NONSURGICAL ORTHOPEDICS — KEY WEST CONCIERGE ORTHOPEDICS

Platelet Rich Plasma (PRP)

Platelet-Rich Plasma (PRP) Injections: Overview and Applications

Clinical Applications

Platelet-rich plasma (PRP) is made from your own blood. A small sample is spun in a centrifuge to concentrate the platelets and their growth factors. The PRP is then injected into injured or arthritic tissue to promote healing.

Mechanism of Action

Platelets release growth factors such as PDGF, TGF-β, and VEGF. These are thought to calm inflammation, activate the cells that build connective tissue, and spur new blood vessel growth to support repair.

What the Evidence Shows

The strongest evidence supports PRP for arthritis, tendonitis, and tendon healing. A 2016 systematic review in *Arthroscopy* (Meheux and colleagues) found PRP improved knee arthritis pain and function more than hyaluronic acid or placebo injections. Results vary, and improvement is not guaranteed.

Procedure

PRP is prepared with the EmCyte Sapphire Series centrifuge and the EmCyte PurePRP Supraphysiologic system with AspiraDome. Supraphysiologic means the platelets are concentrated well above their normal level in blood.

About 52 cc of blood is drawn from a vein and spun. The platelet-rich layer is collected in a sterile syringe. After the injection site is confirmed with you, the skin is cleaned and draped in sterile fashion. The PRP is then injected, typically about 7 cc for a joint, and the site is bandaged.

Therapeutic Indications

- **Orthopedic Injuries**: Arthritis and joint degeneration, chronic tendinopathies (e.g., tennis elbow or rotator cuff pathology), muscle strains, and ligament injuries.
- **Before and After Surgery**: May support soft tissue and musculoskeletal healing.
- **Osteoarthritis**: May reduce synovial inflammation and pain and improve function.
- **Hair Restoration**: May stimulate hair follicles in androgenic alopecia and support regrowth after a transplant.
- **Cosmetic Use**: Employed in facial rejuvenation

Efficacy Timeline

Clinical effects manifest gradually and may take up to 6 weeks for joints and up to six months for scalp applications. Repeat injections are often necessary.

Safety Profile

PRP is generally well tolerated because it comes from your own blood. Possible risks include:

- A temporary flare of pain or inflammation
- Swelling, stiffness, bruising, or bleeding
- Infection, including joint infection
- Injury to a nearby nerve, blood vessel, tendon, muscle, or cartilage
- Lightheadedness or fainting
- Reaction to skin prep or adhesive
- No improvement, or symptoms that worsen
- Need for more injections, procedures, or surgery

FDA Status and Cost

PRP is not an FDA-approved drug. The FDA has cleared the EmCyte device that prepares it, but not PRP itself for any condition. PRP may be considered investigational for some uses. Medicare and many insurance plans generally do not cover it, so you are responsible for the cost. Dr. Pirozzolo reviews the benefits, risks, and alternatives with you before treatment.

Pre-Procedure Guidelines

Patients should be well-hydrated and consume a meal before the procedure to reduce the risk of lightheadedness during the blood draw. Discontinue all anti-inflammatory medications at least 5 days prior unless medically necessary or prescribed for a heart, neurologic, or other essential condition. Corticosteroids should be avoided for a minimum of 14 days, as they may impair platelet activity and compromise PRP effectiveness.

Post-Procedure Guidelines

- Take it easy for the rest of the day.
- Early on, avoid running, jumping, heavy weight training, long walks, and other strenuous leg activity.
- Put weight on the leg as comfort allows unless told otherwise.
- Gentle heat may be used for 20 minutes at a time, with at least 20 minutes off.
- Avoid aspirin, ibuprofen, naproxen, and similar medicines for about 5 to 7 days unless medically necessary or prescribed for a heart, neurologic, or other essential condition.
- Acetaminophen (Tylenol) may be used for discomfort if it is safe for you.
- Pain, stiffness, or soreness may increase for the first several days.
- Resume range-of-motion, strengthening, and rehab exercises gradually, following your post-PRP plan.

Follow-up is recommended to assess your response and the need for further treatment.

Related reading: a sports medicine view of BPC 157.

Contact Key West Concierge Orthopedics to reach out to Dr. Jason Pirozzolo or schedule a Concierge Care without the Concierge Fee™ appointment. Check out

Nonsurgicalorthopedics.com and TopOrthoDocs.com to continue your research.