

SUN PROTECTION

WHY IS THE SUN HARMFUL?

Exposure to the sun causes problems such as sunburn, aging of the skin, hypersensitivity reactions, skin cancers and eye damage. The sunrays responsible for this damage are ultraviolet A (UVA) and ultraviolet B (UVB) rays.

Excessive exposure (more than 10 minutes for moderately sensitive skin) initially leads to sunburn. Redness, swelling and blisters occur in severe cases. Sunburn predisposes the development of skin cancers. Melanomas may occur as a result of exposure of intermittent doses of UV radiation rather than chronic exposure to sunlight. Office workers who have only occasional but excessive recreational sun exposure may be at more risk of melanoma compared to workers who are always outside. Other kinds of skin cancers however will occur more often in people who are frequently outside.



Sun tanning results from repeated exposure to the sunlight stimulating the production of melanin, a skin pigment. This requires relatively little UV exposure (10-20 minutes for moderately sensitive skin), becomes apparent within 48-72 hours and fades over a period of several weeks. During tanning skin thickening occurs, giving some protection from sun damage. This may last for several months. The darker your complexion, the more melanin pigmentation is present in your skin. The melanin absorbs UV radiation and protects you from sun damage. However, no tanning occurs without mild degrees of skin burning and associated skin cell damage.

PREVENTION OF SUN DAMAGE

Risk factors for sunburn include time spent in the sun, light coloured skin, exposure between 10am and 4pm, locations close to the equator, and high altitude. Wind, sun reflection off surfaces like snow or rippling water, wet clothing and heat all increase the effects of UV radiation on the skin.

Clouds do not greatly reduce penetration of UV radiation and beach umbrellas will reduce exposure by only 50% as the radiation will reflect off the sand and water.

Photosensitivity is increased if you are using some medications and skin products, and these will make you sunburn more quickly. Examples include tetracyclines (antibiotics and antimalaria tablets such as doxycycline), oestrogens in the oral contraceptive pill, chloroquine (another antimalarial), some antihistamines, and some deodorants and perfumes.

Obviously, staying out of the sun altogether is the best method to prevent sun damage. Sunscreens and clothing are useful in minimising the amount of UV radiation reaching your skin.

Sunscreens used regularly in childhood have been shown to reduce the lifetime incidence of some skin cancers by more than 75%. Use them daily if possible. The effectiveness of sunscreen is measured by its SPF (sun protection factor) value. If a sunscreen is rated SPF 15 it means when you apply this sunscreen correctly it will take you 15 times as long to burn compared to not using the sunscreen. For best protection, a broad spectrum sunscreen which protects against both UVA and UVB rays with SPF30 or more is recommended. Apply to clean dry skin preferably half an hour prior to sun exposure. If swimming or sweating occurs, use a water resistant preparation and reapply every 1-2 hours. Some sunscreens themselves may cause skin reactions -try a small amount first if you have sensitive skin.

Clothing will provide an excellent barrier to sunrays. New fabrics such as lycra and polyester are more effective than looser weaved fabrics (e.g. rash vests are more effective than cotton T-shirts). Protection decreases when fabrics are wet. Don't forget to wear a hat or cap.

Sun damage to the eyes, especially in a reflective environment such as snow, ice or sea, can be prevented by full spectrum wrap around sunglasses.

TREATMENT OF SUNBURN

Simple treatment of sunburn includes cool compresses, aspirin or paracetamol to reduce pain and inflammation, soothing burn creams and adequate water intake. Avoid perfumes and insect repellents if possible on burnt skin as more chemicals can be absorbed into the body through damaged skin. Avoid further sun exposure and seek medical care if your burns are severe.

