

Acne Scars

For reasons that are not completely understood, some people develop severe acne that leads to permanent and sometimes disfiguring scarring. The term “scarring” refers to a process where collagen within the skin is damaged from inflammation, leading to permanent texture changes in the skin. However, many patients refer to scarring when they see color changes that remain for months after an acne lesion has healed. Scarring and color changes are different processes and are treated differently. Acne scarring is a reaction to the inflammation in the skin caused by acne. During the inflammatory process, tissue is destroyed and in an attempt to heal the skin, a reaction called fibrosis occurs. Fibrosis leads to changes in the texture of the skin that can be thinner (called atrophic) or thicker (called hypertrophic) than normal skin. Scarring is permanent. Thus, treating acne early, before scar formation and discoloration develop is crucial.

There are different kinds of acne scarring:

1. Ice Pick Scarring - deep pitted scars with steep edges
2. Atrophic Scarring - pitted scars but have smooth borders
3. Hypertrophic Scarring/Keloids are more common on the back and chest and are thick lumpy scars that sit above the surface of the skin

Color changes in acne are more common than scarring and can resolve but usually takes weeks to months to completely disappear.

There are 3 basic types of discoloration:

4. Post Inflammatory Erythema (pink and purple patches at the site of acne lesions)
5. Post Inflammatory Hyperpigmentation (brown/black discoloration at the site of the acne lesion) which is very common in darker skin toned individuals or in those who tan easily.
6. Post Inflammatory Hypopigmentation (white marks at the site of a healed acne lesion)

Treatment for acne scarring is difficult. Thus, the best treatment is prevention. Different scars require different treatments. Acne scarring is permanent but can be improved. No treatment is 100% effective and the best result is improvement, not perfection. Treatment of scarring may require many different modalities, depending on the skin type and the kind of scarring. It is important that acne is under control before treating scarring. Otherwise, new scars can form and the procedures may need to be repeated.

Treatment for Discoloration of the Skin

Although technically not scarring, discoloration causes distress to a lot of people and may be mistaken for scarring so we will discuss some treatments that can be done for discoloration from acne. Discoloration, in general, will mostly fade on its own though can take a few weeks to a few months for them to disappear. If acne is not under control, new acne lesions will replace the discoloration of the old acne lesions so may seem like the discoloration never resolves. The first step is to get acne under control with an individualized regimen. After acne is under control and the discoloration persists, then treatments for the discoloration should be considered.

Red discoloration usually fades away on its own after a few weeks. However, if redness persists, lasers that target red specifically such as a pulsed dye laser can be effective to reduce the redness. Multiple treatments may be needed, typically 2-3 treatments about a month apart. For good results, bruising after each treatment should be expected.

Brown discoloration can be treated in several different ways. The most common, simplest treatment is a prescription bleaching cream. Most dermatologists will have a compounded blend of prescription medications that can effectively reduce pigmentation. Usually this compounded medication will contain hydroquinone of 6% or 8% (high strength bleaching agent), retinoic acid (to allow the bleaching agents to go deeper into the skin), kojic acid (another bleaching agent) and a mild hydrocortisone (to help with the irritation this medication can cause).

Microdermabrasion and superficial or medium-depth chemical peels can also help with brown discoloration. Microdermabrasion mechanically gently removes the upper portions of the skin which allows to slowly slough off the areas that contain the excess pigmentation. Chemical peels do the same thing but with an acid that is applied to the skin. Deeper chemical peels will be more effective but can have more risk of further pigmentation from the peel itself. For both of these modalities, multiple treatments need to be done, generally, at least 4-6 treatments, for satisfactory results.

Unfortunately, there are no good treatments when it comes to white discoloration. Currently, there are no procedures or medications that can help bring back color. Treatments will be targeted at trying to even out the entire skin so that the white areas blend in better to its surroundings. Chemical peels, lasers and microneedling can be used to try to achieve this.

Treatment for Depressed Scars

Depending on the extent of the depressed scars, different treatments are recommended. For single or very few depressed scars, treatments such as subcision and/or punch excision can be used.

Subcision is a method where a needle with a small knife-like edge is inserted into the skin to break up fibrosis caused by scarring. Local anesthesia is used and a needle is then inserted under the scar and gently moved underneath the skin to release the scar tissue. This method has been tested in recent studies and shown to be effective.

Punch excision and grafting is the only effective treatment for deep ice pick scars because it completely removes the scar. A small round cookie cutter like device (called a punch) is used to cut out the scar and the edges of the wound are sewn together with a stitch. In this case, a deep, large scar is traded for a tiny line scar that can later be treated to further blend into the rest of the skin. Larger scars can be removed and then filled with a skin graft, taken from skin (usually behind the ear).

For more extensive depressed scarring, other modalities, such as dermabrasion, fillers, microneedling and laser are used.

Dermabrasion, not microdermabrasion, can be used for scarring. An abrasive tool is used, similar to sandpaper, to aggravate and stimulate collagen production. The downside of this treatment is that there is a high risk of hyperpigmentation.

Fillers can be used to fill deeper scars. Fillers are usually composed of hyaluronic acid and this can be used to inject right under the scars to fill them in. Though this is a quick fix where results are seen immediately, fillers are temporary, usually lasting 6-18 months and then need to be redone.

Microneedling is a more favored treatment for extensive acne scarring on the face as it has long-lasting results. After the face is numbed with a topical agent, multiple small needles go in and out of the skin. In the process of healing these little punctures, collagen is stimulated to help fill in the depressed scars. There is minimal downtime of about 2-3 days where the skin is pink to red. Usually 5 treatments, a month apart, is recommended for optimal results.

Fractionated CO2 lasers are also a favored treatment for extensive acne scarring as this too has long-lasting results. Instead of needles creating small punctures in the skin, a laser is used to also create small punctures in the skin. In the process of healing, along with the heat that the laser transmits, collagen is stimulated to improve the look of scars. Downtime is longer, about a week, where the skin is red and swollen for at least 2-4 days and then mainly pink to red for the rest of the week. Less treatments are needed than microneedling, usually about 2-3 treatments, but each treatment of fractionated CO2 laser is typically significantly more expensive than each treatment of microneedling. The end result of 2-3 fractionated CO2 treatments is usually comparable to 5 treatments of microneedling.

Acne scarring can be just as distressing as having active acne itself. Fortunately, there are many different modalities to treat these scars depending on the type of scar, extent of the scars and budget. Consult with your local dermatologist to see which method would be the best for your specific skin.