

An exciting new treatment is available for patients who suffer from acute and chronic problems with tendons, ligaments and muscles. This treatment is known as PRP or "platelet rich plasma" injections.

What is Platelet Rich Plasma?

Platelet Rich Plasma, or PRP, is blood plasma with concentrated platelets. The concentrated platelets found in PRP contain large reservoirs of bioactive proteins, including growth factors that are vital to initiate and accelerate tissue repair and regeneration. These bioactive proteins initiate connective tissue healing: bone, tendon and ligament regeneration and repair, promote development of new blood vessels, and stimulate the wound healing process.

How does PRP Therapy work?

To prepare PRP, a small amount of blood is taken from the patient. The blood is placed in a centrifuge which spins and automatically produces the PRP. The entire process takes less than 15 minutes and increases the concentration of platelets and growth factors up to 500%.

When PRP is injected into the damaged area it stimulates the tendon or ligament, causing mild inflammation that triggers the healing cascade. As a result new collagen begins to develop. As this collagen matures it begins to shrink causing the tightening and strengthening of the tendons or ligaments of the damaged area.

PRP therapy for inflamed tendons has been used for years in Europe to treat such things as tennis elbow, Achilles tendonitis, patellar tendonitis, and plantar fasciitis.

PRP Injection Application Sites

Knees

Shoulders

Elbows

Wrist & Hand

Hip/Pelvis

Ankle & Foot

Lower Leg

Spine

Arthritic Joint

With the exception of Medicare, some insurance companies, including worker's compensation, may cover PRP therapy after pre-certification.

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Regenerative Injection Therapy

**With
Growth Factors in
Platelet Rich Plasma
An alternative approach
to healing tendon and
ligament injuries**



What are Tendons, Ligaments, & Platelets?

Tendons, composed of collagen fibers, connect muscle to bone, making everyday physical activity possible. Overuse or damage to tendons over a long period of time causes the collagen fibers to form small tears, a condition. Damage most often occurs in the knee, ankle, shoulder, elbow, wrist, biceps, calf, hamstrings, and Achilles tendon.

Ligaments are also composed of collagen fibers, connecting bone to bone (i.e. joints: ankles, knees, shoulders, etc.), stabilizing the joint and controlling range of motion. A damaged ligament is no longer able to provide support, weakening the joints and shifting the burden of support to muscles (and then to the tendons) which should primarily act as movement engines. Tendons and ligaments have poor blood supply particularly where they connect to bone. Once injured (sprains or strains) they do not heal easily and the damage progresses with the stress of day-to-day activities. As a result the tendons and ligaments become inefficient, the muscles are over-taxed causing chronic pain and weakness and further damage.

Platelets are components of blood that cause it to clot. Platelets become “activated” when injected into injured tissue and release substances that are known as “growth factors” which lead to tissue healing (as witnessed by anyone who has ever suffered from a skin cut). These growth factors have been shown to lead to the healing of tendons, something no other treatment can claim. The growth factors recruit cells that will eventually become new tendon, ligament, or muscle.

What to Expect

The PRP injection does not provide the instant relief that a corticosteroid injection does, but the big difference is that PRP can actually heal the injured area over a period of time, while corticosteroids only stop the inflammation and do not cause the tendon to heal. In addition, studies have shown that cortisone injections may actually weaken tissue. Corticosteroids cannot be injected into weight bearing tendons such as the patellar tendon of the knee and the Achilles tendon of the ankle because they can weaken the tendon and cause it to rupture. Because of this, treatment for these problems has been limited. PRP offers treatment otherwise not available for areas without the danger of rupture. PRP therapy heals and strengthens tendons and ligaments, strengthening and thickening the tissue up to 40% in some cases.

While responses to treatment vary, most patients will need 1-3 injections, however, some patients may need as many as 6 injections. Each set of treatments is spaced about 4 weeks apart. The PRP injection process takes about an hour.

Is PRP right for me?

If you have a tendon or ligament injury and traditional methods have not provided relief, the PRP therapy may be the solution. The procedure is less aggressive and less expensive than surgery. It will heal tissue with minimal or no scarring and alleviates

Are there any Special Instructions?

You are restricted from the use of non-steroid anti-inflammatory medications (NSAIDs) one week prior to the procedure and throughout the course of treatments.

Initially the procedure may cause some localized soreness and discomfort. Most patients only require some extra-strength Tylenol to help with the pain. Ice and heat may be applied to the area as needed. The first week after the procedure, patients will typically start a rehabilitation program with physical therapy, however, aggressive physical activity is discouraged.

PRP therapy helps regenerate tendons and ligaments but it is not a quick fix. This therapy is stimulating the growth and repair of tendons and ligaments, and requires time and rehabilitation. Through regular visits, Dr. McConnell will determine when you are able to resume physical activities.

What can be Treated?

PRP injections can be performed in tendons and ligaments all over the body. Sports injuries, arthritic joints, lower back, degenerative disc disease and more specific injuries including tennis elbow, carpal tunnel syndrome, ACL tears, shin splints, rotator cuff tears, plantar fasciitis and iliotibial band syndrome may all be effectively treated with PRP.