

Platelet-Rich Plasma (PRP) Injection

Overview

Platelet-rich plasma (PRP) is a therapy to treat a joint injury using your body's natural healing process. The platelets and plasma come from your own blood. They release growth factors that help heal damaged tissue. A PRP injection delivers a higher number of platelets directly into the joint and may ease painful arthritis.

What is platelet-rich plasma?

Plasma is the clear liquid part of your blood. Platelets are tiny cells made in your bone marrow. They help stop bleeding by forming clots and release growth factors that signal a healing immune response. When an injury occurs, platelets are activated and gather at the site to repair it.

A PRP injection gives your body a lot more platelets—10 to 12 times more than normal—right into the injured area.

To make platelet-rich plasma, the doctor takes some of your blood and spins it rapidly in a centrifuge. This separates the platelets and concentrates them in the plasma (Fig. 1).

Who is a candidate?

PRP works best for younger people (under 60) with mild to moderate arthritis pain in their joints. People who also participate in physical therapy or an exercise program get better results. PRP can be used for:

- sacroiliac joint pain
- facet joint arthritis of the spine
- joints like the knee, shoulder or hip
- tendons, such as a torn knee or rotator cuff

People who smoke, or are diabetic or overweight, may have weaker platelet function and may not benefit. If you have certain blood conditions, PRP may not be safe for you.

Most insurance plans do not pay for PRP, so you may have to cover the cost yourself.

What happens before treatment?

The doctor who will perform the procedure reviews your medical history and previous imaging to plan the best location for the injections. The benefits and risks will be explained, and you will sign consent forms.

Bring a list all the medications or vitamins you are taking and if you have any allergies. You may need to stop taking anti-inflammatories or blood thinners several days before the procedure. Discuss any medications with your doctors.

The procedure is performed in an outpatient center with X-ray fluoroscopy or ultrasound. Plan to have someone drive you to and from the center the day of the injection. The procedure lasts about 1 hour.

Stay hydrated. Drink lots of water the 48 hours before treatment to plump up your veins and make the blood draw easier. It also prevents dizziness.

What happens during treatment?

Step 1: draw your blood and prepare platelets

The nurse or doctor will take a few vials of blood from your arm. The blood is placed in a centrifuge to spin and separate the cells. The red and white blood cells are removed, leaving the plasma with lots of platelets.

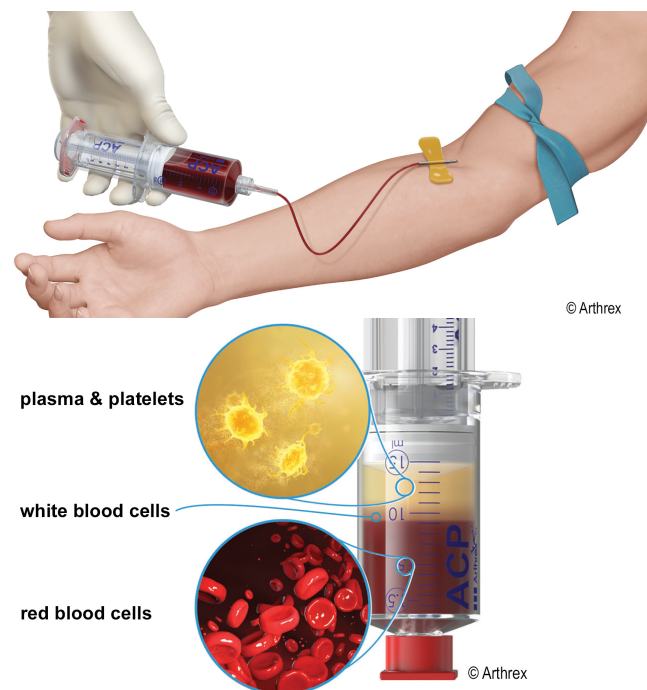


Figure 1. Blood is separated to make platelet-rich plasma.

Step 2: access the joint or tendon

You sit or lie on a table. The doctor numbs the skin to minimize discomfort. Using an X-ray or ultrasound, the doctor guides a needle into the joint or tendon area. Some discomfort occurs, but patients feel more pressure than pain.

Step 3: inject the platelet-rich plasma

Contrast dye may be injected to confirm the needle is in the right place. Then the platelet-rich plasma is injected (Fig. 2). The needle is then removed. Several injections may be given.

You will return to the recovery area. After being monitored for a short time, you can leave the center. Someone must drive you home.

What happens after treatment?

You may experience more pain for a week or two. You may take Tylenol for pain. DO NOT use ice on the PRP site, because ice reduces swelling. The therapy is meant to cause swelling, which helps you heal. Avoid anti-inflammatory drugs such as Aleve or Motrin for several weeks.

Stretching and/or physical therapy may also be recommended. Your injection results should take effect in about 6 to 8 weeks.

Call the office if you have a fever higher than 101.5°F or if the incision shows signs of infection (spreading redness, swelling, pain or drainage).

What are the results?

Results vary depending on your age, health, disease severity, and platelet quality. PRP helps most people, but not everyone. About 15–25% of patients see little or no improvement. Here's what studies show:

- **Sacroiliac joint:** About 70% of patients had at least 50% less pain at 3 months after PRP, compared to 30% with steroid injection¹.
- **Facet joint:** About 65–75% of patients had less pain and moved better at 6 months².
- **Knee joint:** About 65–75% of patients had less pain at 6–12 months, compared to 40% with hyaluronic acid.

PRP is a regenerative biologic therapy that helps your body's natural repair process. It's not a replacement for surgery or physical therapy.

While PRP is a low-risk option, it does not promise full or permanent relief. Some people may need more than one treatment.

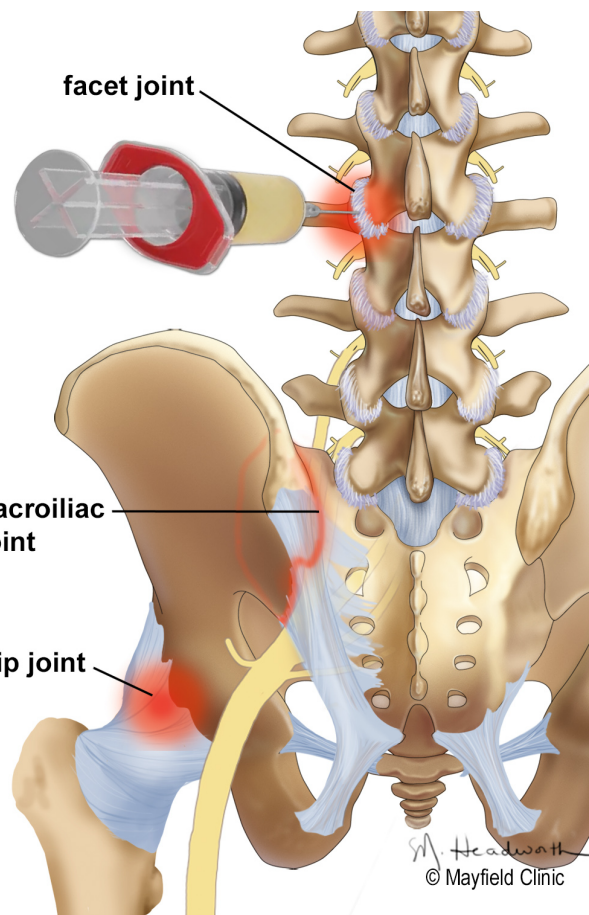


Figure 2. Platelet-rich plasma is injected into the damaged joint to promote tissue healing and relieve pain.

What are the risks?

PRP uses your own blood cells, so you're less likely to have an allergic reaction compared to other shots like steroid injections. Side effects are rare. Possible risks include bleeding, infection or nerve injury.

Sources & links

If you have questions, please contact Mayfield Brain & Spine at 800-325-7787 or 513-221-1100.

Sources

1. Navani A, et al. Responsible, Safe, and Effective Use of Biologics in the Management of Low Back Pain: American Society of Interventional Pain Physicians Guidelines. *Pain Physician* 22(1S):S1-S74, 2019
2. Wu J, et al. A Prospective Study Comparing Platelet-Rich Plasma and Local Anesthetic (LA)/Corticosteroid in Intra-Articular Injection for the Treatment of Lumbar Facet Joint Syndrome. *Pain Pract* 17(7):914-924, 2017



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