

Regenerative Injection Therapy with Platelet Rich Plasma **“An alternative approach to healing tendon, ligament, and cartilage injuries”**

What is PRP and what is regenerative injection therapy?

Platelet Rich Plasma (PRP) is a portion of the blood plasma that has a high concentration of platelets. These platelets contain large reservoirs of bioactive proteins including growth factors and chemical mediators that are vital to initiate and accelerate tissue repair and regeneration. This can be used to naturally help heal injuries in connective tissue (especially tendons, ligaments, muscle, cartilage, and open wounds). When PRP is injected into damaged tissue it is considered to be a tissue graft. PRP contains many bioactive proteins that trigger the healing cascade, cause some inflammation, and cause adult stem cells to enter the injured area. Regenerative injection therapy uses PRP to aid in healing injuries that otherwise might not ever heal, to speed the healing of certain injuries, or to augment surgical procedures.

How is this procedure performed?

To prepare a PRP graft, a small amount of blood is drawn from the patient, and placed into a special processing kit. This is then placed in a centrifuge and in approximately 15 minutes the platelet rich plasma is concentrated by 500% and the graft is prepared. The skin at and around the injured area is prepped in a sterile fashion. Then a high frequency ultrasound unit is used to localize the damaged area and to guide the needle placement with an accuracy of within 1 – 2 millimeters. Local anesthetic is 1st injected, then the tissue graft of PRP is injected into the injured tissue.

What are the potential benefits?

Most patients will see a significant improvement in their symptoms within a few weeks and many heal completely, although this may take several months to occur.

Are there any risks?

Yes, but they are very small. With any injection there will be some discomfort and there is a small risk of bleeding, bruising, or infection. The risk of infection is less with PRP than with other injections, or surgery.

How is this different from cortisone injections?

Cortisone shots diminish inflammation and provide temporary relief of symptoms, but don't usually lead to healing. Research has shown that cortisone may weaken tissue. PRP helps to heal and strengthen damaged connective tissue, and may strengthen and thicken tendons and ligaments by up to 40%.

What injuries can be treated?

PRP injections can be performed in tendons, ligaments, cartilage, and joints all over the body. Sports injuries, repetitive stress injuries, and degenerative joint disease (arthritis) can all be treated. Some examples include: ligament sprains and tears, chronic tendonitis, tennis elbow, plantar fasciitis, IT band syndrome, cartilage tears, osteoarthritis, muscle strains and tears, shin splints, rotator cuff injuries, back injuries, and more!

Does the PRP injection need to be repeated?

While responses to treatment may vary, most patients will start with one injection and will be reassessed before deciding on more. Most injuries will respond to 1-3 injections, but others may require a few more. The injection would not be repeated in less than 4 wks, and usually in 6-8 weeks. There is not a definite limit, and the risks and side effects do not increase with a higher number of injections.

Are there any special instructions?

Yes. Patients are restricted from the use of non-steroidal anti-inflammatory medications (NSAIDs) 5 days prior to the treatment and for 4 weeks after the treatment. Initially the procedure may cause some localized soreness and discomfort, but usually Tylenol is sufficient to manage this pain. Ice and heat may be applied to the treated area as needed. The patient should plan on rest, or only minimal activity for the 1st 3 days, and light activity for the 1st wk. Return to regular physical activity depends on the location and severity of the damaged tissue that is being treated, and thus varies considerably.

What about rehab?

Rehabilitation is often useful to augment the effects of PRP injections. Usually any rehab is discontinued or delayed until 1-2 wks after the injection, then gradually advanced injections?

Will my insurance cover PRP treatments?

Most commercial insurances will cover partial reimbursement after pre-authorization, but Medicare will not cover this treatment.

Why are tendon and ligament injuries often difficult to heal?

Tendons and ligaments and cartilage have poor blood supply. This reduces healing potential and speed of healing, and when combined with the stresses of daily activities, they do not heal easily from damage. As a result they become inefficient causing chronic pain and weakness, which often requires medical intervention.