

Alpha-2-Macroglobin (A2M)

Alpha-2-Macroglobin (A2M) is a plasma protein that naturally occurs in our blood that helps protect cartilage from degradation. A2M helps slow down the progression of osteoarthritis (OA) by slowing down cartilage loss. It acts as a biological “shield” to inhibit destructive enzymes that break down cartilage and provides growth factors to stimulate healing. This therapy aims to reduce pain, inflammation, and degeneration in conditions like osteoarthritis and other musculoskeletal injuries.

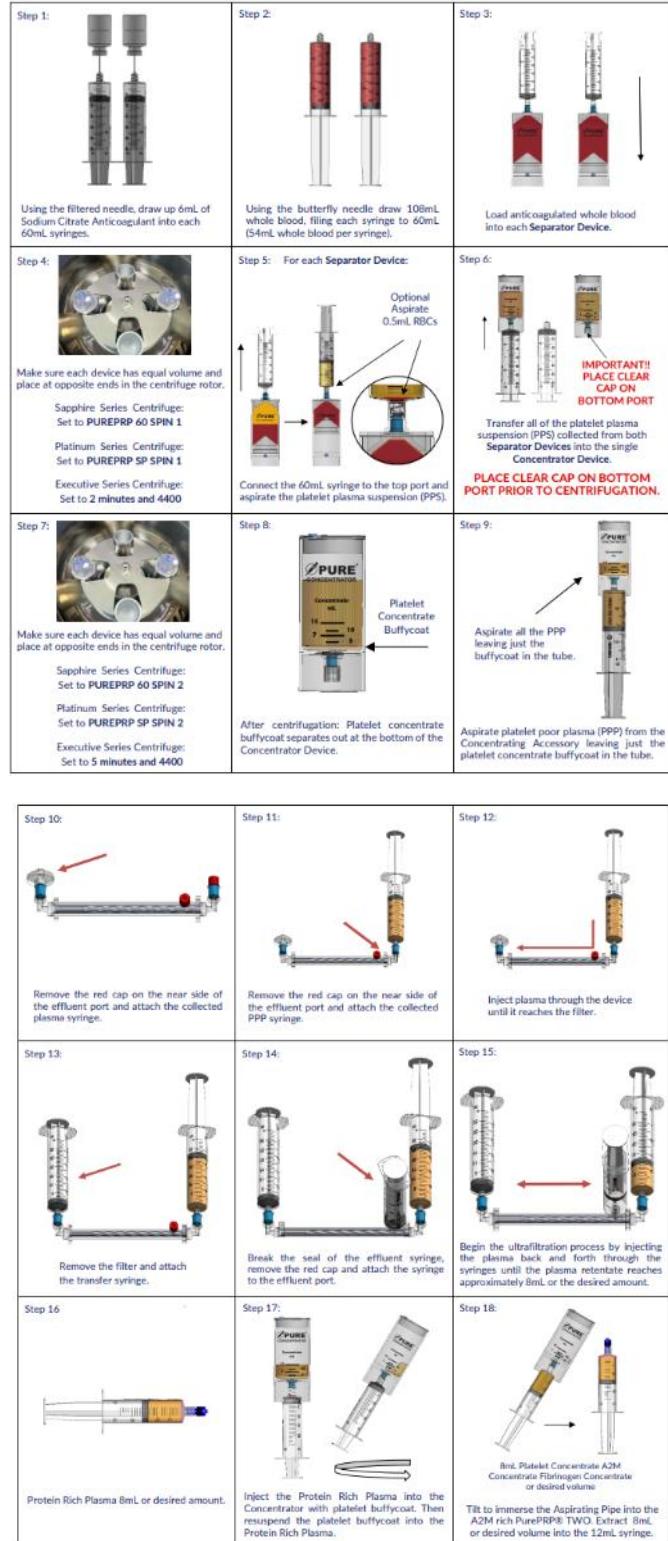
The treatment uses your own blood components, making it a biocompatible therapy with minimal side effects. It can help delay or avoid the need for surgery. Patients will need to arrive 15 minutes before appointment to sign their consent and fill out a questionnaire if not already done so. The whole procedure takes about an hour and a half to two hours in the clinic. The results are typically evident within 6 weeks.

Product: Emcyte A2M

- Mainly used for mild to moderate Osteoarthritis
- Blood draw:
 - 120cc of blood is drawn (total of 3 60cc syringes)
 - 7cc of Anticoagulant (ACD-A) is in each syringe to help prevent your blood from clotting.
- Spin time: 10 minutes
- Concentration time in the Filter: 30-45 min
- Total Time: 1.5-2 hours

Alpha-2-Macroglobin (A2M) PRP

- What is A2M?
 - A2M is a protease inhibitor that is naturally produced by your body. It acts as a defense mechanism for enzymes that degrade the cartilage in arthritic knees. While this protein is in our blood naturally, the molecule itself is too large to enter the joint space in therapeutic quantities. Thus, by concentrating and injecting directly into the joint, the molecule is able to stay in the joint space. This allows the A2M to stop the progression of OA by preventing cartilage loss.
- How does the patient know if he/she is a good candidate?
 - Early to moderate osteoarthritis of the knee joint and spine
 - Recurrent knee joint effusions (swelling)
 - Persistent knee or back pain
- Where and how long is the procedure performed?
 - The procedure is performed in clinic or in conjunction with surgery and takes about an hour and a half to two hours.
- What is the procedure?
 - First, a phlebotomy technician will draw your blood, and then the blood is spun down in a centrifuge to separate the platelets from your red and white blood cells. After that, the platelet plasma is transferred to a filter to isolate the A2M from the plasma. It will then be ready to inject into your site of injury.
- Are there any side effects from PRP?
 - Very low risk factor for infection
 - May have some increased pain, stiffness, and swelling after the procedure.
- Is there anything the patient needs to do to prepare for the procedure?
 - Discontinue all NSAIDs and supplements 7 days before procedure.
 - Make sure the patient begins to hydrate 24-72 hours before the procedure to ease the blood draw.
- What is the down time after the procedure?
 - Patients may feel increased pain, soreness, or stiffness for 24-72 hours post injection.
 - The patient can take Tylenol and ice the site if there is any discomfort after the procedure.
 - Can resume NSAIDS 2 weeks post injection.
- When will the patient start to feel better from the injection?
 - Could take up to 6 weeks to feel the effects



Please contact our office at 404-355-0743 ext. 1332 if you have any questions.

A2M PRP Instructions

Pre-Procedure

- Discontinue all NSAIDS, this includes supplements (Advil, ibuprofen, Aleve, Naprosyn, aspirin) at least **7 days** prior to procedure.
- Increase fluid intake 48-72 hours prior to scheduled procedure.
- Dietary restrictions are NOT necessary before or after procedure. **You must eat breakfast and lunch before your procedure.**
- It is medically recommended that you arrange for a driver if you are undergoing a right lower extremity injection or bilateral upper extremity injections.
- Take 1,000mg of Tylenol, if tolerated, 1 hour prior to the procedure.
- Arrive 15 minutes prior to the procedure in order to sign the consent form.

Post-Procedure

- It is not unusual to have pain following an injection of PRP for 24-72 hours.
 - o Tylenol you may take 1000mg (do not exceed 3,000mg daily) will help minimize the discomfort.
- You may resume use of NSAIDS and Supplements **2 weeks** following the procedure, unless your physician specifies otherwise.
- Physical therapy can be beneficial treatment following administration of PRP. Inquire with your physician if physical therapy is appropriate for your diagnosis and treatment plan.
- Strenuous physical activity should be avoided for **2 weeks** following the procedure. You may participate in everyday activities, such as normal everyday walking, grocery shopping, etc.
 - o Avoid any activity that will increase your heart rate or involve weights for 2 weeks.
- On average, most patients report relief from PRP therapy 4-6 weeks from the time of injection.
 - o Remember, we are looking for long-term results rather than short-term results!
- Make a follow-up appointment with your physician 6-8 weeks following the procedure.

Please contact our office at 404-355-0743 ext. 1332 if you are concerned with increasing redness, swelling, fever, and/or pain.

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A2M Contraindications

- Anti-inflammatories – stop taking **7 days before and 2 weeks after**
 - Aspirin
 - Motrin
 - Advil/ Ibuprofen
 - Aleve
 - Naprosyn
 - Naproxen
 - Diclofenac (ex: Voltaren gel)
 - Meloxicam/ Mobic
 - Celebrex
 - Daypro
 - Feldene
 - Lodine (Etodolac)
 - Orudis
 - Indomethacin (Tivorbex)
 - Natural remedies (ex: turmeric, Boswellia extract, fish oil)
- Blood Thinners/ Anticoagulant: Discuss with your prescribing physician when to discontinue the following:
 - Xarelto
 - Warfarin
 - Eliquis
 - Pradaxa
 - Heparin
- Oral Steroid: need to be off Steroids **7 days before and 2 weeks after** procedure
- No restrictions on Semaglutides/GLP1
- Wait at least one month after Cortisone (steroid) Injection!
- No restrictions on antibiotics, but preferably not on antibiotics during the procedure.
- History of Metastatic Conditions like cancer or disease. Discuss with your physician and please get clearance from Oncologist.
- History of severe liver disease
- Septic arthritis
- History of Autoimmune disease. Discuss with your physician and discuss with Rheumatologist.
 - Certain medications prescribed for autoimmune conditions may reduce the effectiveness of A2M treatment.

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Post-A2M Injection Instructions

- It is normal to experience increased pain or soreness after the injection; this typically resolves within a few days.
- Do not use any prescription or over the counter anti-inflammatory medicines (NSAIDS) for **2 weeks after injection** such as: Aspirin, Motrin, Advil, Ibuprofen, Aleve, Naprosyn, Naproxen, Voltaren, Diclofenac, Meloxicam, Mobic, Celebrex, Daypro, Feldene, Lodine, Orudis and Ansaid. This includes supplements such as: Omega-3, Ginger, Turmeric, Spirulina, Vitamin A, Bromelain, and Capsaicin.
- You may use Tylenol (Acetaminophen) as needed for discomfort. 1,000mg every 8 hours as needed for pain. Do NOT exceed 3,000mg daily. If Tylenol does not help with the pain, please call your physician as they may be able to prescribe you different medications.
- Call the physician if you develop drainage from the injection site, bleeding, redness, or fever. You may experience some localized swelling and bruising at the injection site that will take 3-7 days to resolve.
- On average, most patients report relief from PRP 4-6 weeks from the time of the injection. Remember, we are looking for long-term results rather than short-term results! Please do not hesitate to call or contact us should you have any questions or concerns throughout your recovery.
- Continuing everyday activities (such as gentle range of motion, normal walking, grocery shopping, walking your dog slowly/short distances) is okay. Avoid any activity that will increase your heart rate.
 - **Strenuous physical activity (anything that increases your heart rate) should be avoided for 2 weeks following the procedure.**
 - For upper extremity procedures do not do any repetitive motion, pulling, tugging, grasping or gripping with the upper extremity for at least 2 weeks or instructed by your physician.
 - For lower extremity procedures (injections into the hip, thigh, knee, ankle, and foot) high intensity or weighted exercising should be avoided for 2 weeks after injection.
 - Slowly ease back into activity as tolerated after 2 weeks. Physical therapy can be beneficial in this process. We are happy to provide a referral for PT, to commence 2

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weeks after the procedure. Ask your physician if PT would be beneficial for you and they can provide you with a referral.

- No restrictions on showering/bathing after the injection.
- Please discuss with your physician when to discontinue braces, slings, or crutches if given. Gentle range of motion is recommended, as we do not want your joint to become stiff. Ideally, discontinue after 2-4 days, but your physician will provide you with this information.
- Make a follow-up appointment with your physician 6-8 weeks following the procedure.
- Please contact our office at 404-355-0743 ext. 1332 if you have any questions.