HEALTH BASICS

Skin protection from the sun

Sun protection uses shade, clothing, sunscreen, and planning to reduce ultraviolet exposure.

WHAT IT IS
Ways to reduce skin and eye exposure to ultraviolet radiation

WHERE IT COMES UP
Outdoor activities, daily routines, travel, medicines, and skin checks

WHY IT MATTERS
Lowers sunburn, skin ageing, eye damage, and skin cancer risk

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
Primary care clinician, dermatologist, pharmacist, or eye-care professional

HOW IT IS CHECKED
UV index, sunscreen label, and skin examination when needed

Overview

Skin protection from the sun means limiting exposure to ultraviolet radiation, often called UV radiation. UV comes from the sun and artificial sources such as tanning beds.

UV exposure can occur during ordinary activities, including walking, driving, gardening, working outdoors, and playing sport. It can reach your skin on cool or cloudy days. Snow, sand, and water can reflect UV and increase exposure.

Sun protection is not a disease, diagnosis, or medical treatment. It is a set of practical steps that can reduce skin and eye damage over time. These steps include seeking shade, wearing suitable clothing, using sunscreen, and checking the local UV index.

Everyone can be affected by UV radiation. Darker skin contains more melanin, the pigment that gives skin its colour, and may burn less easily. However, darker skin can still develop UV-related damage and skin cancer.

How it works

UV radiation is divided into different types. UVA reaches deeper into the skin and contributes to skin ageing and skin cancer. UVB is a major cause of sunburn and also contributes to skin cancer. Broad-spectrum sunscreen is designed to protect against both UVA and UVB.

The sun protection factor, or SPF, mainly describes protection from UVB when the sunscreen is used correctly. A higher SPF filters more UVB, but no sunscreen blocks all UV radiation. Sunscreen should not be used to extend the time you spend in strong sun.

Protection works best when several methods are combined:

Sunscreen can rub, wash, or sweat off. The American Academy of Dermatology recommends a broad-spectrum, water-resistant product with SPF 30 or higher. Apply it generously before going outdoors and reapply about every two hours, as well as after swimming, sweating, or towel drying. Follow the product label because directions can differ.

The UV index describes the strength of UV radiation expected at a particular place and time. A higher number means unprotected skin may be damaged more quickly. Weather apps and local forecasting services often provide this information.

- Shade reduces direct exposure, especially when the sun is high
- Closely woven clothing covers the skin without wearing off
- A wide-brimmed hat protects the face, ears, and neck
- UV-protective sunglasses help protect the eyes and nearby skin
- Broad-spectrum, water-resistant sunscreen protects uncovered skin

Why it matters for your health

UV radiation can damage DNA, the genetic material inside skin cells. The body repairs much of this damage, but repeated exposure can leave lasting changes. Over time, this can contribute to premature skin ageing and skin cancer.

Sun protection lowers exposure rather than removing all risk. It is useful even if you have had sunburn before or did not routinely use protection in the past.

Protecting the eyes also matters. UV exposure is linked with cataracts, which cloud the eye's natural lens, and other forms of eye damage. Sunglasses should block both UVA and UVB. A wraparound style can reduce radiation entering from the sides.

Some people need additional care. This includes people with a history of skin cancer, many moles, very sun-sensitive skin, or a weakened immune system. Certain medicines and skin products can also make the skin more sensitive to sunlight. A pharmacist or prescribing

clinician can explain whether this applies to a specific product.

UV protection and heat protection are related but not identical. Sunscreen does not prevent dehydration, heat exhaustion, or heat stroke. In hot weather, you may also need fluids, rest, ventilation, and a cooler environment.

What can go wrong

Too much UV exposure can cause sunburn. A mild sunburn may produce red, warm, tender skin. More serious burns can involve extensive blistering or illness, particularly in children.

Long-term exposure can contribute to actinic keratoses. These are rough, scaly areas caused by sun damage, and some can develop into squamous cell carcinoma. UV exposure is also an important cause of basal cell carcinoma, squamous cell carcinoma, and melanoma. These are different types of skin cancer.

Make a routine appointment with a primary care clinician or dermatologist if you notice a new or changing mole, a sore that does not heal, or a patch that repeatedly crusts or bleeds. These changes have several possible causes and do not automatically mean cancer, but they should be assessed.

Seek prompt medical advice for severe or widespread blistering sunburn, worsening swelling, signs of infection, or sunburn accompanied by vomiting, marked weakness, or difficulty drinking. New eye pain or a change in vision also needs prompt assessment.

Confusion, collapse, seizure, or loss of consciousness in hot conditions may indicate heat stroke rather than sunburn. Heat stroke is an emergency. Call emergency services and move the person to a cooler place while help is coming.

Indoor tanning devices expose the skin to UV radiation. A "base tan" does not provide reliable protection against later damage.

What you can do

Check the UV index when planning outdoor time. Adjust the timing of activities, use shade, and take extra protection when UV levels are high. Remember that shade may move and may not block reflected UV.

Choose clothing that covers more skin while remaining suitable for the temperature. Some clothing carries an ultraviolet protection factor, or UPF, rating. This shows how much UV passes through the fabric. Ordinary tightly woven clothing can also provide useful coverage.

Use broad-spectrum, water-resistant SPF 30 or higher sunscreen on skin that clothing does not cover. Include often-missed areas such as the ears, neck, tops of the feet, and backs of the hands. A lip balm with SPF can protect the lips. Check the expiry date and store sunscreen as directed; prolonged high heat can affect the product.

For babies younger than 6 months, shade and protective clothing are the main approaches. Ask a pediatric clinician about sunscreen if adequate shade and clothing are not available.

Read medicine labels for warnings about sunlight. If you are unsure, ask a pharmacist, "Could this medicine or skin product make me more sensitive to UV?" Do not stop a prescribed medicine without advice.

There is no routine blood test that shows whether your sun protection is adequate. A clinician may examine your skin when there is a concerning change or when your medical history suggests that skin checks may be useful. You can keep dated photographs of a spot to document change, but photographs do not replace an examination.

Do not rely on intentional UV exposure for vitamin D. If you are concerned about vitamin D, ask whether a dietary review, blood test, or supplement is appropriate for you.

Common questions

Do I need sunscreen on a cloudy day?

Clouds can reduce UV, but they do not block it completely. Check the UV index rather than judging risk from temperature or cloud cover alone.

Does sunscreen prevent all skin cancer?

No. Sunscreen reduces UV exposure but does not remove all risk. It works best with shade, clothing, hats, and avoiding indoor tanning.

Is one morning application enough?

Usually not for a full day outdoors. Sunscreen can wear off, so follow the label and reapply after the stated interval, swimming, sweating, or towel drying.

Can I use last year's sunscreen?

Check the expiry date and whether the texture, colour, or smell has changed. Replace expired products and products that may have been damaged by heat.

Does make-up with SPF count?

It can add protection, but people may not apply enough make-up to achieve the SPF shown on the label. A separate broad-spectrum sunscreen may provide more reliable coverage.

Can sunlight through a window affect my skin?

Standard window glass blocks most UVB but may allow some UVA through. People who spend long periods beside windows, especially while driving, may consider clothing, sunscreen, or UV-protective window film where legally permitted.

Sources

- American Academy of Dermatology Association. Sunscreen FAQs
- Centers for Disease Control and Prevention. Sun Safety
- US Food and Drug Administration. Tips to Stay Safe in the Sun: From Sunscreen to Sunglasses
- World Health Organization. Radiation: The ultraviolet UV index -index)
- US Environmental Protection Agency. Learn About the UV Index
- National Cancer Institute. Sunlight