

## **Chemical peels**

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### **What are chemical peels?**

Chemical peeling is a procedure, where a chemical agent of a defined strength is applied to the skin, which causes a controlled destruction of the layers of the skin, without any scarring. This is followed by regeneration and remodeling, with improvement of texture and surface abnormalities.

Chemical peels are among the oldest and most frequently performed aesthetic procedures used for skin rejuvenation worldwide. The earliest use of caustic preparations for peeling the skin was described in Egyptian medicine as early as 1550 BC and also mentioned in Greek and Roman literature. Cleopatra used sour milk, that contained lactic acid and French women used old wine that contained tartaric acid as beauty baths. Though the concept of skin peeling by chemicals to beautify the skin has been used since time immemorial, it has become a standardized technique in the past few decades.

### **Is chemical peel safe?**

The trend nowadays is increasingly for procedures that are noninvasive or minimally invasive, requiring little downtime. The majority of the chemical peeling procedures fit into this category. The long term experience with chemical peels has shown them to be safe and effective for a variety of common conditions like increased blotchy pigmentation, photoaging and acne.

### **What are the types of peels?**

Depending on the depth of peeling of the skin, peels are divided into superficial, medium and deep. The peeling agent is the most important factor in determining the depth of the peel, but other variables such as skin type, pre-peel preparation and method of application also play a role in determining the depth of the peel. The most

commonly performed peels are superficial peels. Superficial peels extend up to the upper layers of the skin (epidermis) and medium depth peels extend up to the upper one third of the deeper layer (dermis). Deep peels extend deep into the dermis and are not recommended for Indian skins.

### **How do peels work?**

The chemical agent causes wounding and destruction of the required layers of the skin. This stimulates the wound healing process and leads to formation of new skin which is smoother with an even texture. There is stimulation and remodeling of the collagen in the skin, which is the main reason that chemical peels are able to cause rejuvenation and reduce wrinkles.

### **When are peels useful?**

Chemical peeling is a useful technique in the treatment of common cosmetic disorders such as melasma (pigmentation on face common in women), photodamage (damage induced by sun), acne, mild facial scarring and rejuvenation for ageing skin. Peels are useful for uneven pigmentation on the skin such as freckles, age spots (lentigenes), melasma and pigmentation following skin injury. In ageing skin they are useful for early skin aging and fine lines. They are also useful procedures for the treatment of acne, especially blackheads (comedones) and mild acne scars.

### **When peels should not be used?**

Peels should not be used if the skin is red, dry and flaky because this can lead to uneven penetration of the peeling agent and cause deeper peeling with higher risk of complications. Peels should also be avoided if the skin is sunburned or there is increased sun exposure. They should be done with caution in patients with history of cold sores (herpes simplex on facial skin) and warts. In darker skins, deep peels should be avoided, as they are associated with a high risk of complications.

### **Common peeling agents**

There is a wide array of peeling agents available in the market today, with different formulations and combinations. Alpha hydroxy acids (AHA, also called as fruit acids as they are found in certain fruits), salicylic acid, trichloroacetic acid are the most

commonly used peeling agents. Glycolic acid, lactic acid and mandelic acid are the commonly used alpha hydroxy acids. The peeling agents are available singly and in combination. The peeling agent and its concentration is selected according to the pathology being treated and the type of the patients skin.

### **Skin preparation before the peel**

The foundation of an effective and risk free peeling procedure is based on a standardized regimen and skin preparation prior to peeling. Sunscreens, tretinoin, glycolic acid and hypopigmenting agents like hydroquinone are cornerstones of an effective priming regimen.

Skin preparation before starting a peel is called priming. It is the first step towards performing safe and effective peels. There are two phases to skin priming. Pre-treatment is applying of topical medications before starting chemical peels and should be started at least two to four weeks before chemical peeling. Preparation is cleaning the skin before applying the peeling agent. There are many advantages of priming, the major one being reducing complications. Broad spectrum sunscreens are essential before peeling. A topical retinoid such as tretinoin is used at night to enhance healing, reduce pigmentation and ensure uniform absorption of the peeling agent. The retinoids should be stopped one week before the peel and resumed when peeling is complete. Hypopigmenting agents such as hydroquinone or kojic acid are used in darker skin types to reduce incidence of post inflammatory hyperpigmentation. A consent form should be signed before the peel and photographic record should be maintained.

Immediately before the peel, contact lenses should be removed and the face is washed with soap and water. The skin is cleansed with alcohol and degreased with acetone before the peel is applied.

### **Peel procedure**

**Peel is a simple procedure done in the outpatient with in 10-15 minutes.**

After cleansing and degreasing, the selected peeling agent is applied on the required area. There may be slight burning on application. Neutralizing the peel may or may not be required according to instructions of the doctor.

### **Skin care after a peel**

A strict home care regimen according to doctor's instructions must be followed. Sunscreens should be regularly used during the day. They should be applied 20-30 minutes before going out so that it has time to bond with the skin. Use an adequate amount, little more than half a teaspoon (3ml) each to the face, neck and forearm. Do not pick, peel, scratch, rub or scrub the skin. **Report immediately to the doctor if you see crusts, oozing, pus formation, blisters, excessive redness, swelling, burning or pain.** Do not schedule any important event or vacation for at least 1-5 days after a superficial peel and 7-10 days after a medium depth peel.

### **What to expect after a peel?**

This depends on the depth of the peel. A superficial peel may not show any reaction or there may be slight redness, dryness or flaky skin 2-3 days after the peel. This is temporary and subsides in 1-2 days. Results vary but generally a significant improvement in the appearance of pigmented areas is seen in 3-4 weeks. Dark spots lighten and skin texture and tone improves. Although most patients may experience peeling of their skin, not every patient will notice this, particularly with the newer peels. It is not necessary for visible peeling to occur to show benefits.

Good results are expected in epidermal melasma, ephelides, dull uneven complexion, epidermal hyperpigmentation and comedonal acne after a series of chemical peels. Senile lentigines mixed melasma (epidermal and dermal) and postinflammatory hyperpigmentation show variable results and results may not be satisfactory in dermal pigmentation.

In general, fine lines and wrinkles become less apparent, skin tone evens out, oily or acne-prone skin is improved. The enlarged pores appear smaller, superficial scars appear reduced and the skin appears healthier and more youthful.

## **What are the risks? Are there any complications?**

The possibility of adverse consequences following superficial chemical peels is rare, if the patient has been properly primed and the correct peel selected according to the skin type of the patient. The risks include infection, scarring, and temporary or permanent pigmentary changes. The skin color may become light or darker. Darker skin types are at a higher risk for darker pigmentation but may also suffer from a lightening of the skin color. Lighter skinned individuals are mostly at risk for developing an even lighter pigmentation in the treated areas. Hence, unmet expectations are the commonest cause of complications in these patients.

## **Frequently asked questions**

Q. Which cleanser and moisturizer should I use?

A. Cleanser should be mild and nonirritating. Scrubs should be strictly avoided. Gentle non soap cleansers that are less drying are preferred in the peeling phase. In patients prone to acne, moisturizers should be non greasy, whereas in dry skins heavy moisturizers are more suitable.

Q. Can I use make-up?

A. Light make up can be used, but heavy greasy make up should be avoided.

Q. Can I do facials and parlor treatments before a peel?

A. Do not bleach, wax, scrub, massage or use loofahs, sponges, depilatories or scrubs one week before and after the peel.

Q. How often do the peels need to be repeated?

A. superficial peels can be repeated every 2 weeks whereas medium peels can be repeated after 2-3 months.

