Protection Factors

SPF and UPF are different sun protection values you may encounter.

SPF - Sunscreen and some cosmetics

Sun protection factors (SPF) come in a wide range from 2 to 50+. The number measures the fraction of the UVB rays that reach the skin (most sunscreen is poor at blocking UVA rays). So SFP 15 means that 1/15 of the UVB rays reach the skin.

UPF - Clothing

The ultraviolet protection factor (UPF) is the measure of how well a fabric or textile blocks the sun's UV rays. Like SPF, the number is the fraction of the sun's UV rays that will pass through the item and reach the skin.

- A typical lightweight white cotton t-shirt has a UPF of about 4.

UPF is affected by several factors

- **Material**, some materials absorb UV rays better than others.
- **Weave**, thicker and tightly woven materials let less light through.
- **Color**, dyes may absorb and/or reflect UV rays, darker colors usually offer better protection.

Reapply Your Sunscreen

The Environmental Protection Agency (EPA) and dermatologists recommend using at least SPF 30 sunscreen. Higher SPF values block slightly more UV rays but don't let you reapply less frequently. Regardless of the SPF you choose, you should always reapply every 2 hours and after going swimming.

Sun Safety

The sun's ultraviolet (UV) rays can damage your skin in as little as 15 minutes. Follow these recommendations to protect yourself.

Sunscreen

Apply broad spectrum sunscreen with at least SPF 30 before you go outside, even on slightly cloudy or cool days. Apply a thick layer and reapply every two hours.

Hat

Wear a hat with a brim all the way around that shades your face, ears, and the back of your neck.

Sunglasses

Sunglasses protect your eyes and the skin around your eyes from exposure to UV rays, they also reduce the risk of cataracts. Make sure your sunglasses block both UVA and UVB rays for the best protection.

Clothing

When possible wear loose-fitting, long-sleeved shirts and long pants. If possible choose clothes with ultraviolet protection factors (UPF) which are certified to help block UV rays.

Shade

You can reduce your risk of skin damage and skin cancer by seeking shade.

Environmental Health & Safety
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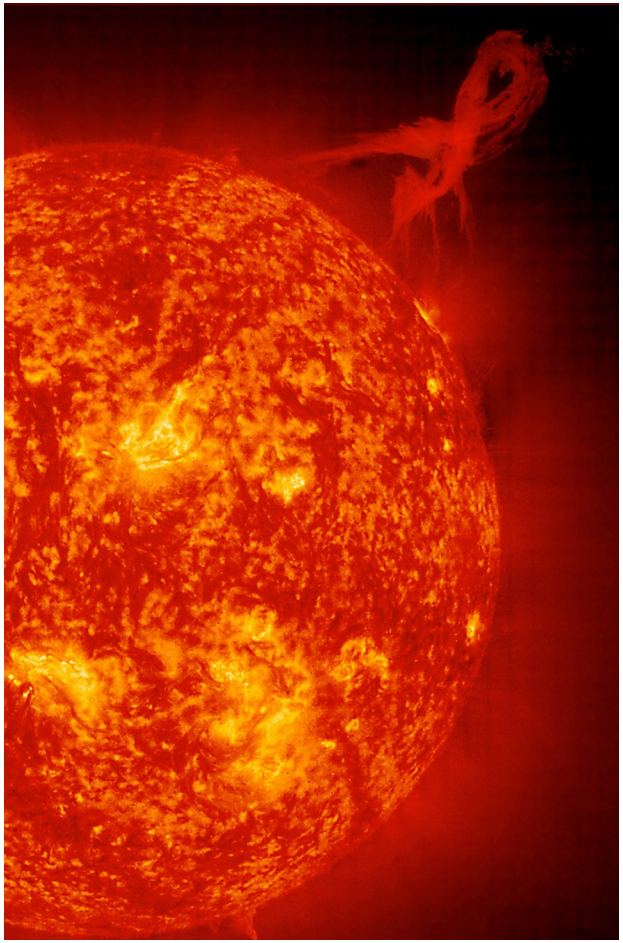
SUN PROTECTION



Environmental Health & Safety

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Skin Cancer

Nearly 5 million people are treated for skin cancer each year in the United States. The estimated costs for these cancers is $8.1 billion a year. Skin cancer can be serious, expensive, and sometimes deadly. Skin cancer cases continue to increase in the United States, but most skin cancers could be prevented with appropriate precautions.

Ultraviolet Radiation

Ultraviolet (UV) radiation is a major risk factor for most skin cancers. Sunlight is the main source of UV rays, but tanning lamps and beds are also sources.

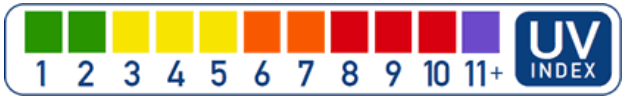
UV rays damage the DNA of skin cells. Skin cancers can start if the damage affects genes that control skin cell growth.

The main UV rays of concern are:

- **UVA rays** age skin cells and can damage their DNA. These rays are most linked to long-term skin damage, such as wrinkles. They are also thought to play some role in skin cancers.
- **UVB rays** have slightly more energy than UVA rays do. They damage the skin cell's DNA directly and are the main cause of sunburns. They are also thought to cause most skin cancers.

UV ray strength depends on a number of factors, such as:

- **Time of day**: strongest from 10am to 4pm
- **Season of the year**: stronger in spring and summer
- **Latitude & Altitude**: stronger closer to the equator and at higher elevations
- **Reflective surfaces** can bounce UV rays increasing exposure



UV Index

Because the amount of UV light reaching the ground depends on a number of factors, the UV Index was developed to help people determine how strong the UV light is in their area.

If you plan to be outdoors, check the UV Index for your area. It is presented in weather forecasts and can also be found on the EPA website at: www.epa.gov/sunwise/uv-index-1

Sunscreen

Pick a broad spectrum sunscreen that works against UVA and UVB rays.

Follow the label directions for applying sunscreen. About an ounce of sunscreen (a shot glass or palmful) should be used to cover the arms, legs, neck, and face of the average adult. Don't forget about lipbalm with sunscreen in it to protect your lips.

Apply sunscreen under your makeup or insect repellent. Apply 15 minutes before you leave the house and reapply every two hours.

When trying to determine if a mole could be cancerous, use ABCDE.