

Introduction

What is plasma and what are platelets?

Plasma is the liquid portion of whole blood. It is composed largely of water and proteins, and it provides a medium for red blood cells, white blood cells and platelets to circulate through the body. Platelets, also called thrombocytes, are blood cells that cause blood clots and other necessary growth healing functions.

What is platelet-rich plasma (PRP) and what are PRP injections?

Platelet-rich plasma (PRP) therapy uses injections of a concentration of a patient's own platelets to accelerate the healing of injured tendons, ligaments, muscles and joints.

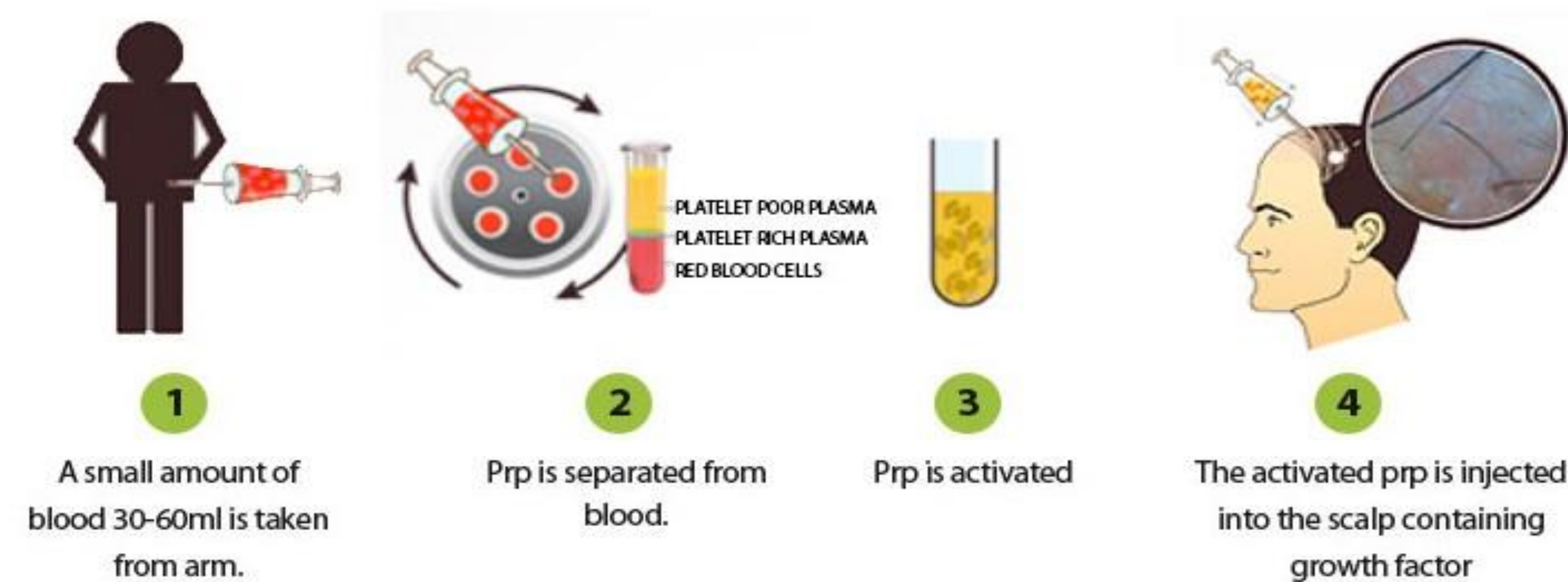
Purpose

- ❖ **Hair loss:** Doctors have injected PRP into the scalp to promote hair growth and prevent hair loss.
- ❖ **Tendon injuries:** Tendons are tough, thick bands of tissue that connect muscle to bone.
- ❖ **Acute injuries:** Used PRP injections to treat acute sports injuries, such as pulled hamstring muscles or knee sprains.
- ❖ **Postsurgical repair:** Sometimes doctors use PRP injections after surgery to repair a torn tendon (such as a rotator cuff tendon in the shoulder) or ligaments (such as the anterior cruciate ligament, or ACL).
- ❖ **Osteoarthritis:** Doctors have injected PRP into the knees of people with osteoarthritis.

Process

1. A healthcare professional will draw a sample of your blood. The amount of the sample depends on where the PRP will be injected. For example, the amount of blood taken for injection into the scalp for one study was 20 milliliters.
2. The blood is placed into a centrifuge. This is a machine that spins around very quickly, causing the blood components to separate. The separation process takes about 15 minutes.
3. A technologist takes the separated plasma and prepares it for injection into the affected area.
4. Doctors will often use imaging, such as ultrasound, to pinpoint specific areas for injection, such as the tendon.

HARVEST → SEPARATE → ACTIVATE → RETURN



Side Effects

Because PRP involves injecting a substance into the skin, there are potential side effects. PRP is autologous, which means it contains substances that come directly from your own body. This reduces the risks for an allergic reaction that can occur from injecting other medications, such as cortisone or hyaluronic acid. However, there are risks from the injection itself, including:

1. Infection
2. Nerve injuries
3. Pain at the injection site
4. Tissue damage



Summary

Plasma is the liquid portion of whole blood Platelet-rich plasma (PRP). It is used for several purposes including hair loss, tendon injuries and others. There are a few risks from PRP injections including infection and nerve injuries.

References

https://www.hss.edu/condition-list_prp-injections.asp

<https://www.healthline.com/health/prp#purpose>