



Dear Shoulder Owner,

In our practice, we always strive to provide the best evidence-based treatments for our patients. Platelet rich plasma (PRP) injections have been shown in many studies to be effective. We have done our best to provide a summary of the most comprehensive studies to date. Many of these studies are high level of evidence studies or meta-analyses, which are a type of study that pools data from multiple high quality scientific papers. This allows us to glean the best information from the entire body of medical literature. We have included all the links to the citations in case you want to read the studies yourself. We hope this is helpful as you consider whether PRP may be a useful treatment for your shoulder pain.

Sincerely,

A handwritten signature in black ink that reads "Roger Sohn, MD". The signature is fluid and cursive, with the first name "Roger" and last name "Sohn" being more prominent, followed by "MD" in a smaller, less stylized script.

Roger C. Sohn, MD  
Orthocare Health  
949-691-3131

## **Platelet Rich Plasma Effectiveness**

A 2022 systematic review and meta-analysis showed improved patient rated outcomes in patients with partial rotator cuff tears. They found effectiveness of the PRP, especially more than 8 weeks after the injection.

<https://pubmed.ncbi.nlm.nih.gov/35892292/>

A 2021 prospective study examined the effectiveness of PRP for partial thickness rotator cuff tears. Patients were given 2 separate PRP injections and followed for 2 years. The study noted: “No adverse events were seen in any patient. Based on global rating scores positive results were seen in 77.9 % of patients at 6 months, 71.6 % at 1 year, and 68.8 % of patients at 2 years”. The authors concluded that PRP was safe and effective for treating partial rotator cuff tears with the greatest improvement in higher grade lesions.

<https://pubmed.ncbi.nlm.nih.gov/34051761/>

A 2021 systematic review and meta-analysis of 9 high quality studies showed that patient rated outcomes improved after PRP injections for partial rotator cuff tears. They found significant improvements at 6 months but the effects did not last longer than 1 year.

<https://pubmed.ncbi.nlm.nih.gov/33896214/>

Conclusion: PRP appears to be effective as a treatment for partial rotator cuff tendon damage. The effects are long lasting in some studies, but others show the effects to be less noticeable at 1 year.

## **Platelet Rich Plasma vs. Steroids**

PRP has been compared to cortisone injections in various parts of the body. In most conditions, PRP compares favorably to cortisone injections in the medium to long term. For partial rotator cuff tears, it appears to follow a similar pattern as seen in these studies.

A 2021 double blind randomized controlled trial showed PRP to be superior to steroid injections into the shoulder at the 3 month mark. The two groups had similar function at 1 year however.

<https://pubmed.ncbi.nlm.nih.gov/33127554/>

A 2021 study compared PRP to cortisone injections. They found similar improvements in both groups at 1 month. However, the PRP group did better at the 6 month followup.

<https://pubmed.ncbi.nlm.nih.gov/29298726/>

A 2020 systematic review showed that PRP injections were effective in the treatment of partial rotator cuff tears in the short and long term. They found “the treatment of partial rotator cuff tears with PRP injections seems to lead to significantly better outcomes in terms of pain and

shoulder function in long term follow up. Whereas in short and medium term follow up, PRP injections was superior only in terms of shoulder function”.

<https://pubmed.ncbi.nlm.nih.gov/33375716/>

Conclusion: Cortisone injections have long been known to give short term pain relief. In degenerative or partial rotator cuff tears, PRP compares favorably to cortisone injections. The effect appears to be more noticeable at longer term follow up (>3 years).

### **Platelet Rich Plasma vs Hyaluronic Acid or Collagen Injection**

A 2022 study examined a single PRP injection against 3 Hyaluronic Acid (HA) injections in the treatment of partial rotator cuff tears. They found functional score improvements in patient function in both groups at the 3 month mark. They concluded that both treatments were effective with no differences detected between the two treatments at 3 months followup.

<https://pubmed.ncbi.nlm.nih.gov/35507030/>

A 2019 study examined the effectiveness of PRP and hyaluronic acid (HA) for partial thickness rotator cuff tears. The subjects received either PRP, HA, or PRP + HA. They found significant improvements in functional scores at the 1 year mark after PRP and SH injections. On repeat MRI, they found that the tear size decreased in the PRP as well as the SH group. The authors comment: “Our study provided evidence of the efficacy of PRP injection in the healing of small to medium PTRCT. Moreover, the combined injection of HA and PRP yielded a better clinical outcome than HA or PRP alone.”

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6336488/>

A 2022 randomized controlled trial compared PRP to collagen injections. Subjects received either PRP, collagen, or PRP + collagen. They found similar improvements in PRP and PRP + collagen groups. They also noted ultrasound evidence of rotator cuff regeneration in two thirds of the patients in all groups.

<https://pubmed.ncbi.nlm.nih.gov/36536333/>

Conclusion: PRP appears to have a benefit for partial rotator cuff tears with or without other adjuncts such as Hyaluronic Acid or Collagen. In one study, PRP + hyaluronic acid performed better than PRP alone. In our practice, we believe that high concentration PRP offers the most benefit and we can add HA if patients prefer.

### **Summary**

The growing body of evidence appears to support the use of PRP for these and other conditions. PRP appears to give significant improvement for partial rotator cuff damage, especially after 3 months. It is superior to cortisone treatments. It is a useful treatment in our

practice for patients whose rotator cuff tear is not significant enough to warrant a surgery. Please let us know if we can answer more questions about whether PRP may be helpful for your shoulder condition.

Sincerely,

A handwritten signature in black ink, reading "Roger Sohn, MD". The signature is fluid and cursive, with the first name "Roger" and last name "Sohn" clearly legible, followed by "MD" in a smaller, more formal script.

Roger C. Sohn, MD  
Orthocare Health  
949-691-3131