CAIRNS COSMETIC CLINIC

Exploring PRP for Nasal Inflammation, Allergy Relief, and Smell Restoration

Platelet-Rich Plasma (PRP) is emerging as a promising regenerative therapy for sinus and allergy-related conditions. By delivering a concentrated dose of the body's own anti-inflammatory and healing factors, PRP may help calm chronic nasal inflammation, restore mucosal integrity, and support long-term respiratory function — all without the use of drugs or surgery.

Once primarily used in aesthetics and joint repair, PRP is now gaining attention in ENT care for its ability to promote tissue repair and improve symptoms in patients with ongoing congestion, irritation, or smell disturbances.

What the Research Shows

Dizdar et al. (2023)
PRP applied post-septoplasty reduced crusting and congestion, and improved mucociliary clearance.
→ Suggests PRP supports healing and inflammation control within nasal tissue — even outside major surgical repair.

Kim et al. (2021)
Injections into inferior turbinates in patients with atrophic rhinitis led to significant improvement in hydration, nasal blockage, and mucociliary function.
→ Demonstrates PRP's ability to regenerate dry or damaged nasal mucosa — often seen in allergy-affected individuals.

Mostafa & Ayad (2020)
In a cohort of 78 patients with persistent nasal symptoms, PRP led to dramatic improvements in obstruction, crusting, smell loss, and epithelial function over 6 months.
→ Shows PRP's restorative potential for long-standing nasal dysfunction.

Lechien et al. (2025)
Patients with smell loss following viral inflammation (e.g. COVID) showed significant improvement in anosmia, hyposmia, and parosmia after PRP to the olfactory cleft.
→ Suggests potential crossover benefit in allergy-related smell disruption.

Maniaci et al. (2024)
A systematic review confirmed PRP's effectiveness in smell recovery and nasal lining restoration across multiple inflammatory and post-viral conditions, with minimal side effects.
→ Reinforces PRP's safety and potential in outpatient sinus care.

How PRP May Help in Sinus & Allergy-Related Conditions

Chronic inflammation from hay fever or allergies
*→ PRP is rich in natural anti-inflammatory messengers like **TGF-β and interleukins**, which can help **calm the overactive immune response** seen in allergic rhinitis. This may reduce swelling, irritation, and the "blocked nose" feeling that many patients experience day to day.*

Dry, crusted, or congested nasal tissue
*→ PRP stimulates **new blood vessel growth (angiogenesis)** and encourages **epithelial regeneration** — meaning it helps rebuild and rehydrate the thin, irritated lining of the nose. This is particularly helpful for patients with long-term nasal dryness from allergy sprays, pollution, or antihistamine use.*

Poor sinus drainage and ongoing congestion
*→ The nose has a self-cleaning system called **mucociliary clearance**, which moves mucus and allergens out of the sinuses. PRP has been shown to **restore this function**, helping reduce blockages, pressure, and the risk of recurrent sinus infections.*

Loss or distortion of smell (anosmia or parosmia)
*→ PRP may support the repair of **olfactory nerve endings** damaged by inflammation (from allergies or viruses). Growth factors in PRP encourage **neural tissue regeneration**, potentially helping patients regain their sense of smell or reduce unpleasant distortions.*

Polyp-prone or inflamed nasal tissue
*→ While more research is needed in non-surgical cases, PRP may help **stabilize the nasal lining** by reducing chronic inflammation and promoting healthier tissue regeneration. This could help reduce the likelihood of polyp recurrence or slow progression in those trying to avoid repeat surgery.*

Who This May Benefit

PRP may be a valuable option for patients looking for a natural, regenerative way to manage chronic nasal issues — especially when conventional treatments fall short. This includes:

- ***Patients with persistent hay fever or allergic rhinitis** seeking relief from congestion and inflammation without relying solely on sprays or antihistamines*
- ***Individuals with dry, irritated, or crusted nasal passages**, often worsened by overuse of decongestants or long-term allergy symptoms*
- ***People experiencing ongoing smell loss or distorted smell** following viral illness, allergy flare-ups, or inflammation*
- ***Those prone to nasal polyps** who want to reduce recurrence risk or delay further surgery through a supportive, anti-inflammatory approach*
- ***Anyone seeking a safe, drug-free treatment** that uses their own blood to naturally promote tissue healing, reduce inflammation, and restore nasal function*

This regenerative therapy may be especially appealing for patients looking to avoid pharmaceuticals, support long-term sinus health, or explore evidence-based alternatives in a clinical setting.

What the Evidence Shows — and What's Still Evolving

*Most of the current studies have looked at PRP's effects in related nasal conditions like **surgical recovery**, **atrophic rhinitis**, and **post-viral inflammation**. These have shown consistent benefits: reduced crusting, faster healing, improved smell, and better sinus function.*

*While there are **no large-scale trials yet** focused specifically on seasonal hay fever or non-surgical allergic rhinitis, the biological mechanisms — anti-inflammatory action, tissue repair, mucosal*

*regeneration — make it a **promising option worth exploring**, especially in patients looking for safe, drug-free alternatives.*

At its core, PRP has been shown to reduce inflammation, stimulate tissue repair, and support healthier nasal function — all key goals in managing chronic sinus and allergy-related issues. While more targeted research on allergic rhinitis would strengthen the evidence base, current findings make PRP a compelling regenerative option to consider, particularly for patients seeking longer-term relief or alternatives to medication.

References

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