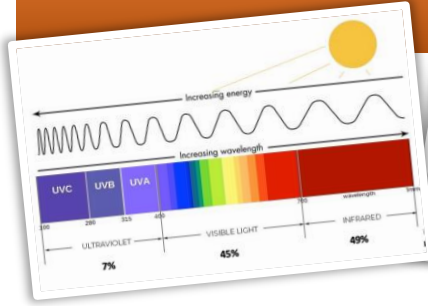


Sunscreen in Skin of Colour

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REGION	UVA Protection symbol	UVA Index
EU	UVA Seal	UVA protection at least one third of SPF protection
UK	Star Rating ranging from 0-5	Protection level of sunscreen towards UVA and UVB almost equal e.g. 5 stars = UVA/UVB ratio > 0.9
US	'broad spectrum'	Critical wavelength > 370nm
Japan	PA rating between + and ++++	Time to cause Persistent Pigment darkening from UVA exposure



UV and the skin

About 45% of the sun's energy comes from visible light, with only 7% coming from the UV range. UV rays have a lower wavelength, but emit higher energy which poses danger to the skin. UVB is attenuated by stratospheric ozone and makes up 5% of solar UV radiation. It causes erythema and skin cancer and contributes much less to hyperpigmentation. SPF is the standardized measure of UVB protection. UVA on the other hand, makes up >90% of solar UV radiation and is split into UVA-I (about 75%) and UVA-II (about 20%). It penetrates through glass and causes immediate and persistent pigment darkening. UVA-I works synergistically with visible light to cause hyperpigmentation in darker skin types, which is deeper and longer lasting with visible light. In the UK, the 5-star rating system is used as a measure of UVA protection.

Types of sunscreens

Sunscreens are divided into inorganic (physical) or organic (chemical) sunscreens. They both absorb UV light but inorganic ones reflect 5% of UV light. Organic sunscreens are thinner, easier to apply and don't usually leave a white cast unlike inorganic sunscreens. Micronized inorganic formulations are more cosmetically acceptable but do not reflect visible light. They are chemically inert and do not irritate the skin. Modern organic filters are less irritating than older forms. Tinted sunscreens containing Iron oxide combined with non-organic filters protect

When to wear Sunscreen

UV and visible light aggravate dermatoses such as melasma, post-inflammatory hyperpigmentation, lupus and lichen planus pigmentosus which are commonly seen in skin of colour. Sunscreens can be extremely helpful in preventing flares or halting the progression of these conditions.

Whilst skin cancers are less common in SOC, basal cell carcinomas are the 2nd most common type of skin cancer in blacks and South Asians and tend to be UV induced. Majority of melanomas in darker skin are 'acral lentiginous' and develop in non-sun exposed palms and soles.

Those with genetic predisposition to skin cancers e.g. albinism or on immunosuppressive medication will also benefit from sunscreen use.

Whilst melanin is protective against sun-induced ageing, it doesn't protect indefinitely. As such, regular sunscreen use may help to slow down signs of ageing.

Practical recommendations

To reduce the harmful effect of UV and visible light:

1. Stay indoors or seek shade between 10am and 2pm where the sun rays are strongest
2. Apply ONE teaspoon of sunscreen each to your face & neck; back & shoulders; chest & tummy; each arm and leg.
3. Reapply sunscreen every 2 hours when in direct sunlight and after swimming.