

LECTURE PRESENTATION

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Prevention of skin damage to solar radiation in elderly patients: sunscreens

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Exposure to UV radiation can cause skin damage; among UV rays UVB are commonly considered to be more important in inducing photoaging and skin cancer; however in recent years some authors have claimed an important role also for UVA that can concur with UVB to damage the skin.

UVB rays have a wavelength between 280 and 320 nm and are responsible for immediate skin damage represented by erythema. On the contrary, the skin damage produced by UVA, with a longer wavelength than UVB comprised between 320 and 400nm, is generally not clinically evident but will accumulate over the years, showing its effects later.

In the past the attention of the formulation of sunscreens was placed on UVB protection, but nowadays, as we have mentioned before, UVA protection is also necessary. Moreover, UVA radiation is not shielded either by plastic or glass, so the skin can be exposed even in apparently protected closed spaces, such as the home or car. Therefore there are now filters or sunscreens available with complex formulas that effectively protect both from UVB and UVA

The physical filters, also called sunblocks, made of metals such as zinc oxide or titanium dioxide, offer excellent protection, but they do take on a bleached unpleasant side effect. Some researchers have developed formulas with micronized particles to reduce this effect but the results are not always very satisfactory. On the other hand, the chemical filters are substances capable of using the energy of UV radiation to change their molecular structure. A possible solution has been found mixing physical and chemical sunscreens to obtain a higher sun protection factor (SPF) with reduced bleaching effect.

However sunscreens must be used to protect the skin from excessive UV radiation, not to permit more UV exposure. Therefore we must not neglect the traditional precautions of wearing hats or protective clothing and avoiding the sun during the middle of the day.

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