



KERRY SKIN CLINIC
SKIN, HAIR + NAILS SPECIALISTS

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What is PRP Therapy?

PRP (platelet-rich plasma) is a growth factor-based treatment for hair loss that falls under the regenerative medicine umbrella that also includes [stem cell therapy](#). There are three potential sources for growth factors:

1. **Synthetic**, which is currently a proprietary product administered with an ultrasound device.
2. **Exogenous**, generally as exosomes, which are intercellular communication structures that are obtained from bone marrow or placenta, but exogenous also includes plant-based growth factors and other types of exogenous growth factors.
3. **Endogenous**, which is obtained from the patient's own blood. It is the endogenous source that is most well-known as PRP, which is the subject of this page.

Platelets are blood-cell fragments that are critical to normal blood clotting function and that also contain several different growth factors. **Growth factors are proteins** that signal the body to generate specific tissues, such as blood vessels and skin, after an injury, as well as many other functions. With PRP, blood from a patient is centrifuged into separate layers, including red blood cells, plasma, and a buffy coat layer where all the platelets are concentrated. This layer is separated from the others along with a small quantity of plasma and is thus termed platelet-rich plasma, in which the growth factors reside.

Since there is a wide range for **normal platelet levels** (from 150 to 450 per mcl), some PRP samples will have much higher levels of growth factors than others, and this may account for the inconsistent results often seen with this therapy.

The PRP is injected very superficially into the skin of the scalp in areas of [hair loss](#) with the expectation that the growth factors will produce thicker, darker, healthier, and more cosmetically effective hair growth.



Before(left)

and After(right)

PRP Therapy

By: Dr. Robert Haber

FDA Approval

Importantly, while several PRP preparation systems are FDA-cleared for orthopedic indications, their use for hair growth is “**off-label**”, as no data has been submitted to the FDA sufficient to grant clearance for this indication. Off-label treatments allow physicians to legally perform the procedure with adequate patient counseling about the nature of the procedure along with the pros, cons, and limitations associated with that kind of therapy.

An ongoing and possibly perpetual problem is a **lack of standardization** in terms of blood collection, preparation, and administration. There are literally dozens of permutations, and no attempts at standardization have achieved acceptance amongst practitioners.

How Does PRP Work for Hair Loss?

The exact mechanism of action for how PRP promotes hair growth is **unknown**. PRP contains at least six different growth factors, and the individual and synergistic effects of these proteins on hair growth cannot easily be identified. In addition, PRP contains at least 30 other substances, including chemokines, clotting factors, and immune mediators, all or some of which may influence hair growth as well. **Growth factors in PRP** that are most involved in hair growth include Fibroblast Growth Factor (**FGF**), Vascular Endothelial Growth Factor (**VEGF**), and Epidermal Growth Factor (**EGF**). Growth factors can increase the duration of the anagen, the [growth phase of hair](#), and may increase the thickness of the hair shaft.

Who's a Good Candidate for PRP?

As with almost all [non-surgical treatments for hair loss](#), the **best candidates are those with thinning hair** rather than complete baldness and for those who have experienced more recent hair loss. Thinning hair is more common in younger individuals, but anyone with thinning hair loss may benefit from the treatment. As noted earlier, **individuals with naturally high platelet levels** have an advantage over those with lower platelet levels, as the quantity of growth factors administered will be greater in the former group.

PRP Treatment Process

- A PRP visit begins with a clear explanation of the procedure and the signing of an informed consent form. This signifies that the patient understands the risks, benefits, limitations, and alternatives to the procedure.
- Next, a quantity of blood will be drawn, the exact amount being dependent on the system used by the office. While the PRP is prepared, the patient will generally be moved to a treatment room, where local anesthesia will be administered if appropriate.
- The blood sample will be processed according to the protocol specific to the system used, which may involve a single or double spin, and transferred to test tubes or separation containers. When concluded, **there will be three products:** packed red blood cells, platelet-poor plasma (PPP), and platelet-rich plasma (PRP).
- Sometimes, but not always, a small sample will be tested to determine the exact concentration of platelets. The goal is to concentrate the **platelet level 2–6 times higher** than the starting level. There is no consensus on the ideal concentration.
- In some offices, the PRP will be injected as is, while other offices may add a porcine-based extracellular matrix as a stabilizer. This is done to stabilize the PRP proteins and enhance the results. Generally, **at least 6 ml of PRP** will be available to inject.

PRP is often administered along with **microneedling**, another method of stimulating growth factor release. If so, an anesthetic ring block may be administered, or nitrous oxide gas may be administered, to reduce any pain. **The PRP is injected in small quantities of as little as 0.05 ml, allowing as many as 120 injection sites per procedure.** Microneedling will generally follow the PRP injections, if they are administered.

Required Number of Sessions

PRP treatments will always **need to be repeated** to be effective. However, there is no standard treatment interval. A common program is **one treatment session each month for three months, followed by a booster session every six months**. Your practitioner will discuss your recommended treatment program and its rationale.

Post Treatment Care

Avoid using scalp products or [camouflage products](#) prior to the procedure. Patients should avoid anti-inflammatory agents such as NSAIDs and aspirin for up to 14 days after the procedure, as they may interfere with the beneficial effects of PRP.

Benefits and Effectiveness of PRP for Hair Loss

PRP, along with all non-surgical [hair loss treatments](#), **may decrease shedding or result in thicker-looking hair**. Thicker-looking hair can be seen with either an increase in the actual number of hairs present, by an increase in the hair-shaft diameter, or by a combination of both. Not all patients will benefit from growth factor treatments, so some patients experience no benefit. As mentioned above, any benefits noted will only be maintained if ongoing treatments are maintained.

Multiple studies have been published on the effectiveness of PRP. **While some have demonstrated benefits, others have not**. This is not surprising due to the wide variability of protocols and patient characteristics.

In my opinion, PRP is best performed after other non-invasive treatments have already been enlisted, including [minoxidil](#) and [finasteride](#).

Potential Risks and Side Effects

PRP injections are considered to be **very safe**. The substance injected is autologous, meaning it was obtained from the patient's own body, eliminating the risk of blood or tissue borne pathogens. Assuming the procedure is carried out in an aseptic manner, there is little risk of infection from the injections themselves, although it is not possible to sterilize the surface of the scalp. Thus, **local and temporary pain** at the injection sites is the principal risk.

Cost and Considerations

The cost of PRP is quite variable and **can be as little as \$400 or as much as \$1,500 or more per session in the USA**. Comparing costs is difficult, as the equipment used and any additives have a significant impact on the cost to the provider. The skill and experience of the provider are also critical to success. Do not look for the cheapest or the most expensive office, but rather investigate experience and reputation above all.

PRP Before and After Pictures

You can view before and after pictures of female patients below. All were taken six months after three treatments of platelet-rich plasma therapy.



Before(left)

and After(right)

PRP Therapy

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Choosing the Right Provider

As with all aspects of hair loss management, finding an experienced and compassionate provider is critical to success and satisfaction. True hair loss specialists have mastered many approaches to hair loss. Some are very effective and very inexpensive, and when appropriate, these should be recommended first. Unfortunately, some providers see PRP as an easy way to make a profit and recommend this modality when other choices are preferred.

Take the time to determine if you have found an office that provides many treatments for hair loss, and **be wary if only expensive treatments are**

recommended. Visiting the office and meeting with the provider is also critical to determining your best treatment approach. If you are unsure, take the time to meet with other practitioners.

For a consultation with a hair restoration surgeon, access our [Find A Doctor](#) tool, where you can search for an ISHRS member by location.

Expert Opinion

As a practitioner offering PRP treatments for over a decade, I have seen many successes and many failures. It is frustrating that no protocol standardization exists, and none is likely to exist in the future. The cost of properly studying all the variables is prohibitive, and we are thus left to arrive at our own best practices. In my practice, I have a cost-centric approach, meaning if I can effectively treat a patient's hair loss for \$10 per month, which is possible with minoxidil and finasteride, then I do so. For patients that do not respond to those treatments, I then offer PRP and other more expensive modalities, and that often takes place 6 to 12 months after our first visit. Hair loss can be a devastating condition, so above all, each patient must find a doctor that he or she feels comfortable with during what will be a very long journey.

FAQs

Does PRP actually regrow hair?

For most patients, the answer is yes. Some patients will only experience a decrease in shedding, and some patients will not experience any benefit. Unfortunately, there are no guarantees of success.

What are the side effects of PRP for hair loss?

Local pain and temporary swelling may occur at the sites of injection.

What is the disadvantage of PRP?

PRP is an expensive, invasive, and somewhat painful procedure that is not guaranteed to work. When it does work, ongoing treatments will be required to maintain benefits.

How successful is PRP for hair loss?

This is difficult to answer, as so many variables play a factor, and most have not been well studied. Available data suggests that at least 30–50% of patients will experience some benefit.

Who is not a good candidate for PRP?

Individuals who are completely bald in the area of concern are not likely to experience any benefit. Patients with active skin conditions such as skin cancer or pre-cancer, as well as certain systemic diseases, should not undergo PRP.

Can I comb my hair after PRP?

You will be able to gently style your hair immediately following the procedure.

Is PRP better than hair transplant?

There is no procedure that can produce long, thick, dense hair in the recipient zone as well as surgical hair restoration. PRP can be an effective adjunctive treatment for patients undergoing surgery, or using pharmacologic therapy or [photobiomodulation therapy](#).

How many PRP sessions are needed for hair?

There are several commonly accepted protocols, with the most common being three sessions spaced one month apart, followed by booster sessions every six months.

What happens if you stop the PRP?

As with all effective treatments for hair loss, discontinuing the treatment will result in hair loss. Generally, you will only use the hair that the treatment helped grow.

How long does PRP take to regrow hair?

While visible growth can be seen as early as 1-2 months, it can take as long as six months to see a benefit.

Which age is best for PRP?

Patients with thinning rather than full baldness are better candidates for surgery. While younger patients are more likely to fit this criteria, patients of all ages can be considered for PRP.

Can I do shampoo after PRP?

Generally, it is recommended to shampoo gently the morning after the procedure.

Can we go to the gym after PRP?

Light exercise can begin the day after the procedure. Most offices suggest waiting several days before undergoing strenuous exercise.

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This article is based on information from **The International Society of Hair Restoration Surgery (ISHRS):** www.ishrs.org

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