

Patient Information Leaflet

Platelet Rich Plasma (PRP) for treatment of hair loss

Hair is a key component in body self-image and is important in the expression of individuality and perception of attractiveness. Hair loss has been shown to have a significant impact on psychological well-being and quality of life. The current options of treatment for hair loss include prescription drugs (partial effect) and surgical hair restoration (addresses symptoms but not the underlying medical problem). Platelet rich plasma is a newer treatment which has shown benefit in multiple recent studies in hair restoration.

What is Platelet Rich Plasma?

Platelet-Rich Plasma (PRP) refers to the use of patient's own platelet cells (autologous) from their blood to stimulate hair growth. Platelets are a part of our blood cells and they are rich in various growth factors and cytokines that have the potential to stimulate hair growth. PRP is helpful for individuals with hair thinning. Current estimates suggest that a benefit is attained in at least 30-40% of selected patients. For some patients, it can provide a good option when hair transplantation is not possible.

What causes growth in PRP?

The PRP specific growth factors or proteins that induce hair growth include:

- Platelet-Derived Growth Factor (PDGF) – promotes blood vessel growth, cell replication & skin formation
- Vascular Endothelial Growth Factor (VEGF) – promotes blood vessel formation
- Epidermal Growth Factor (EGF) – promotes cell growth and differentiation, blood vessel formation and collagen formation
- Fibroblast Growth Factor – 2 (FGF-2) – promotes growth of specialized cells and blood vessel formation
- Insulin-like Growth Factor – (IGF) – a regulator of normal physiology in nearly every type of cell in the body

Who is a candidate for PRP?

In general, PRP is suitable for:

- Individuals with hair thinning who do not wish to start Minoxidil (Regaine) or hormone blocking drugs
- Individuals who have started Minoxidil (Regaine) or hormone blocking medications but stopped on account of side effects.
- Individuals with hair thinning who had an improvement in their hair with Minoxidil (Regaine) or hormone blocking medications and wish to try to achieve even further improvement.
- Individuals who did not have improvement with low level laser light
- Individuals undergoing hair transplantation
- Individuals with scarring hair loss conditions or alopecia areata who did not respond to standard treatment

Does PRP actually help hair loss?

There are two pieces of research that analyse all studies performed to date (Gupta et al. 2017, Giordano et al. 2018). In Gupta's research (2017), which covered four separate studies, the authors concluded PRP was beneficial to treat balding. Giordano et al (2018) looked at six studies of which four were high quality. These showed that PRP treatments were associated with increased number of hairs per square centimetre compared to controls. The authors concluded there was "compelling evidence about PRP treatment for hair restoration in AGA" (androgenetic alopecias).

What is the technique for PRP?

The technique comprises of withdrawal of your own blood (11ml or 22ml) which is then processed into separate blood components (Platelet-Rich Plasma, Platelet-Poor Plasma, Red and White Blood Cells) by centrifuge.

Using a small needle, the platelets are then injected strategically into your scalp in the areas that need improvement.

Is the process time-consuming?

No, collecting the PRP usually takes 10-15 minutes with the treatment itself a further 10 minutes.

How many treatments are required?

Generally an initial 3 treatments (one per month) are advised, followed by a possible fourth treatment a month later and a new assessment by your doctor. This treatment protocol may vary according to age, , diet, genetics, history of smoking and others. Subsequently, maintenance is advised once or twice a year.

What are the side effects of treatment?

The autologous nature of PRP minimizes concerns for disease transmission. Therefore, possible side effects are only due to the injection process itself and the use of local anaesthetic. These, ordered from common to incredibly rare, may include:

- Minor discomfort from blood draw
- Minor redness in the scalp for 2-4 days
- Minor bruising and bleeding at injection sites
- Pain or itching at the injection site
- A temporary headache
- Swelling (around the forehead and around the eyes), discoloration and bruising associated with the procedure (rare)
- allergic reaction to the solution (very rare)
- infection (very rare)
- Injury to a nerve during blood draw (very rare)
- Dizziness or feeling faint (very rare)
- Hair loss (temporary) in the existing hair. This is termed 'shock loss'.

What are the effects of PRP on hair growth?

PRP serves to promote the growth of hair by stimulating the stem cells located in the dermal papilla along with the other cell structures present in the hair follicle. PRP cannot cause growth of new hair follicles once they have died or where they have not existed before.

The use of PRP in hair loss is based its efficacy in increasing hair count, hair thickness and the growth phase of the hair cycle.

Can I have PRP if I have other ongoing treatments?

Inform your doctor if you currently have infections, skin diseases such as lupus or porphyria, severe metabolic or systemic disorders, liver disease, abnormal platelet function (blood disorders), anticoagulation therapy, urticaria, cancer or chemotherapy, chance of pregnancy or are breast feeding, or use steroid injections in the scalp. Consistent use of NSAID drugs within 48 hours of PRP application should be avoided.

When can I see response to treatment?

Since PRP stimulates a biological effect, results should not be expected immediately and are generally visible at 3-4 weeks, with continuous gradual improvement over 6-12 months. Improvement is dependent on follicle conditions, and the initial cause of hair loss.

Can PRP be combined with other treatments for hair loss?

Yes, PRP may be combined with other treatments to stimulate its biological effect.

Is there any recovery time?

There is no downtime or a long recovery process. You may take a warm shower the evening of the treatment. In addition, it is advised to avoid using any harsh dyes or chemicals on your hair for 48 hours. You can generally return to work the same or the next day.