



PRP (Autologous Blood)

PRP stands for platelet rich plasma. The medical community has been using PRP since the 1970s. At first, it was used as a surgical glue, and since then, it has been used by dental surgeons to enhance wound healing in jaw reconstruction.

Orthopedic surgeons started using PRP in the late 90s to repair bone fractures experiencing delayed healing, and eventually for chronic tendinitis, partial tears (tendon ligaments, muscles), cartilage damage, and osteoarthritis. Recently, it has also been used as a cosmetic procedure (face and scalp).

Platelets contain various components that are effective in tissue repair:

- Connective tissue growth factor (effective on cartilage, tendons, ligaments, bone growths)
- Insulin-like growth factors: IGF-1 and IGF-2 (increase tissue proliferation, decrease inflammation)
- Vascular endothelial growth factor
- Epidermal growth factor (EGF)
- Fibroblast growth factor (helps wound healing, aesthetics)
- Keratinocyte growth factor (helps wound healing, aesthetics)
- Interleukin 8
- Transforming growth factor beta (TGF β)

PRP is an elective treatment for sub-acute and chronic conditions. PRP promotes increased healing of the damage tissue by bringing growth factors to the site of injection, extracting mesenchymal stem cells (MSC) from the blood vessels and increasing stem cell proliferation and blood supply.

Before injecting the PRP, the platelets are “harvested”. This involves a basic blood draw from the patient. The blood is then put inside a special centrifuge machine (that is FDA approved). This process takes about 20 minutes. Because it is the patient’s blood that is used in the procedure (autologous), PRP injections are very safe.

Tissue takes 6-12 weeks to heal. After 6 weeks, a second dose of PRP may be injected depending on the outcome of the first procedure.

Examples of indication for PRP:

- Osteoarthritis (knee, hip, ankle, shoulder, etc.)
- Small meniscus tear
- ACL sprains (not a complete tear)
- Partial tears of tendons (hamstrings, tibialis posterior, Achilles, patellar, rotator cuff)
- Chronic tendinopathy (epicondylitis, De Quervain, plantar fasciitis)
- Wrinkles
- Certain form of alopecia (hair loss)

Contraindications:

- Wound or infection
- Coagulation disease

After the PRP procedure:

- Do NOT ice the area for 2 days
- Do NOT take non-steroidal anti-inflammatory medicine (Ibuprofen, Aleve, Advil, etc.) for four weeks

Bibliography:

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