## Summer Dreams, Sun Damage Nightmares. What Should You Do?

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Summer is almost gone, leaving behind all the good memories that remain forever. However, after many days of sun exposure, sun damage is the natural consequence, and this can become your worst nightmare.

Sun damage is caused by frequent exposure to (UV) rays. We are all vulnerable to the harmful effects of the sun. However, some people may be more at risk than others: if you are fair skinned with light hair and freckles, if you are taking certain medications like antibiotics, if you work outdoors or practice outdoor sports and if you live in mountain regions or closer to the equator. People that have sustained sunburns are in one of the top groups of individuals that are at higher risk.

## The Dangers of Sun Damage

Sun damage is very dangerous, not only because of cosmetic reasons but also because of the higher risk of skin cancer and photoaging. You will start noticing that your skin tone is darker, your moles are probably larger, your spots are more noticeable and bigger, your wrinkles are deeper, your blood vessels are thicker, your skin is saggier and it now has a leathery appearance. You are probably noticing new growths, and the existing ones are changing. The fact is sun damage is cumulative and starts when we are babies. As we grow old, with every summer, this damage gets worse. When we are in the teens and early twenties, sun damage is not apparent; it is during the late twenties and thirties that it becomes more obvious. After a certain age, almost everybody will exhibit some degree of sun damage, wrinkles, hyperpigmentation, red blotches, loss of elasticity and precancerous lesions. Skin cancer has long been associated with sun exposure. Photoaging is produced by damage to the elastic fibers in the skin. The face and neck are the most exposed parts of the body, and that is where photoaging is more evident.

Nowadays there is a range of treatment options available to reverse sun damage. It is important that you speak with your dermatologist about your level of sun damage and treatments that will best suit your individual needs. For only mild sun damage, topical treatments are an easy option.



Tretinoin, a substance in the vitamin A family has been shown to reduce fine wrinkles, splotchy pigmentation and rough skin associated with chronic sun exposure. Tretinoin is commercially available as Renova® or the newest presentation Tazarotene®. Hydroquinone, a topical cream helps to remove overpigmented cells to enhance overall tone and clarity. Topical Vitamin C has also a modest effect to reduce sun damage. Talk to your dermatologist to find out which prescription cream is right for you.

Chemical peels are another alternative to be used for mild sun damage. These procedures remove the upper layers of the skin by topically applying a chemical solution to the skin causing the upper layers to exfoliate. The new skin is usually smoother and less wrinkled than the old skin. The peels can be superficial or deep into the dermis. Chemical peels carry an increased risk of pigmentary changes or even superficial scarring. I do not use chemical peels in my practice since we do not know how each patient is going to react and how much damage to the skin can be done. Chemical peels are not a precise science and it is hard to control the final result.

## **Moderate to Severe**

For moderate to severe sun damage, there are laser modalities that can be used. Laser light therapies can reduce sun damage to a great extent. The most newly developed nonablative laser modalities do not carry down time, such as GENESIS that works in the deeper layers of the skin creating new collagen

and rejuvenating existing collagen to reduce wrinkles and fine lines. Genesis also reduces redness, blood vessels and hyperpigmentation. Intense Pulse Light (IPL) targets and removes brown spots and blood vessels. Several treatments are usually required, spaced every other week. TITAN, a form of infrared light, creates new collagen and contracts existing fibers to considerably decrease sagginess. Titan is done in series of three treatments, once a month.

For a more complete treatment of severe sun damage I recommend the Three Dimensional (3D) treatment that combines three different laser modalities at the same time (GENESIS, IPL and TITAN), providing a complete repair of all the layers of the skin. Usually three treatments are required, done once a month, and the results are amazing.

Continuing with the ablative lasers that have some down time, MICROLASER PEEL is done with an erbium laser. It offers a very effective approach to reduce and remove brown spots, wrinkles, and even superficial precancerous lesions. The erbium lasers are very precise and the depth of penetration is controlled by a computer, providing a treatment designed just for the particular patient needs. The erbium laser is very popular nowadays thanks to a faster recovery time, usually 2 to 5 days.

For people with deeper precancerous lesions, like actinic keratosis, the latest treatment modality is PHOTODYNAMIC THERAPY with Levulan, a FDA-approved treatment that is very effective on precancerous lesions. It consists of a topical application of Aminovevulonic acid, which is a compound found naturally in the body, followed by incubation and activation with a light or laser. It has a few days of down time but is also highly effective.

The question is: what happens if you don't repair your sun damage? The deterioration of your skin will progress to wrinkles, sagginess, spots, redness, precancerous lesions and skin cancer. Whatever the degree of your sun damage, there are many alternatives that can be used. Prevention of further damage is really important by using a broad spectrum sun block.

Skin Diagnostics Laser and Rejuvenation offers medical and laser treatments to treat sun damage. Call us for an appointment at 513-631-0059 or visit our website at www.cincinnatiskinlaser.com.

