Platelet Rich Plasma

Platelet rich plasma (PRP) treatment is becoming a more popular option for giving a biological boost to the healing process. PRP treatment has received significant attention from patients, orthopedic community and media.

What is PRP?

PRP is produced from a person's own blood. It is a concentration of one type of cell, known as platelets, which circulate through the blood and are critical for blood clotting. Platelets and the liquid plasma portion of the blood contain many factors that are essential for the cell recruitment, multiplication and specialization that are required for healing.

After a blood sample is obtained from a patient (usually few cubic centimetres), the blood is put into a centrifuge, which is a tool that separates the blood into its many components. Platelet rich plasma can then be collected and treated before it is delivered to an injured area of bone or soft tissue, such as a tendon or ligament.

PRP is given to patients through an injection, and ultrasound guidance can assist in the precise placement of PRP, but the use ultrasound guidance relies upon doctor's decision. After the injection, a patient must avoid exercise for a short period of time before beginning a rehabilitation exercise program.

Is PRP Treatment Effective?

Several basic science studies in animal models suggest that PRP treatment can improve healing in soft tissue and bone. For example, increased numbers of cells and improved tendon strength have been noted in Achilles tendon injuries, and improved muscle regeneration has been shown in calf muscle injuries.

These favorable findings in animal models have led to the widespread use of PRP treatment for a variety of conditions, mainly chronic tendon problems, as well as injuries to ligaments and muscles. Some early-stage clinical studies in humans have been promising, but are limited by their study design and few patients.

The most promising early results have been seen when PRP treatment is used for chronic tendon conditions, such as lateral epicondylitis (tennis elbow) and Achilles tendinosis, which impacts the Achilles tendon.

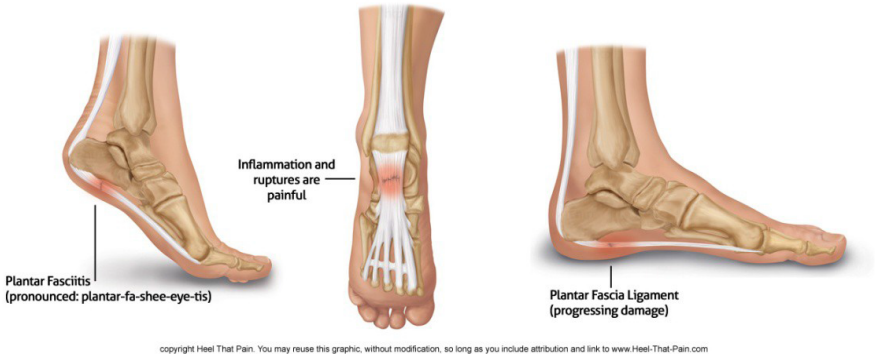
Concerns Involving PRP Treatment

Because PRP is given in the hopes of optimizing the initial inflammatory response of healing, anti-inflammatory medications should likely be stopped at the time of PRP treatment.

Also, PRP does contain endogenous growth factors, so some agencies consider it to be a performance-enhancing substance. For instance, the World Anti-Doping Agency and the United States Anti-Doping Agency forbid the injection of PRP within muscles because of the possibility that the growth factors could enhance a person's performance.

Key Points to Remember

- Platelet Rich Plasma (PRP) comes from a patient's own blood.
- PRP is a concentrated source of growth factors and cellular signaling factors that play a
- significant role in the biology of healing.
- Basic science studies show that PRP treatment may improve healing in many tissues.
- There are clinical studies in humans showing the effectiveness of PRP treatment.
- Anti-inflammatory medicines should be stopped before and after PRP treatment is given.



Plantar fasciitis is the most common cause of heel pain. The plantar fascia is the flat band of tissue that connects the heel bone to toes. It supports the arch of the foot.
Plantar fasciitis is caused by straining the ligament that supports your foot arc. Repeated strain can cause tiny tears in the ligament. These can lead to pain and swelling. This is more likely to happen if:

- Feet rolls inward too much when walking
- With high arches or flat feet.
- Walk, stand, or run for long periods of time, especially on hard surfaces.
- Overweight.
- Shoes that don't fit well or are worn out.
- Tight Achilles tendons or calf muscles.

Symptoms

Most people with plantar fasciitis have pain when they take their first steps after they get out of bed or sit for a long time. You may have less stiffness and pain after you take a few steps. But your foot may hurt more as the day goes on. It may hurt the most when you climb stairs or after you stand for a long time.

Diagnosis

The doctor will perform a physical exam to see if a plantar fascia is tender or swollen. X-rays are sometimes needed to evaluate the heel bone. On X-rays, pointed bony fragment that stems from the heel bone, however it is not always present. In some cases, an Ultrasound or MRI may be needed.

Treatment

Physiotherapy is of great value, and conservative treatment is usually all that is required.
Specifically, patients may benefit from radial shock wave therapy, which is new, safe and effective treatment modality.
Sometimes, an local injection of potent inflammatory medicine (called “steroid”) is helpful.
Surgery is indicated for selected cases.

Prevention

No single treatment works best for everyone with plantar fasciitis. But there are many things you can try to help your foot get better:

- Give your feet a rest. Cut back on activities that make your foot hurt. Try not to walk or
- run on hard surfaces.
- To reduce pain and swelling, try putting ice on your heel. Or take an over-the-counter
- pain reliever like ibuprofen, naproxen or aspirin.
- Do toe stretches, calf stretches and towel stretches several times a day, especially when
- you first get up in the morning.
- Heel cups or shoe inserts (orthotics). Use them in both shoes, even if only one foot hurts.
- Get a new pair of shoes. Pick shoes with good arch support and a cushioned sole. Or try