. In this way, PRP injections use each individual patient's own healing system to improve musculoskeletal problems.



Overview of PRP injections:

https://www.hss.edu/condition-list_prp-injections.asp

- Platelet-rich plasma has been found to significantly enhance the healing process, and using a PRP injection for shoulder pain caused by **rotator cuff tears**, for **Achilles tendon ruptures** and for other soft-tissue injuries is becoming more common.

Pros and Cons of PRP:

<https://www.arthritis-health.com/treatment/injections/potential-pros-and-cons-prp-injections>

1. Advantages of Platelet-Rich Plasma (PRP) Therapy:

- Platelet-rich plasma is autologous, meaning it comes from the patient's body, so it is natural and the injections carry few risks.
- Other treatments for mild to moderate osteoarthritis can be unreliable or vary from person to person, and some have side effects or drawbacks

2. Uncertainties Regarding Platelet-Rich Plasma Therapy

Though laboratory studies have shown platelet-rich plasma encourages cell regeneration, scientists do not completely understand how or why this happens. Experts still have many questions regarding platelet-rich plasma treatment:

- Indications, i.e. when should this treatment be used? If it is an effective treatment for osteoarthritis, should it be used in the early stages of osteoarthritis or only when all other options are exhausted?
- What are the optimal concentrations of platelets and white blood cells?
- How much platelet-rich plasma should be injected?
- Do certain additives, such as thrombin, make the PRP more effective?
- When and with what frequency should injections be given? Is one injection enough?
- What is the best rehabilitation protocol to use after PRP injection?

Suggested Indications for PRP Injections for Osteoarthritis:

[Supplements and Medications for Knee Osteoarthritis Video](#)

While there is no universally adopted list of criteria describing who is eligible for PRP injections, professional organizations such as the American Academy of Orthopaedic Surgeons and the International Cellular Medicine Society have suggested guidelines, many of which are included below:

- Osteoarthritis pain affects daily activities
- Other more conservative treatments have failed or been eliminated:
 - Physical therapy to strengthen joint muscles has not helped
 - The patient is sensitive to anti-inflammatory medications (NSAIDs) such as ibuprofen, or find NSAIDs do not provide adequate pain relief
 - Joint aspirations are not appropriate or do not provide adequate pain relief
 - Steroid injections have not worked, or the patient wants to avoid steroid injections

*Note

Platelet-rich plasma injections are not typically recommended for the most severe cases of osteoarthritis

Preparing for PRP:

<https://www.howardluksmd.com/prp-injection-procedure-and-recovery-time>

- Platelet function is affected by certain medications

- You may need to consult your cardiologist or primary care doctor if you take aspirin for your heart health.
- **Aspirin, Motrin, Advil, Alleve, Naprosyn, Naproxen, Celebrex, Mobic, and Diclofenac will all interfere with platelet function** and would be expected to lessen the response to a PRP injection.
 - We ask people to be off of aspirin or other anti-inflammatories for one week before the injection and two weeks after the injection.
 - Tylenol will not affect platelet function and may be taken during the treatment period

The American Academy of Orthopaedic Surgeons recommends patients adhere to the following pre-injection guidelines:

- Avoid corticosteroid medications for 2 to 3 weeks prior to the procedure
- Stop taking non-steroidal anti-inflammatory drugs (NSAIDs), such as aspirin or ibuprofen, or arthritis medications such as Celebrex, a week prior to the procedure
- Do not take anticoagulation medication for 5 days before the procedure
- Drink plenty of fluids the day before the procedure
- Some patients may require anti-anxiety medication immediately before the procedure

Where to inject and What to Expect?

<https://www.howardluksmd.com/prp-injection-procedure-and-recovery-time>

- The entire PRP procedure from start to finish takes 30 minutes or so
- **Most people experience soreness** after the procedure. A few will describe it as pain. The pain after a PRP injection will vary significantly.
- Knee, shoulder, or elbow joint PRP injections typically produce mild swelling and discomfort. Injections of PRP into muscles or tendons usually cause much more pain than a joint injection. That discomfort or pain can last 2-3 days or longer

1. Meniscus tears

- PRP when used alone will not heal a meniscus tear. However, when we repair the meniscus using sutures at the time of surgery, we will often inject the PRP around the repair site. The current thinking is that PRP *might* improve the chance that the repaired meniscus will heal after suturing.

2. Rotator cuff injuries:

- Many people with bursitis or inflammation of their rotator cuff might respond to a PRP injection. PRP can reliably decrease inflammation. That is the primary goal of PRP. These injections will not reliably heal a rotator cuff tear. Like a meniscus tear, we might inject PRP in the area after repairing the rotator cuff. Again, the thought is that this might improve the chance that the rotator cuff tear will heal. In cases of bursitis without a tear, the PRP is often effective at alleviating the pain due to inflammation of the bursa.

3. Knee Osteoarthritis:

- One of the most common uses for PRP is to treat the pain of osteoarthritis of the knee. PRP will not reverse or cure osteoarthritis, but PRP can diminish the pain due to the osteoarthritis. This post goes into more detail about PRP injections for knee arthritis. The main goal of the PRP is to decrease the inflammation within the joint. We have used this successfully in combination with other procedures such as an embolization for people looking to delay a knee replacement.

4. Knee ligament injuries

- PRP seems to be useful for injuries to the medial collateral ligament (MCL). Most MCL injuries heal on their own within 2-3 months. Some MCL injuries become chronic. That means that they hurt longer than we anticipate. PRP injections might help an MCL tear heal faster and minimize the pain of a chronically painful tear.

Angel System:

<https://www.arthrex.com/resources/VID1-003625-en-US/cellular-components-and-growth-factor-content-of-prp-from-the-angel-cprp-system?referringteam=orthobiologics>

- The Angel system is the only fully automated system that utilizes 3-sensor technology (3ST) and one-button automation to prepare customized platelet-rich plasma (PRP) formulations

Additional Information video:

<https://www.arthrex.com/resources/VID1-003625-en-US/cellular-components-and-growth-factor-content-of-prp-from-the-angel-cprp-system?referringteam=orthobiologics>

***Note**

Patients should keep in mind that PRP is not a cure-all, and it may be best used in combination with nonsurgical treatments and lifestyle changes, such as physical therapy, weight loss, bracing, and NSAIDs.

