

Photoaging

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Staying young and healthy is a prized wish of most individuals. Though scientists have not been able to slow down our chronological aging, other causes of rapid aging have been elucidated and thus measures can be put forward to prevent them. Poor habits, like smoking; lack of exercise; bad food; excessive make up, well as the sun can all contribute to us looking aged. The latter, also called photoaging, has been in the spotlight since the 1980's, however, people still do not seem to grasp the concept of sun protection. People trying to reverse the aging caused by the sun, help to sustain the multi-billion rand beauty and cosmeceutical industry.

Photoaging is caused by the action of ultraviolet rays on the skin. UVB as well as UVA are responsible for the accelerated aging of one's skin. The fairer the person, the more prone the individual is to be affected by UV-rays and it is more apparent on areas that are usually exposed to the sun. It is very easy to identify a person suffering from premature aging as a result of UV Rays and the table below helps to distinguish it from chronological aging.

PHOTOAGING	CHRONOLOGICAL AGING
Uneven skin colour	Mild colour changes
Starts even below 30 yrs of age	Usually more apparent after 50 yrs of age
Deep wrinkles	Superficial wrinkles
Decrease moisture in skin	Laxity of the skin
Uneven thickening and thinning of the skin	Non-cancerous growths
Many visible, dilated capillaries, easy bruising	Decrease hairs on the scalp
Leathery appearance and increase vellus hairs on face	
Dilated sebaceous glands on face, oily skin	
Pre-cancerous growths	
Brownish discolouration on the sides of the neck	

When fair skin is exposed to sunlight, UV radiation is absorbed by the skin cells, leading to the generation of free radicals. When the rate of formation of the free radicals becomes higher than the rate that they can be cleared from the skin cells, they start causing damage to the collagen fibres; elastic fibres; and other cellular components of the dermis. Repeated sun exposure leads to imperfect repair, leaving a photo-damaged skin. Lately, a lot of emphasis has been laid on UVA rays as they penetrate the skin deeper and can cause more damage. More studies are underway for the role of visible light and IR rays, however, no conclusive results have been obtained yet.

It goes without saying that sun- protection is the most effective way to stay younger. One has to use strong sunscreens that have broad spectrum protection. The use of one with a high SPF as well as high UVA protection is now recommended by dermatologists. Most sunscreens that contain titanium dioxide; zinc oxide; oxybenzone; or avobenzone, offer good protection and should be used liberally. Other methods of sun protection are the use of broad hats; avoiding the midday sun; avoiding sun-tanning beds; and the use of sun protective clothing can be very helpful. One should always remember to reapply sun protection every few hours and also on a regular basis when swimming.

Once damage has taken place, there are very few measures that can be taken to partially reverse some of it. Very few creams and substances have proper studies proving their efficacy. Retinoids are derivatives of vitamin A and are clinically proven compounds that help reverse some photoaging. These compounds can be quite irritating to the skin for the first few weeks, thereafter the effects can slowly be noticed. Maximal effect is noted in about 6 months from commencement of treatment, thereafter the retinoid cream can be continued lifelong. Most good cosmetics contain some retinol, however, one can obtain higher concentrations of this compound in creams like Retin A or Retacnyl creams.

There have been numerous claims by the cosmetic industry of products that help with photoaging. However, one should be very careful as it does not mean that the most expensive product is the best. Cosmeceuticals are not required to undergo rigorous testing and therefore are not always endorsed by qualified dermatologists. Some creams containing idebenone or vitamin C have shown to have a positive effect on the aged skin, however, many other claims are not supported by proper clinical trials.

Nowadays there are several other procedures that can improve or hide the appearance of photoaging. The use of skin peels can help in the rejuvenation of skin, as well as the stimulation of collagen fibres. If performed by qualified personnel, it can yield excellent results at a very affordable price. The use of lasers and intense pulsed light have beneficial effects on selected people. However, one should be very careful of unqualified personnel offering these treatments as there has been a huge surge in law suits against them in the USA. Other methods include the use of LED lights and photodynamic therapy, where with the latter, a substance is applied to the skin and activated by the light. This results in damage to abnormal skin cells, allowing new cell to grow, thus rejuvenating the skin.

In cases where there are the deep wrinkles and volume loss on the face, one may need to resort to the use of botulinum toxin or fillers. The abuse of fillers and botulinum toxins by celebrities who end-up having over-filled cheeks and gold fish pouts, has installed fear in many people who could have benefitted from them. If performed by qualified health professionals, these are very safe and do give a natural look. If everything else fails, one can make use of foundation and concealers to try to hide the aged look.

Photoaging is an indication of the health of one's skin and makes the person more prone to various skin diseases, including cancers. Thus one must start taking care of his skin from an early age, as no amount of procedures can reverse the damages fully. Sunscreens do not need to be from expensive companies, however, they need have high SPFs, high UVA protection and applied liberally.