



Nonsurgical Rotator Cuff Treatment with Platelet-Rich Plasma

Rotator cuff injuries have historically required invasive, surgical techniques for repair. Without surgery, patients were forced to live with pain, weakness and significantly reduced mobility.

Today, regenerative medicine treatments offer an exceptional alternative. Specifically, minimally invasive platelet-rich plasma injections may provide pain relief and restore strength while helping many patients avoid the risks and recovery associated with shoulder surgery.

What Is a Rotator Cuff Injury?

The rotator cuff stabilizes and moves the bone of the upper arm (humerus) within the shoulder joint. It is composed of four muscles that originate at the scapula (shoulder blade), all connecting to the head of the humerus.

These muscles are responsible for almost every movement of the shoulder and upper arm.

Common injuries include rotator cuff tears and tendinopathy or tendinitis. Tendinopathy without a full tear is a common type of orthopedic injury that can affect the patient's ability to use their arm. Although this injury is common in overhead athletes, it can affect patients of any age or physical condition.

Previously, patients had to deal with a shoulder injury either with pain management — which does not facilitate healing or repair — or by undergoing invasive shoulder surgery.

What Is Platelet-Rich Plasma Therapy?

Platelet-rich plasma, or PRP, is a form of orthobiologic treatment that is sometimes referred to as regenerative medicine. Orthobiologics are substances that occur naturally in the human body. When extracted, concentrated and injected back into the body, these substances activate the body's own healing mechanisms.

PRP is derived by taking approximately 30 to 90 milliliters of the patient's blood and spinning it in a centrifuge to separate the platelet layer. Then, using ultrasound guidance, the doctor injects the PRP into the injured tissue.

How Is Platelet-Rich Plasma Used to Treat Rotator Cuff Injuries?

After diagnosing a shoulder injury, the orthopedic surgeon or sports medicine doctor may recommend using PRP injections to facilitate the body's healing mechanisms.

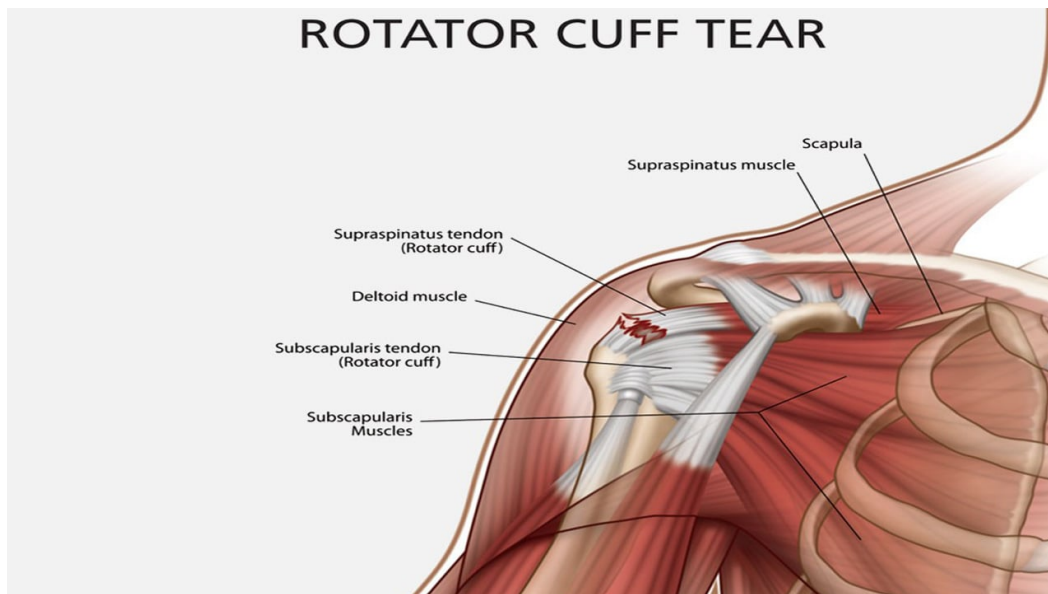


PRP has been shown in the research to be highly effective for treating [rotator cuff tears](#), without the risks and expense of surgery. Additionally, as PRP injections are performed in the doctor's office, there is no hospital stays or lengthy surgical recovery necessary.

The doctor administers the injections using ultrasound or fluoroscopic guidance, to ensure that the plasma is deposited in the precise location of the rotator cuff tear. The patient may experience an increase in pain in the period immediately after treatment. However, significant improvement typically occurs in the subsequent weeks.

A recent study compared PRP treatment to corticosteroid injections for a rotator cuff tear. Results showed that, at three months after treatment, the PRP patients had significant [reduction in pain](#) and improvement in range of motion. Patients treated with PRP had "significantly better active forward flexion, abduction, and internal rotation" than did patients treated with corticosteroid injections.

Perhaps most impressive, only about 3 percent of the PRP patients in this study sought surgery for their injury after one year, whereas almost half of the corticosteroid group required surgery. In other words, patients in this study who were treated with platelet-rich plasma were 16 times less likely to need surgery than those treated with steroid injections for their rotator cuff injury.



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