

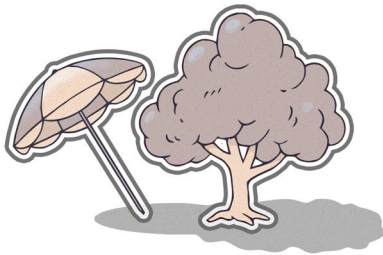


The Sun Protection Fact Sheet

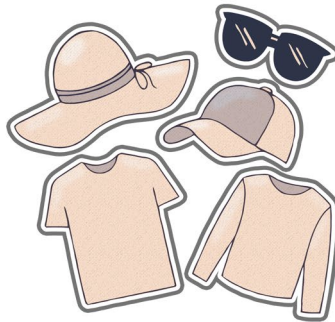
Sun exposure is a major cause of skin cancer, the most common type of cancer in the UK. This fact sheet will give you information on staying safe in the sun so that you can enjoy yourself outside. You will find sections on UVA and UVB rays, sunscreen, top tips for applying sunscreen, and vitamin D.

Our top sun safety tips

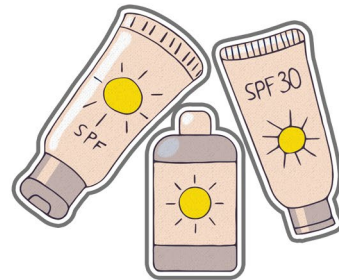
Sun safety doesn't have to mean total sun avoidance. Instead, we recommend three simple steps to keep safe in the sun at home or abroad. These will keep you safe from sunburn and reduce your risk of skin cancer in the future.



**Make use of the shade
(especially between
11am and 3pm)**



**Wear clothes that
protect you from the
sun**



**Use sunscreen
(SPF30+) and re-apply
it every 2 hours**

UVA and UVB

Sun damage is caused by ultraviolet rays from the sun, known as UV rays. Two types of UV rays can penetrate the Earth's atmosphere, these are called UVA rays and UVB rays. Both types of UV rays are linked to skin ageing and skin cancer and UVB rays are largely responsible for sunburn.

When it comes to choosing sunscreen products, it's important to pick ones that offer both UVB protection and UVA protection. UVB protection is indicated by the SPF (sun protection factor) while UVA protection is indicated by the UVA logo or the UVA star system. With sunscreen this 'broad-spectrum' protection is standard, but other products such as moisturisers and lip balms which offer sun protection sometimes only offer UVB protection. For more information on sunscreen see our section on sunscreens below.

Understanding UV levels

This intensity of the sun's UV rays changes throughout the day and the year. They tend to peak between 11am and 3pm during the summer months and between 10am and 2pm during the winter months. As you would expect, UV levels are at their highest on a clear day in mid-summer.

UV levels are expressed using the UV index. Most weather apps and forecasts include a UV Index, and you can also check the UV Index on the Met Office website.



A UV Index rating of 3 (medium on some weather forecast apps) or more is the point at which we recommend sun protection for people with white skin. In the UK, this is usually between April and September.

For people with black and brown skin, a UV index rating of 11+ (extremely high on some weather forecast apps) is the point at which we recommend sun protection. The maximum UV index in the UK is around 7, so routine sun protection is usually unnecessary for people with these skin tones. However, there are important exceptions to this advice. Sun protection, even in the UK, is important for people with black or brown skin if:

- You have a skin condition such as photosensitivity, vitiligo, or lupus which makes you more vulnerable to sun damage
- If you have a high risk of skin cancer, especially if you are taking immunosuppressive treatments (including organ transplant recipients), or if you are genetically pre-disposed to skin cancer

In some countries, the UV Index can be extreme and if you plan on spending a prolonged time outdoors you may wish to follow sun protection advice.

Sun exposure can also make hyperpigmentation (spots or patches of darker skin) more noticeable. If this is a concern, follow sun protection advice for the affected area.

Check the UV index forecast to ensure you don't get caught out.

Make use of the shade

Shade is a great way to protect yourself from the sun while enjoying being outside but, depending on the level of shade, you may also need to use other forms of protection.

When we are outside in the summer, roughly half the UV we are exposed to comes directly from the sun and the other half is from UV rays scattered in the sky. This means you can sit in the shade and still be exposed to these scattered UV rays.

Imagine being under a beach umbrella on a sunny day. Beach umbrellas only offer about 3 to 5 times more protection than no shade at all. In this instance, effective sun protection may also involve using sunscreen and/or clothing.

If we wish to achieve a protection factor of 20 or higher from shade alone, we need to block not only direct sunlight but about 90% of the sky. If you find that hard to picture, this would be the equivalent to the level of shade provided by a woodland.

Protective clothing – what do we mean?

Clothing is very effective at protecting against UV from the sun. Importantly, you want good body coverage and fabric which prevents UV radiation from reaching your skin.

Several factors affect the UV protection provided by clothing. These include weave density, composition of fibres, colour, thickness, and wetness.

Studies carried out on thousands of samples of summer clothing indicate that about two-thirds of samples offer protection equivalent to SPF 50 or higher with more than 95% providing more than 10-fold protection.



A hat, t-shirt, shorts and sunglasses would be considered good coverage if used with other forms of sun protection.

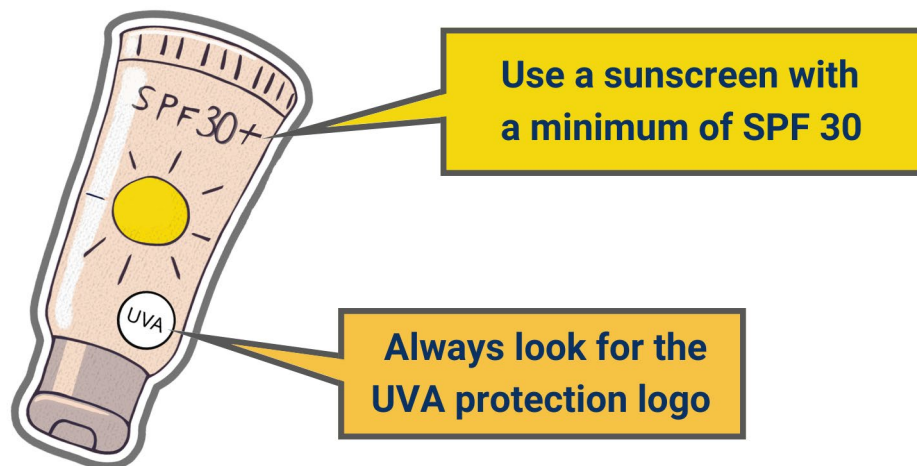
Hats and sunglasses

Hats protect the scalp, a common site for sun damage in balding men. They provide shade to parts of the face, with the extent of shade depending on the hat design.

A wide-brimmed hat, such as a Panama hat, offers the best type of protection. Baseball caps provide good protection to the nose but leave the ears, cheeks and neck unprotected. Legionnaire-style hats, with a flap of fabric covering the neck and ears, are particularly effective at protecting these sites.

Sunglasses are important to wear in strong sunlight as they protect our eyes from UV damage and protect the skin around the eyes which is often missed when applying sunscreen. Sunglasses that transmit 1% or less of UVB and UVA are often labelled as UV400.

What do I need to know about sunscreen?



To get the most out of sunscreen, it's helpful to understand how it works – what it does, and what it *doesn't* do.

Most sunscreens contain a mix of organic and inorganic chemicals. Organic chemicals work by absorbing UV radiation, turning it into harmless warmth. Inorganic chemicals both absorb and scatter UV rays away from the skin.

Sunscreen can take many forms, including creams, milks, lotions, and sprays, among others. They come labelled with an SPF, which stands for Sun Protection Factor. We recommend you choose a sunscreen with an SPF of 30 or above. Your sunscreen should also have a UVA logo (see image below). This indicates that the sunscreen will protect you from UVA rays (see section on UVA rays above). SPF and UVA protection are linked, so a higher SPF sunscreen will have more UVA protection.



The UVA logo: the letters UVA inside a circle

Most sunscreens sold in the UK use the Star Rating system (see image below) to indicate the product's UVA protection rating. With the star rating system the higher the number of stars, the more protection you'll get from UVA rays. We recommend choosing products with 4 or 5-star protection.



Star Rating system for UVA protection in sunscreen: from 1 star (minimum) to 5 stars (ultra)

An important thing to remember is that the best sunscreen is the one you are happy to wear. It may take trial and error to find one you love.

How long will sunscreens keep

Sunscreens are mixtures of oil and water so will always tend towards separation. The time this takes depends on the quality of the formulation and can vary from just a few months to many years. Typically, the shelf life for sunscreens is 30 months.

Sunscreens should be stored in a cool, dry place, out of direct sunlight. Look for the 'period after opening' (PAO) symbol on the labelling. The PAO symbol is a small picture of an opened jar with a number printed within it. This number shows the number of months the product can be used after it has been opened.

SPF in moisturisers

The SPF in moisturisers is tested the same way as SPF in sunscreens. In theory, this means that a moisturiser with SPF 15 should provide you with the equivalent protection of SPF 15. In reality, the protection you receive is much lower.

This is for several reasons. Typically, moisturiser is applied more thinly than sunscreen. Thinner coverage provides a lower level of sun protection. In addition, most sunscreens are formulated to be rub-resistant and water resistant, and to bind well with the skin – moisturisers are not. Finally, many moisturisers don't protect against UVA rays.



A moisturiser with an SPF will help protect you against small amounts of UV exposure, such as when you walk to the car or pop outside to hang out the washing, but sunscreen is better for longer, more deliberate UV exposure.

Can I use sunscreen on my baby?

The best approach is to keep infants under 6 months out of direct sun and in the shade as much as possible. This is especially important between the hours of 11 am and 3 pm when UV rays are most intense.

Avoid using sunscreen on babies younger than 6 months unless there is no other way to protect them from the sun. Shade and clothing which covers the skin are better sun protection methods.

A few general safety tips for sun protection for babies:

- Make sure your child wears loose-fitting clothing that covers the skin and keeps them cool, including a sun hat
- If there is no other option, and you cannot keep your baby out of the sun, you can apply small amounts of high SPF sunscreen to small areas like cheeks and the back of their hands
- Don't forget that babies and children can easily overheat, which can be very dangerous, so shade is best!

You can read more specific advice and information on our separate [Sun Protection for Babies and Children page](#).

Tips for applying sunscreen

To ensure maximum protection:

- Apply sunscreen liberally to the parts of your skin that will be exposed, about **15 to 30 minutes before** you go out into the sun
- Reapply it to exposed skin about **15 to 30 minutes after** stepping outside

The first application will give your skin time to absorb the sunscreen before sun exposure begins, and the second will cover areas you may have missed the first time.

When you apply it, spread it as uniformly as possible over your skin and let it dry.

Reapply sunscreen every two hours or if you take part in any activity that could cause it to rub or wash it off – for example, swimming, towel-drying, or playing sports.

Are sunscreens safe

Expert reviews have concluded that the ingredients used in sunscreens do not pose a concern for human health. However, although uncommon, sunscreens can occasionally cause skin irritation or a skin allergy.

Year-round sunscreen use

Year-round sunscreen use is unnecessary in the UK, except for people with certain medical conditions. In winter months in particular the UV index does not get high enough for it to be beneficial.



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Vitamin D

Sunlight is the main source of vitamin D, necessary for healthy bones and muscles.

People with white skin, who are most at risk of skin cancer, must balance the benefits and risks of sun exposure carefully. People with black or brown skin have a much lower risk of skin cancer linked to sun exposure and a much higher risk of vitamin D deficiency. As such, people with these skin tones are more likely to benefit from sun exposure.

For most of us, adequate levels of vitamin D are obtained by spending time outdoors in the spring, summer and autumn going about our normal day-to-day activities, but taking care not to overexpose ourselves and end up with sunburn. Giving advice about how long you need to be outdoors is not very helpful as it depends on many factors such as your posture, your skin tone, what clothing you are wearing, the time of day and season, what the weather is like – sunny or cloudy – and whether you are in the shade of buildings or trees.

Vitamin D supplements can help boost vitamin D levels. In the UK, 10 micrograms (400 IU) daily is recommended for adults, although around twice that daily dose can be safely taken (800-1000 IU). In children less than 1-year-old, 8.5 micrograms daily is recommended (SACN 2016).