



**ADVANCES IN ACNE TREATMENT:
THE LATEST OPTIONS FOR
AESTHETICS PRACTICES**

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According to the U.S. National Institutes of Health, about 80 percent of people aged 11 to 30 experience acne outbreaks at some point in their lives.

Leading treatments (like topical products, fillers, and resurfacing procedures) can mitigate these conditions and their effects—such as acne scarring and collagen loss—to some degree.

But research is continually expanding our avenues for treating acne vulgaris.

This report covers the best and latest treatments, from the basics of acne care, to innovations in light-based technology, to advancements in treatment devices, that will enable you to raise the bar for your patients with up-to-the-minute research in aesthetic medicine.

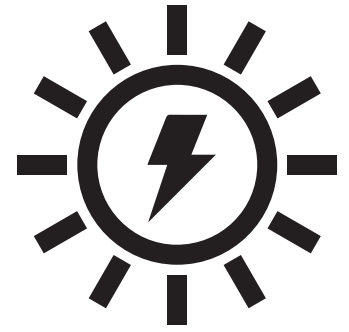


CAUSES OF ACNE

Acne is among the most frequent reasons for visits to aesthetic professionals. Acne vulgaris, or common acne, begins when the pores become plugged with sebaceous secretions. These clogged pores can become inflamed and infected, producing pimples and cysts. While acne is most common among adolescents, it is also known to occur or persist into adulthood.

Because of the visible nature of acne, more and more people are seeking treatment to address lesions, inflammation, and scarring. Let's look at some of the most promising new directions for treatment of these conditions.

NEW DIRECTIONS FOR TREATMENT OF LESIONS, INFLAMMATION, AND SCARRING



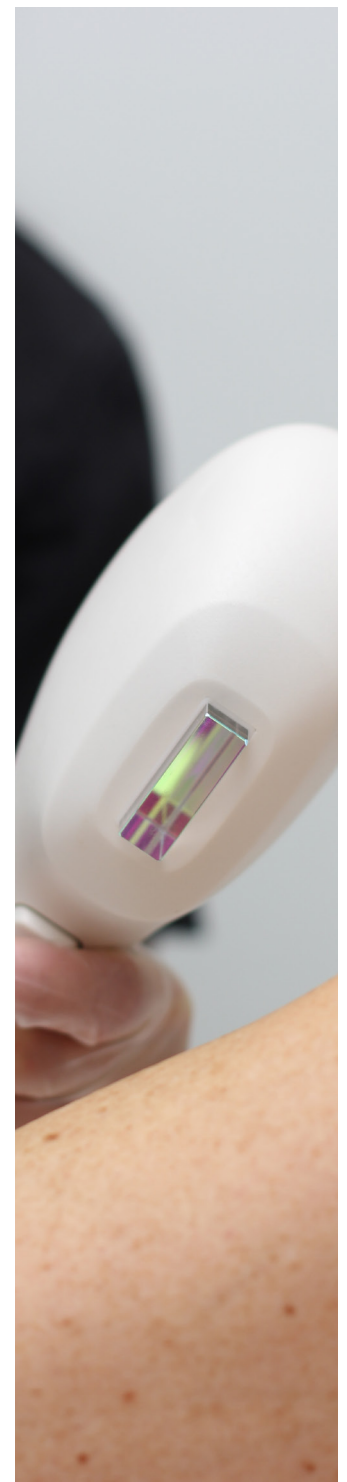
LIGHT AND ENERGY THERAPIES FOR ACNE:

The failures of more traditional acne treatments have propelled researchers towards investigating more heavy-duty options. Topical and over-the-counter treatments are inconsistent in terms of their efficacy and effects, and have been widely criticized on issues like bacterial resistance and recurrence. Consumers and providers alike are on the lookout for newer, safer, and more technological capable treatments. Light and energy therapies are among this new crop of advanced acne-fighting options.

Laser systems, including near-infrared and radio frequency (RF) devices, and light-based therapies, such as blue light and intense pulsed light (IPL), are now commonly used to treat acne. These therapies can inactivate the bacteria associated with acne, particularly when paired with photosensitizing agents.¹

LED blue light treatments are gaining popularity—there are even at-home treatments available. But there's no replacement for the muscle of professional equipment. Powerful blue light used with photoactivating gel is recognized as highly effective for treating moderate to severe acne with sustained clinical response. A 2016 multi-center, randomized clinical study confirmed its potency resoundingly.²

The main difference between IPL and laser treatments comes down to the number of wavelengths they use. IPL uses multiple wavelengths per pulse, allowing it target deeper layers of skin, while laser treatments just use one wavelength, and tend to only target the top layers.³

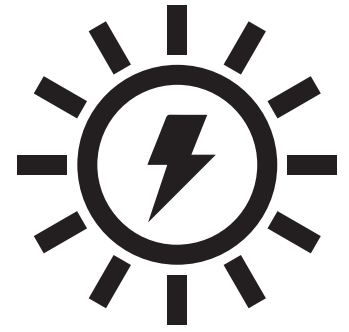


1 Parth S, Niyati A, Rohan L, Santhanakrishnan S. Acne Vulgaris: An Update on Current Therapy and Advances in Treatment Strategies. *Int. J. Pharm. Sci. Rev. Res.* 2016 Sept-Oct; 40(1): p. 234-244.

2 Antoniou C, Dessinioti C, Sotiriadis D, Kalokasidis K, Kontochristopolous G, Petridis A, et al. A multicenter, randomized, split-face clinical trial evaluating the efficacy and safety of chromophore gel-assisted blue light phototherapy for the treatment of acne. *Int. J. Dermatol.* 2016 Dec; 55(12): p. 1321-1328.

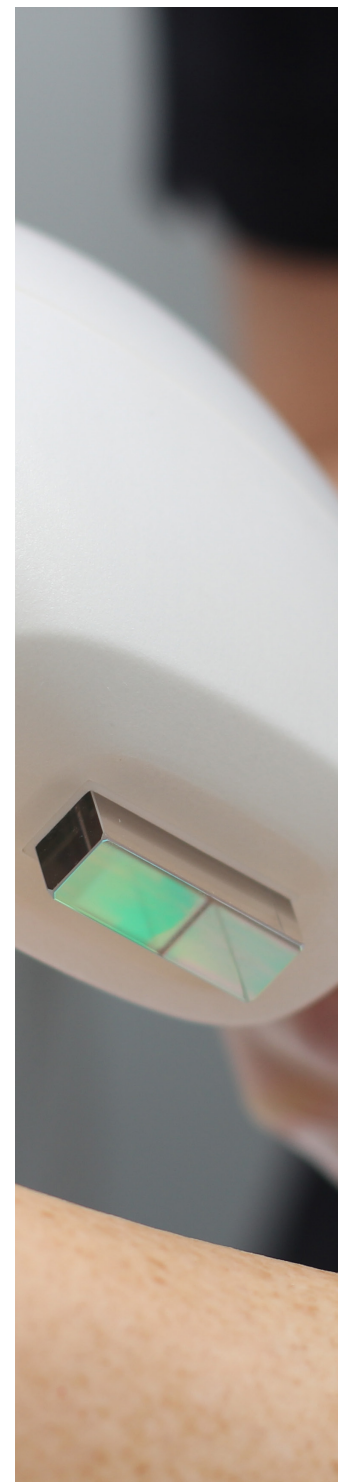
3 Ngan V. DermNet New Zealand. [Online].; 2005 [cited 2017 July 24. Available from: <https://www.dermnetnz.org/topics/intense-pulsed-light-therapy/>.

NEW DIRECTIONS FOR TREATMENT OF LESIONS, INFLAMMATION, AND SCARRING



Recent research has pushed laser and IPL procedures to the forefront of acne treatment. The results of a single-blind study comparing one type of laser (neodymium-doped yttrium aluminium garnet, or Nd:YAG) to IPL, consisting of 74 patients, found that both treatments are safe and effective for active acne, with no significant difference visible between the results of each.⁴

As well, one recent study using IPL at two different energy densities—or fluences—illuminates the effectiveness of such treatment. It demonstrates that the use of IPL at subnormal fluences can yield similar results to treatments at normal fluences, opening the door for expanded IPL-based treatment opportunities on the horizon. The two fluences, 35 J/cm² and 20 J/cm², both normal and subnormal, were compared side by side on the faces of 45 people aged 16 to 28 with inflammatory acne.⁵ After four treatments of IPL at two-week intervals, researchers concluded that both were effective with no statistically significant differences in the outcomes for the two fluences. Promising findings like these are expected to encourage greater usage of IPL for acne treatment.



4 Mohamed E, Tawfik K, Elsaie M. Intense Pulsed Light Versus 1,064 Long-Pulsed Neodymium: Yttrium– Aluminum– Garnet Laser in the Treatment of Facial Acne Vulgaris. *J. Clin. Diagn. Res.* 2016 July; 10(7): p. WC01-WC03.

5 Patidar M, Deshmukh A, Khedkar M. Efficacy of intense pulsed light therapy in the treatment of facial acne vulgaris: Comparison of two different fluences. *Indian J. Dermatol.* 2016 Sept-Oct; 61(5): p. 545-549.

OTHER OPTIONS FOR ACNE TREATMENT

Microneedling treatments—traditionally referred to as collagen induction therapy—are among the more promising alternative options for treating acne. These procedures are popular for skin rejuvenation, but microneedling can now also be used to treat acne scars.

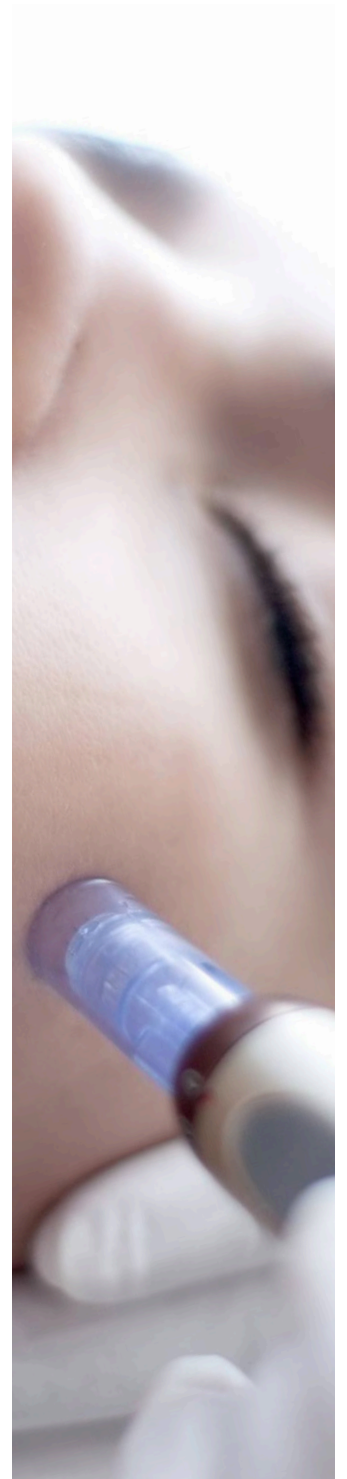
Microneedling involves precise superficial puncturing of the skin with tiny needles, producing controlled skin injury without actually harming the epidermis. The healing process releases growth factors, and the needles break down hardened scar strands.

While this therapy has been around for about a decade, there has been a recent proliferation of new techniques, applications, and instruments.⁶ The original microneedling instrument has undergone a range of advancements—including different needle tip lengths, optimized by indication.

Another innovation in microneedling is the use of radio frequency for therapeutic heating. This RF-enhanced treatment looks promising: in 2016, a long-term follow-up study on a group of patients who received the treatment for acne vulgaris and acne scarring saw significant improvement of lesions, scars, pores, and skin texture while clinical improvement progressed with time.⁷ Some practitioners favor the use of microneedling to treat active acne, especially in combination with serums or platelet-rich plasma. At the same time, this treatment can occasionally run the risk of spreading active acne bacteria.

6 Singh A, Yadav S. Microneedling: Advances and widening horizons. *Indian Dermatol. Online J.* 2016 Jul-Aug; 7(4): p. 244-254.

7 Hellman J. Long Term Follow-Up Results of a Fractional Radio Frequency Ablative Treatment of Acne Vulgaris and Related Acne Scars. *J. Cosmet. Dermatol. Sci. and Appli.* 2016 Jun; 6(3): p. 100-104.



A GOLD STANDARD

Despite the many recent advances in the field of aesthetic medicine, IPL therapy remains the gold standard for acne treatment.

IPL is effective not only in the treatment of acne, but also in the treatment of wrinkles, pigmented and vascular lesions, rosacea, and more. IPL has the added advantage of reducing the production of sebum and acne-causing bacteria. It is able to target multiple layers of skin at once in a non-invasive manner, allowing patients to get right back to their everyday life immediately after treatment. And as IPL is generally done over the course of several sessions, it is easily adaptable for many patients based on the severity of their acne.

Venus Concept is the foremost innovator of versatile energy-based aesthetic devices that offer high efficacy, strong ROI, and award-winning support; we take pride in keeping our practitioner partners at the forefront of aesthetic expertise.



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