

Burning Issue: By Dr Rakesh Newaj

The Cause & Effect of Photoageing

Skin Ageing is divided into two different processes – Photoageing and Chronological Ageing. Photoageing is the premature breakdown of skin cells due to excessive exposure to the sun's rays or tanning beds – while chronological ageing is the natural genetic changes of the skin we experience as we get older. Unlike the chronological process of skin ageing, photoageing causes the skin to become coarse, deeply wrinkled, and irregularly pigmented... and is the single greatest factor causing prematurely aged skin.

Staying young and healthy is a prized wish of most individuals. Though scientists have not been able to slow down our chronological ageing, other causes of rapid ageing have been clarified - and thus measures can be put forward to prevent them.

Poor habits such as smoking; lack of exercise; bad food; excessive make up – as well as the sun can all contribute to us looking aged. The latter, also called photoageing, has been in the spotlight since the 1980's. However, people still don't seem to grasp the concept of sun protection. People trying to reverse the signs of ageing caused by the sun help to sustain the multi-billion rand beauty and cosmeceutical industry.

Chronological Ageing VS Photoageing Know the difference

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

suffering from premature ageing as a result of UV rays - and the table below helps to distinguish it from chronological ageing.

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 thus, 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.

Sun Safety

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.

Can Sun Damage Be Reversed?

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 photoageing.

These compounds can be quite irritating to the skin for the first few weeks, but thereafter the effects can slowly be noticed. Maximal effect is noted in about six months from commencement of treatment, and 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.

PHOTOAGEING

Uneven skin colour
Can even start below 30 years of age
Deep wrinkles
Decrease moisture in skin
Uneven thickening and thinning of the skin
Many visible, dilated capillaries, easy bruising
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

CHRONOLOGICAL AGEING

Mild colour changes
Usually more apparent after 50 years of age
Superficial wrinkles
Laxity of the skin
Non-cancerous growths
Decrease hairs on the scalp