

PRP (platelet rich plasma therapy), which is a platelet concentrate (increased growth factors) from the patient's own blood has increased healing potential when injected at the injury site. It is basically a concentration of platelet growth factors in small amounts of plasma which creates an "ideal environment" for tissue regeneration and is thereby called as "Biological Therapy".

How Does PRP Work?

Although it is not exactly clear how PRP works, laboratory studies have shown that the increased concentration of growth factors in PRP can potentially speed up the healing process.

To speed healing, the injury site is treated with the PRP preparation. This can be done in one of two ways:

1. PRP can be carefully injected into the injured area. For example, in Achilles tendonitis, a condition commonly seen in runners and tennis players, the heel cord can become swollen, inflamed, and painful. A mixture of PRP and local anesthetic can be injected directly into this inflamed tissue. Afterwards, the pain at the area of injection may actually increase for the first week or two, and it may be several weeks before the patient feels a beneficial effect.
2. PRP may also be used to improve healing after surgery for some injuries. For example, an athlete with a completely torn heel cord may require surgery to repair the tendon. Healing of the torn tendon can possibly be improved by treating the injured area with PRP during surgery. This is done by preparing the PRP in a special way that allows it to actually be stitched into torn tissues.

It is a **relatively new method of treatment for several orthopaedic** conditions such as :

- chronic Achilles tendonitis or inflammation of the patellar tendon at the knee (jumper's knee)
- acute sports injuries, such as ligament and muscle injuries (pulled hamstring)
- as a supplement to shoulder surgery to repair torn rotator cuff tendons
- as a supplement to repair torn knee ligaments, especially the anterior cruciate ligament
- arthritic knee (delay the requirement of knee replacement)
- speed the healing of broken bones

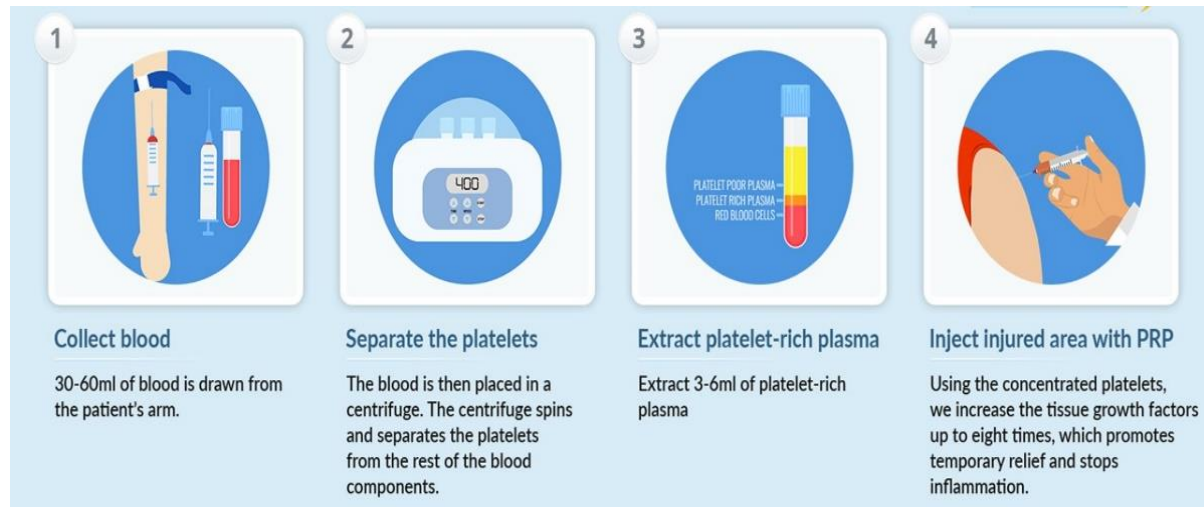
Many famous athletes — Tiger Woods, tennis star Rafael Nadal, and several others — have received PRP for various problems, such as sprained knees and chronic tendon injuries. These types of conditions have typically been treated with medications, physical therapy, or even surgery. Some athletes have credited PRP with their being able to return more quickly to competition.

PRP therapy is there for everybody irrespective of age, sex or body types, however the effectiveness of the therapy does depends on so many factors that include:

- The area of the body being treated
- The overall health of the patient (health of the patient's own autologous platelets)
- Whether the injury is acute (such as from a fall) or chronic (an injury developing over time)
- Inconsistencies associated with PRP preparation and administration

- non-reproducible, autologous blood-derived product
- diversity of preparation methods, commercial or laboratorial, for obtaining PRP
- injection or application techniques, volume of hemoderivative employed and timing and frequency of administration

Typical PRP injection process:



- A healthcare professional will draw a sample of your blood. The amount of the sample depends on where the PRP will be injected. For example, the amount of blood taken for injection into the knee for one study was 60 milliliters.
- The blood is placed into a centrifuge. This is a machine that spins around very quickly, causing the blood components to separate. The separation process takes about 15 minutes.
- A technologist takes the separated plasma and prepares it for injection into the affected area.
- Doctors will often use imaging, such as ultrasound, to pinpoint specific areas for injection, such as the tendon. Or after knee arthroscopy debridement/ ligament reconstruction in the operation theatre. Your doctor will then inject the PRP into the affected area.

What can patients expect after the PRP procedure?

After platelet-rich plasma injections, patients may experience soreness and aching for several days, which is a sign that the healing process has begun. Over-the-counter anti-inflammatory medications may be taken if needed to help alleviate these symptoms but should be avoided as they hamper the inflammatory response and the activation of platelets.

Patients can return to work and other normal activities immediately after treatment, but should refrain from heavy lifting and strenuous activity for a few days.

Side effects and future of PRP

Treatment with PRP could hold promise, however, current research studies to back up the claims in the media are lacking. And the medical community needs more scientific evidence before it can determine whether PRP therapy is truly effective or just a placebo treatment.

Even though the success of PRP therapy is still questionable, the risks associated with it are minimal. Since the PRP is produced from the patient's own blood, there is very little risk for complications with this procedure. There may be increased pain at the injection site, but the incidence of other problems — infection, tissue damage, nerve injuries — appears to be no different from that associated with cortisone injections.