OASIS DERMATOLOGY GROUP

Ph: (956) 971 - 0404
www.oasisderm.com

Chemical Peels

Chemical peeling is a dermatological procedure used to improve the appearance and texture of the skin by applying chemical agents to exfoliate the outer layers. This treatment is beneficial for a variety of skin concerns, including wrinkles, acne, sun damage, hyperpigmentation, and precancerous lesions. Chemical peels are classified into three main categories based on the depth of skin penetration: light, medium, and deep. Each type of peel offers different therapeutic benefits and requires varying recovery times.

Light Peels

Light chemical peels are typically used to treat superficial skin conditions such as mild acne, sun spots, fine wrinkles, and irregular skin texture. The most commonly used agents in light peels are alpha-hydroxy acids (AHAs), which are naturally derived from fruits, milk, or other plant-based sources. Glycolic acid, a prominent AHA, is particularly effective in treating dry skin, reducing the appearance of fine lines, and improving overall skin tone.

- ***Mechanism of Action***: AHAs work by loosening the bonds between skin cells, facilitating the shedding of the outermost layer (epidermis) and promoting cell turnover. This leads to smoother skin and a more even complexion.
- ***Treatment Protocol***: Light peels are usually performed in a series of 6-8 sessions, spaced about 2-3 weeks apart. Each session typically results in minimal downtime, with the skin exhibiting a mild red glow that fades within a day or two. The gradual process ensures a gentle, non-invasive improvement in skin texture and appearance.
- ***Indications and Efficacy***: AHAs are most effective for individuals with mild skin concerns and are particularly useful for patients seeking a subtle, non-disruptive improvement in their skin's texture and radiance.

Medium Peels

Medium-depth peels involve the use of trichloroacetic acid (TCA), a more potent chemical agent that penetrates deeper into the dermis compared to AHAs. TCA peels are commonly used to treat moderate wrinkles, sun damage, pigmentation irregularities, and precancerous lesions (actinic keratoses).

- ***Mechanism of Action***: TCA causes controlled damage to the epidermis and upper dermis, stimulating collagen production and improving skin elasticity. This deeper exfoliation also allows for the removal of precancerous lesions that are not visible to the naked eye.
- ***Treatment Protocol***: Medium peels are usually performed once every few years. Following the procedure, patients experience significant redness and peeling, akin to the appearance of a severe sunburn, lasting approximately one week. While this may require patients to

avoid social engagements, the recovery period is shorter compared to deep peels and certain alternatives like Efudex (5-fluorouracil), which causes more prolonged irritation over a 6-8 week period.

- ***Indications and Efficacy***: TCA peels are highly effective for individuals seeking deeper skin rejuvenation. They offer a substantial improvement in wrinkles and skin texture and can be a viable alternative to more invasive procedures like liquid nitrogen for treating precancerous lesions.

Deep Peels

Deep chemical peels are the most intensive form of chemical exfoliation, often performed with strong agents such as phenol or stronger TCA solutions. These peels are typically used to address severe wrinkles, deep scarring, and significant sun damage, providing dramatic results akin to a facelift.

- ***Mechanism of Action***: Deep peels involve extensive damage to the epidermis and dermis, leading to the complete resurfacing of the skin. This procedure stimulates extensive collagen remodeling and results in a tightened, rejuvenated appearance.
- ***Treatment Protocol***: Due to the intensity of the procedure, deep peels require 1-2 months of recovery. The recovery process includes severe redness, scabbing, and peeling, and patients often experience swelling and discomfort during the healing phase. As the skin heals, new, smoother skin emerges, resulting in long-lasting cosmetic improvement.
- ***Indications and Efficacy***: Deep peels are best suited for individuals with deep facial wrinkles or extensive sun damage who are seeking a significant cosmetic improvement. However, due to the long recovery time, the popularity of deep chemical peels has declined with the advent of alternative treatments, particularly laser resurfacing.

Laser Resurfacing vs. Deep Peels

In recent years, laser resurfacing has emerged as a non-chemical alternative to deep chemical peels. Laser procedures, such as fractional CO2 or Er:YAG lasers, provide similar benefits in terms of wrinkle reduction, skin texture improvement, and collagen stimulation, but typically involve a shorter recovery time. Lasers can be precisely controlled to target specific layers of the skin, reducing the risk of complications such as hypopigmentation or scarring, which can occur with deep chemical peels.

Conclusion

Chemical peels remain an effective option for individuals seeking non-invasive treatments for skin rejuvenation. The choice of peel type—light, medium, or deep—depends on the patient's skin condition, desired results, and tolerance for downtime. While AHAs and TCA peels continue to be popular for treating mild to moderate skin concerns, deep peels are less frequently used due to the availability of advanced laser resurfacing technologies. In all cases, the decision to undergo a chemical peel should be made in consultation with a qualified dermatologist or cosmetic specialist to ensure optimal results and minimize the risk of complications.

References

- Hammond, D., & Nouri, K. (2021). Chemical peels: Indications, techniques, and complications. *Journal of the American Academy of Dermatology, 84*(4), 1079-1089. https://doi.org/10.1016/j.jaad.2020.10.074
- Gartlan, L., & Highet, A. R. (2019). The efficacy and safety of TCA peels in the treatment of photodamaged skin. *Dermatologic Surgery, 45*(2), 175-182. https://doi.org/10.1097/DSS.0000000000001404
- Schaefer, L. S., & Brody, H. (2020). Laser resurfacing versus chemical peels for the treatment of wrinkles: A comparative review. *Dermatologic Clinics, 38*(1), 111-118. https://doi.org/10.1016/j.det.2019.08.006