

Ask Doctor Section

Question: How do we calculate SPF value?

The sunscreen you use will become the first lines of defense to protect your skin from harmful UV rays. The sun protection factor (SPF) is something that you should pay attention to when buying a sunscreen. SPF indicates how long you can stay under direct sunlight without getting burned, as well as how long the sunscreen will be able to protect you from the harmful UV rays. When it comes to choosing a sunscreen it all depends on skin type, sun intensity, and the amount of time you are going to spend in the sun. There are mainly 2 types of UV rays we have to take note and understand:

UVA (ultraviolet-A): long- wave solar rays of 320-400 nanometers (billionths of a meter). It penetrates the deepest. Although less likely than UVB to cause sunburn, UVA penetrates the skin more deeply, and is considered the chief culprit behind wrinkling, leathery, and other aspects of "photoaging." The latest studies show that UVA not only increases UVB 's cancer-causing effects, but may directly cause some skin cancers, including melanomas.

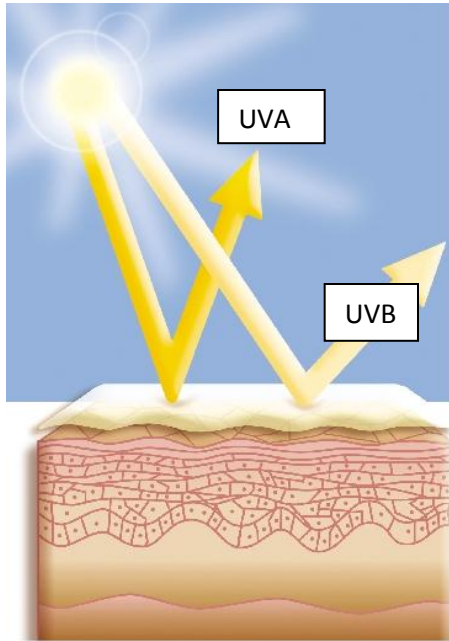
UVB (ultraviolet-B): short-wave solar rays of 290-320 nanometers. It penetrates less deep but is more potent than UVA in producing sunburn, these rays are considered the main cause of basal and squamous cell carcinomas as well as a significant cause of melanoma.

For example, a SPF 25 product will be able to protect you for approximately 4 hours. Formula: $25 \times 10 = 250$ minutes = 4 hours & 10 minutes. Reapplication of sunscreen will be needed for adequate protection. SPF 15 to 30 will be well sufficient for our daily protection. Higher value sunscreens, for example SPF 60, may cause skin blemishes and irritations due to the high levels of metal oxides used in the formulations.

Things to take note:

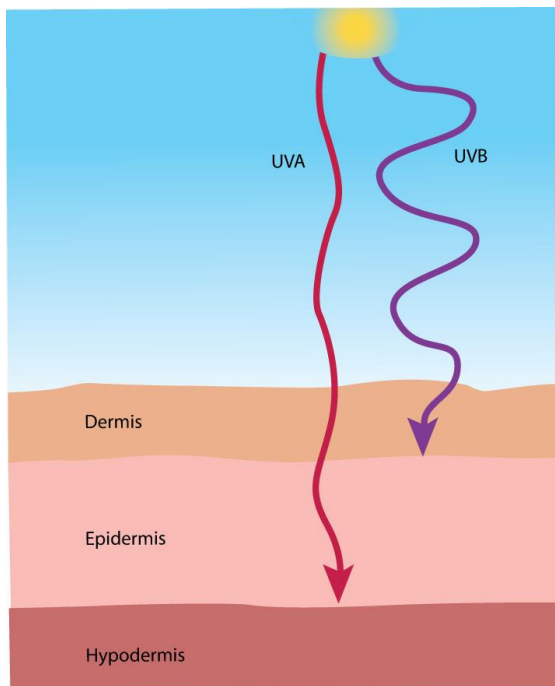
- Perspiration and water on skin can significantly reduce the effectiveness of the sunscreen.
- Sunscreens don't become effective when you first put it on. It can take up to one hour to penetrate into your skin and become effective.
- The sun's UV rays are strongest between 10am and 2pm.
- One of the reasons that our skins ages, is the influence of the ultraviolet rays of the sun. They destroy its lipid barrier, produces free radicals that causes small wrinkles and the skin becomes dry and lifeless.

- Darker skin types burns less easily than fairer skin types.



With appropriate sunscreen:

The harmful UV rays will be deflected away from our skin.



Without Sunscreen protection:

UVA: Penetrates deep into the epidermis of our skin.

UVB: Penetrates less deeply to the dermis level. Causes sunburn.

