



A NATURAL APPROACH TO FULL-FACE REJUVENATION



Platelet-rich fibrin is a groundbreaking development in natural fillers.

BY KIM NICHOLS, MD, FAAD; EMILY ANNE SCALISE, MA; AND VANESA KODRA, MS, PA-C

As people age, their skin naturally loses volume and elasticity, and collagen production slows. This, combined with years of sun exposure, stress, and other environmental damage, leads to skin laxity, wrinkles around the eyes, drooping of the cheek, prominent nasolabial folds, and jawline sagging and loss of contour. The popularity of cosmetic enhancements to slow these effects has increased exponentially in the global medical aesthetics market, with a market compound annual growth rate estimated at 13% from 2022 to 2027.¹

Many cosmetic practices offer

neurotoxins, dermal fillers, microneedling, laser skin resurfacing, and other modalities to treat aging skin. Patients often worry about looking overly enhanced and seek a natural-looking rejuvenation. According to the annual American Academy of Facial Plastic and Reconstructive Surgery survey, 30% of patients seeking cosmetic enhancement state that looking unnatural is a top concern.²

Marketing geared toward natural-looking results therefore plays an important role in patients' selection of a provider. One approach that practices can use is to create a hashtag with a short branding phrase

on social media. Our practice uses #NaturalAtNichols, which emphasizes our commitment to natural-looking results and reminds prospective patients that our practice's responsibility is to offer products and treatment plans that are consistent with this goal.

A new treatment approach may also help practices align with consumers' desire for natural-looking results. Platelet-rich fibrin (PRF; PRF EZ Gel, CosmoFrance) is a novel, natural injectable that can help patients achieve the natural look they want. PRF is designed to smooth, lift, and volumize skin. Based on our

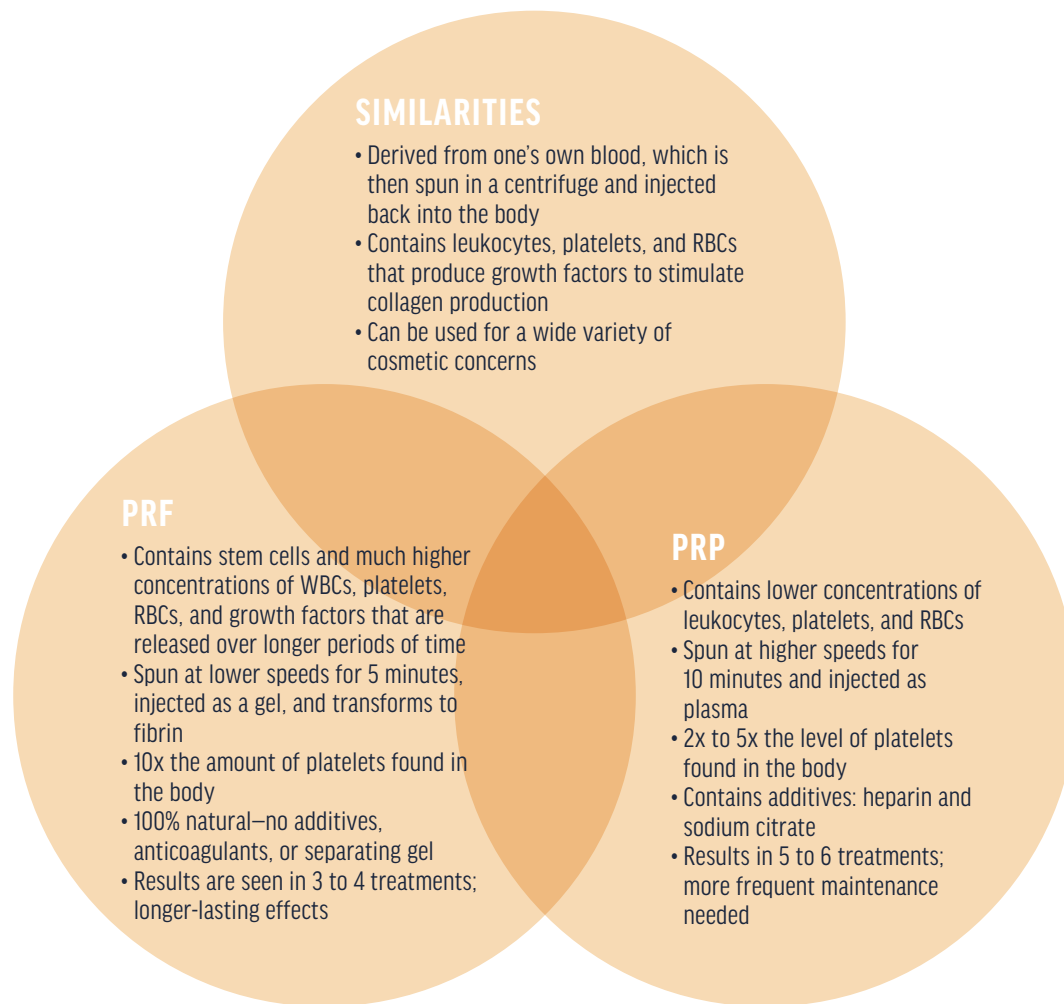


Figure 1. A Venn diagram compares PRF to PRP. Abbreviations: RBCs, red blood cells; WBCs, white blood cells.

experience, PRF delivers on the promise of natural-looking results.

PLATELET-RICH PLASMA VERSUS PRF

PRF EZ Gel is an innovative injectable gel that contains blood products that can help the body produce natural collagen, which can reduce the appearance of wrinkles, improve skin texture, and minimize volume loss. Although similar to the well-known platelet-rich plasma (PRP) injection procedure, PRF has a few key differences that, in our experience, can produce superior results (Figure 1 and Table).

Unlike plasma, PRF is a fibrin clot, which is injected in a gel form. The

fibrin clot releases growth factors slowly, rather than all at once, allowing the body to use those growth factors to regenerate tissue better than with PRP.³ The fibrin clot also contains higher concentrations of proteins, platelets, white blood cells, and mesenchymal stem cells than PRP—all of which further increase the body's natural ability to rejuvenate skin and stimulate collagen production.³ The albumin and fibrin in PRF provide a natural scaffold for leukocytes, platelets, and newly formed tissue cells. PRF also contains vascular endothelial growth factor, platelet-derived growth factor, and transforming growth factor-beta.

Given its fibrin and slow-release growth factors, PRF is highly efficient at building volume, with results achieved in three to four treatments compared to the four to six treatments often necessary with PRP.³

The collection tubes are free of additives and built on a slower centrifugation concept to help preserve cell vitality. PRF may also be mixed with other filler modalities, such as hyaluronic acid or biostimulators, for more dramatic results.³

THE TREATMENT PROCESS

Candidates for PRF treatment seek to maintain youthful skin or reverse the signs of aging with a



Figure 2. A 71-year-old patient concerned about lower face laxity before (left) and after (right) PRF injection. Treatment sites included the jawline and prejowl sulcus.

TABLE. Similarities and Differences Between PRF and PRP¹

	SIMILARITIES	DIFFERENCES
PRF	<ul style="list-style-type: none"> • Derived from the patient's blood • Contains leukocytes, platelets, and red blood cells that produce growth factors to stimulate collagen production • Can be used for a wide variety of cosmetic concerns 	<ul style="list-style-type: none"> • Contains stem cells and higher concentrations of white blood cells, platelets (10x the number found in the body), red blood cells, and growth factors compared with PRP that are released over longer periods of time • Spun at lower speeds than PRP for 5 minutes • Injected as a gel that transforms to fibrin • No additives, anticoagulants, or separating gel • Results are seen in three to four treatments • Longer-lasting effects than with PRP
PRP		<ul style="list-style-type: none"> • Contains lower concentrations of leukocytes, platelets (2–5x the number found in the body), and red blood cells than PRF • Spun at higher speeds than PRF for 10 minutes • Injected as plasma • Contains the additives heparin and sodium citrate • Results in four to six treatments • Requires more frequent maintenance than PRF

Abbreviations: PRF, platelet-rich fibrin; PRP, platelet-rich plasma.

1. Karimi K, Rockwell H. The benefits of platelet rich fibrin (PRF). *Facial Plast Surg Clin North Am.* 2019;27(3):331-340.

natural-looking result. PRF is a great option for patients of either sex and all skin types and age groups. The treatment is a safe and effective way to improve skin firmness and reduce the appearance of skin depressions, undereye hollows, skin rhytids, and acne scars.

Once a patient has been evaluated and deemed an appropriate candidate for PRF EZ Gel, before photographs should be obtained at three fundamental angles: head-on and at 45° and 90° angles. These photographs, procedural planning, aseptic technique, and

anatomic technique are vital. Next, the risks and benefits of treatment are discussed, informed consent is obtained, postprocedural instructions are given, and an explanation of the long-term follow-up plan is provided. Three to four PRF treatments are likely required to achieve optimal results with full-face rejuvenation.³

Treatments should be performed 4 weeks apart to allow the fibrin clot adequate time to release growth factors. After each session, patients may experience some bruising, mild tenderness, or both as well as mild to

moderate swelling, which may last up to 7 days.

Although the results with PRF are gradual, they can last for 2 to 3 years.³ It is recommended that patients return for maintenance sessions, generally one session every 3 to 4 months after the initial series.

INJECTION TECHNIQUE

The PRF EZ Gel kit includes the appropriate blood collection tubes, syringes with needles, and heating and cooling devices. The sterile blood draw must be completed as efficiently as possible (preferably < 90 seconds) so that the blood does not clot too early. In our practice, we follow these steps:

- Blood is drawn into the blue-topped tube (used to isolate PRF) and placed on the cooling device (EZcool, CosmoFrance).
- Blood is drawn into the orange-topped tube (used to isolate albumin) and placed into the centrifuge, where it spins at a rate of 2,600 rpm for 7 minutes.
- Albumin plasma (2.5–3.0 mL) is drawn with the 18-gauge needle on the white syringe and placed in the heating device (EZheat, CosmoFrance), where it is heated to 75 °F for 10 to 14 minutes.
- The blue-topped tube is spun in the centrifuge at 1,100 rpm for 5 minutes.
- The PRF product is drawn with the 18-gauge needle on the

blue-topped syringe and placed in the cooling device.

- Both syringes are connected. The products are transferred to the red 1-mL syringes.

The process should yield approximately 5 mL of albumin/PRF in about 20 minutes, which is just enough time to numb the patient.

For full-face rejuvenation, a 25-gauge microcannula or 27-gauge needle is used to perform an injection into the bilateral temple region, nasolabial folds, jawline, and below the orbit. The total volume of gel used in each area varies depending on the patient's needs. As with any invasive procedure, working in a sterilized field helps to minimize the risk of infection.

LAUNCHING AND MARKETING PRF

All staff members should be well trained and educated about the PRF EZ Gel procedure. At our practice, grand rounds include a live demonstration of the treatment and a review of clinical data, the indications for treatment, side effects, and pricing. It is also important to educate

patients about the new treatment. In our practice, signs are posted in treatment rooms that specify the areas of the face for which PRF may be beneficial, and before-and-after photographs are displayed on our website and in examination rooms (Figure 2).

RISKS AND BENEFITS

Full-face rejuvenation with PRF is a safe, natural, and effective way to combat the signs of aging. PRF has various applications and can be injected safely into areas where injecting other types of filler might be risky, such as under the eyes and at the temple. The risk of vascular occlusion, necrosis, or a hypersensitivity reaction is minimal because PRF does not use synthetic products. Placing the patient's own blood proteins and growth factors back into their skin can kickstart the body's natural process of healing—producing collagen and repairing damage caused by aging. ■

1. Medical Aesthetics Market - Global Outlook & Forecast 2022-2027. ReportLinker. November 2022. Accessed January 13, 2023. www.reportlinker.com/p06364038/Medical-Aesthetics-Market-Global-Outlook-Forecast.html?utm_source=PRN
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 3. Karimi K, Rockwell H. The benefits of platelet rich fibrin (PRF). *Facial Plast Surg Clin North Am.* 2019;27(3):331-340.

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