



PRP / A2M Injections for Hip and Knee Pain: What You Need to Know

A New Approach to Relieving Hip and Knee Pain

Chronic hip and knee pain can be debilitating, affecting your daily activities, mobility, and overall quality of life. But you already knew that didn't you?! In fact, that's the touchpoint I have been emphasizing for over 35 years — when your hip or knee pain gets to the point where it is negatively impacting your daily life, then it's time to seek medical intervention. Since your goal should be to keep your own joint for as long as possible, I always recommend a conservative approach to treatment before choosing a surgical solution. That approach usually consists of weight loss/management if necessary, using non-steroidal anti-inflammatory drugs (NSAIDs) to reduce inflammation and thereby relieve pain, physical therapy, and perhaps cortisone or hyaluronic acid injections. Only after exhausting these non-surgical measures would we begin to discuss hip or knee replacement.

Nowadays we have a new avenue to explore before reaching the operating room — regenerative medicine. Regenerative medicine is a rapidly evolving field that focuses on repairing, replacing, or regenerating damaged tissues using your body's own healing mechanisms.

A Short History of the Adoption of Regenerative Medicine in Orthopaedics

While it may seem like a cutting-edge development, the concept of regenerative healing has deep historical roots. But we'll skip the Greek mythology and the early discoveries surrounding cell theory and focus on regenerative medicine in the field of orthopaedics — specifically how it can help with your hip and knee pain.

The 1950s–1970s saw increased interest in using biologic materials to enhance bone and cartilage healing and in the 1990s, Platelet-Rich Plasma (PRP) Therapy was adopted in orthopaedic medicine to promote tendon, ligament, and cartilage repair. By the early 2000s, PRP Therapy was being widely used in professional sports.

However beneficial PRP Therapy may be in treating ligament tears and tendonitis, the American Academy of Orthopaedic Surgeons does **NOT** recommend using PRP Therapy in osteoarthritic

joints. Why not? Because a high concentration of platelets injected into a joint causes inflammation — the very condition we are trying to remedy!

But in the 2010s, Alpha-2-Macroglobulin (A2M) was discovered. This naturally occurring protein in the blood acts as a powerful inhibitor of cartilage breakdown. This protein captures and neutralizes harmful enzymes that contribute to joint degeneration, particularly in osteoarthritis.

Where do the PRP Platelets and A2M Proteins Come From?

The short answer (and best source) is that they come from you! These substances are part of the makeup of your blood. Blood consists of plasma, red blood cells, white blood cells, and platelets.

Platelets contain growth factors that help repair tissues, reduce inflammation, and stimulate cell regeneration. During a PRP treatment, a small sample of your blood is drawn and spun in a centrifuge to separate the platelets. The concentrated platelet-rich plasma is then injected into the affected area, promoting healing and reducing pain.

The A2M protein is obtained in the same manner. Your blood is collected and processed with a centrifuge and a proprietary filter which isolates and concentrates your blood product down to a small portion of highly concentrated A2M that can be directly injected into your osteoarthritic knee joint.

What Are the Benefits of PRP and A2M Injections for Hip and Knee Pain?

These treatments provide a natural, minimally invasive option for managing joint pain and degeneration. Here are some key advantages:

- **Non-surgical approach:** PRP and A2M injections avoid the risks and recovery time associated with surgery.
- **Pain relief and reduced inflammation:** Growth factors in PRP and the protective action of A2M help alleviate discomfort and swelling.
- **Cartilage protection and repair:** A2M prevents cartilage breakdown, while PRP may help stimulate new tissue growth.
- **Improved mobility and function:** Many patients experience increased joint flexibility and less stiffness.
- **Longer-lasting effects:** Unlike cortisone shots, which provide short-term relief, PRP and A2M treatments may offer prolonged benefits.

Who is a Good Candidate for PRP and A2M Therapy?

PRP and A2M injections are most effective for patients experiencing mild to moderate joint degeneration or soft tissue injuries.

Ideal candidates include:

- Patients with early-stage osteoarthritis
- Individuals with sports injuries or chronic joint pain
- Those looking for alternatives to steroid injections or surgery
- Active individuals who want to delay or prevent joint replacement

Who may not be a good candidate?

- Patients with severe bone-on-bone arthritis
- Individuals with blood disorders affecting platelet function
- Patients with active infections in the treatment area

What to Expect During the Treatment Process

Before the Procedure

- We will evaluate your condition through physical exams and imaging tests (X-rays, MRIs).
- If PRP or A2M is recommended, a simple blood draw will be performed.

During the Procedure

- The blood sample is placed in a centrifuge to concentrate platelets or A2M proteins.
- The PRP or A2M is injected directly into the affected area / joint, often with ultrasound guidance for precision.
- The procedure is typically completed within 30–45 minutes.

After the Procedure

- Most patients experience mild soreness at the injection site for 24–48 hours.
- Rest is recommended for the first few days, followed by a gradual return to activity.
- Pain relief and joint improvement may take a few weeks to become noticeable.

Comparing PRP and A2M to Other Treatment Options

Many patients compare PRP and A2M injections to traditional treatments like cortisone shots, hyaluronic acid injections, or surgery. Here's how they differ:

PRP vs. Cortisone Injections

- **PRP:** Natural healing approach with long-term benefits
- **Cortisone:** Quick pain relief but can weaken cartilage over time

A2M vs. Hyaluronic Acid Injections

- **A2M:** Targets the root cause of cartilage breakdown
- **Hyaluronic Acid:** Provides lubrication but does not stop degeneration

PRP / A2M vs. Surgery

- **PRP / A2M:** Non-invasive, minimal downtime, no structural changes to the joint

- **Surgery:** Required for advanced cases but comes with significant risks and long recovery

Frequently Asked Questions About PRP / A2M Therapies

How many injections are needed?

Most patients require 1–3 PRP or A2M injections spaced several weeks apart for optimal results.

How long do the effects last?

PRP effects may last from 6 months to 1 year, while A2M has the potential for longer-lasting benefits in slowing cartilage breakdown.

Are PRP and A2M covered by insurance?

Currently, most insurance plans do not cover PRP or A2M injections as they are considered experimental treatments. However, some clinics offer financing options.

Are there any risks or complications?

Since PRP and A2M come from the patient’s own blood, the risk of allergic reactions is minimal. Mild swelling and discomfort at the injection site are common but temporary.

For more information on this subject, call The Zehr Center for Orthopaedics at 239-596-0100 or visit www.zehrcenter.com. The information contained herein is compiled from a variety of sources, including an artificial intelligence language model. It may not be complete or timely. It does not cover all diseases, physical conditions, ailments, or treatments. The information should NOT be used in place of a visit with your healthcare provider, nor should you disregard the advice of your health care provider because of any information you read on this topic.