

# Platelet-rich plasma for cosmetic facial procedures—promising results, but evidence has limitations

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Most studies evaluating platelet-rich plasma (PRP) injection for facial rejuvenation and other cosmetic procedures have reported positive results, according to a critical review in the May issue of *Plastic and Reconstructive Surgery*, the official medical journal of the American Society of Plastic Surgeons (ASPS).

But the research evidence supporting PRP for facial aesthetic procedures has important limitations—especially a lack of standardized PRP preparation and injection techniques, concludes the report by ASPS Member Surgeon Alexes Hazen, MD, and colleagues of the Hansjörg Wyss Department of Plastic Surgery at NYU Langone Health, New York. "More studies are needed to optimize PRP treatment techniques," Dr. Hazen comments, "Until that time, our paper may be useful in guiding clinical practice."

## What's the Evidence on PRP for Facial Cosmetic Procedures?

Platelet-rich plasma injection has been extensively used in various clinical settings, including heart surgery, sports medicine, and wound care. In PRP procedures, a small sample of the patient's own blood is processed to release various growth factors from platelets—specialized blood cells involved in clotting. In recent years, PRP has become a "trending therapy" in aesthetic medicine, according to Dr. Hazen and

colleagues. "Dermatologists and plastic surgeons are using the natural healing properties of platelets to improve the appearance and overall health of skin."

But while PRP procedures are growing in popularity, the research supporting their clinical effectiveness is limited. In a review and update, Dr. Hazen and colleagues analyzed published 22 published studies of PRP for specific types of facial aesthetic procedures.

Fourteen studies evaluated the use of PRP for facial rejuvenation. All studies reported positive aesthetic outcomes with PRP injection, on its own or combined with fat grafting. Reported benefits of PRP included improvements in the volume, texture, and tone of the facial skin and decreased appearance of wrinkles.

Six studies using PRP to treat a specific type of hair loss called androgenic alopecia (male or female pattern baldness) reported good results in terms of hair regrowth. "Androgenic alopecia is perhaps the most convincing indication for treatment with PRP," according to Dr. Hazen and colleagues. Another two studies found positive results with the use of PRP to treat facial acne scars.

But despite these encouraging results, the review highlights several limitations of the evidence on PRP for facial aesthetic procedures. Methods of PRP preparation and injection varied considerably; some reports provided no information on the preparation technique. The studies also lacked standardized, objective assessments of skin quality before and after PRP treatment. Other issues included a lack of control (comparison) groups and follow-up to determine whether the benefits of PRP persist over time.

Thus despite many studies reporting promising results, the true value of these procedures remains open to question. "To date, the question of

whether PRP's cocktail of growth factors generates a more youthful appearance has not been definitively answered," the researchers write. They note that PRP injection appears to be safe, with a low complication rate.

Dr. Hazen and coauthors emphasize the need for formal randomized, controlled trials of PRP of [facial cosmetic procedures](#)—including standardized preparation techniques, standard outcome measures, and longer follow-up. They conclude: "In the interim, this review presents a consolidation of PRP treatment techniques currently in use, to help guide physicians in their own clinical practice."

**More information:** Catherine C. Motosko et al. Evaluating Platelet-Rich Therapy for Facial Aesthetics and Alopecia, *Plastic and Reconstructive Surgery* (2018). [DOI: 10.1097/PRS.0000000000004279](https://doi.org/10.1097/PRS.0000000000004279)

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