

Sunburn & Sun Conditions (adults)

Most people love being out in the sun, and warm summer weather gives us all a feeling of well being. However, as most people know from experience, too much sun can lead to painful sunburn. In its mildest form sunburn is a pink skin rash which is uncomfortable to touch and can be itchy. The skin feels hot. More severe sunburn results in red, very tender and swollen skin which will blister and weep. Severe sunburn may be accompanied by sunstroke. You will feel sick and dizzy, and may faint.

The sun has an effect on the skin, both in the short term and the long term. In the short term it causes skin discomfort as described above, but in the long term it gradually causes permanent damage to your skin.

What are the signs of sun damage?

Throughout our lives, from childhood onwards, our skin is exposed to sunlight. More than 75 per cent of our lifetime's exposure to the UV rays that cause sun damage is before we are 18. Over the years the sun damage builds up, and from mid-life onwards the effects are clearly visible.

Long-term exposure to the sun causes premature ageing of the skin. This means that the skin loses some of its elasticity and suppleness, becoming dry and wrinkled. The areas most likely to be affected are your face, ears, the backs of your hands and, in women, the lower part of the legs.

Long-term damage from sunlight also leads to the development of sunspots, flat brown spots and freckling, often found on the back of your hands, your arms and on your chest. When the damage becomes worse, crusty patches develop on the surface of the skin, and these may be difficult to heal. The skin often becomes very red and bruises easily.

Continued exposure to the sun increases your risk of developing skin cancer; people with pale skin and blonde or red hair are most at risk, as are those who work out of doors. Skin cancers are more common in hot countries with white-skinned populations, but they are becoming more common in Britain possibly related to short exposure to intense sun on foreign holidays.

Skin cancers such as rodent ulcers (basal cell cancers) can develop, usually on the face and neck. Sunlight is also involved in the development of malignant melanoma, another type of skin cancer which usually develops from an existing mole. This is more common in younger people with lots of moles or pale skin.

Many skin cancers do not spread to other parts of the body, so they can be treated just by removing them. However, if you have had one, you are more likely to develop others; watch your skin carefully.

What causes sunburn and sun rashes?

Sunburn is caused by exposing your skin to the sun. There are a number of factors that determine how much your skin is at risk of sunburn. One of the major factors is what type of skin you have. Those most at risk of damage from sunlight include babies and children, people with pale or freckly skins, people with red hair, and people with lots of moles.

The sun stimulates the production of the pigment melanin in the skin. Melanin makes your skin turn darker or tan and provides protection against the rays of the sun. Fair-skinned people produce only small amounts of this pigment, so their skin is not naturally protected against the sun.

The other factors relate to the strength of the sun. The rays of the sun are strongest in the middle of the day; in countries which are nearer the equator; and at high altitudes. Do not forget that you can burn yourself when you are skiing as the snow reflects the rays of the sun, increasing their strength. Water has the same effect. The combination of wind and sun are also particularly damaging to the skin.

Even if you do have a skin type that tans easily, you are still at risk of damaging and ageing your skin if you spend a lot of time in the sun, year after year. Sunbeds also damage the skin. Most sunbeds use UVA rays, which cause longterm skin damage rather than the burning associated with UVB rays.

Some people are particularly sensitive to sunlight and suffer from allergic reactions when they go out in the sun. Prickly heat, as its name suggests, is a prickly, burning sensation which develops on the backs of the knees, inner thighs and waist. Polymorphic light eruption (PLE) is an allergic reaction to UVA rays. An itchy red rash appears on the face, chest, legs, arms and hands. If you suffer from either of these conditions it is particularly important to avoid the sun and use high Sun Protection Factor (SPF) products if you must go outdoors in sunny weather, Sunlight combined with some plant juices, which can get onto your skin in the garden, can cause a similar rash.

Some medicines can make your skin sensitive to the sun, causing a red, itchy rash. And some perfumes and cosmetics cause a skin reaction in certain people once they are out in the sun.

What treatments are available?

Preventing sunburn is better than treating it. However, if you do burn your skin, take a cool shower, or use a towel soaked with cold water as a cold compress. Wash off any salt water, as the salt will aggravate the sore skin. Apply a soothing 'after-sun' cream containing hydrating and cooling ingredients to help make the skin feel better, or apply soothing lotions such as calamine to the affected areas. Do not use these if the skin is broken.

After mild sunburn, the skin often peels and feels very dry. Use a moisturising cream to replace some of the moisture you have lost. Add a moisturising oil or an emollient lotion to the bath to help to decrease the itching and make the skin more supple.

If your sunburn is more severe and the skin has blistered, you will need to take good care of the damaged area. Consult your doctor, as you may need to cover the blisters with special dressings until they heal. Once you have burnt your skin, stay out of the sun until your skin has settled completely.

Sunstroke usually causes a headache, dizziness, fever and vomiting. Take a cool shower, lie down indoors in a cool place and drink plenty of cool drinks. Take painkillers, such as ibuprofen, paracetamol or aspirin, for the headache and for the pain of sunburn. Remember that aspirin should not be given to children under the age of 16.

Some medicines cause a rash to develop when you are out in the sun. Check with your doctor if you think this is the case with you, and use a sunscreen with an SPF of at least 25 on all exposed parts of your body whenever you are outside during the

summer. If your skin reacts to perfumes and cosmetics in the sun, wear them only in the evening.

Homoeopathic treatments are available for sunburn. Belladonna is used for skin which feels dry, hot, burning and throbbing. Cantharis should be taken before blistering occurs, or just after.

How can I help myself?

Sunlight in moderation is good for us as it improves our mood and makes us feel better. Sunlight helps the skin to produce vitamin D and it can also improve some skin conditions, such as psoriasis or acne.

Protect your skin against sunburn by using an effective sun protection cream (minimum SPF 15) on exposed skin. Sun protection products available at your Boots pharmacist offer protection against both UVA and UVB rays (see below for a description of the difference between the two).

You will see an SPF marked on sun protection products (sunscreens). The SPF refers to the level of protection from UVB rays. It tells you how much longer you can stay in the sun without burning if you use the sun protection than if you have no protection. The higher the number, the greater the protection. Obviously the length of time you can stay in the sun without burning depends both on your skin type and on how strong the sun is, which varies with the time of day and the country you are in. It is always best to avoid the sun when it is at its highest in the sky; that is between 11am and 3pm.

Sun protection products now aim to protect against UVA rays as well. The level of protection is shown by a star rating, with four stars denoting maximal protection and one star products providing least protection. Products with UVA and UVB protection are known as broad-band sunscreens.

A sun protection lotion or cream that has an SPF of 25 to 30 and a four-star rating provides high protection. If you have a type of skin which does not burn easily, you could use a cream or lotion with an SPF of around 15 and a maximum UVA star rating, particularly if your skin is already beginning to tan.

Some sun protection products contain titanium dioxide, which acts as a physical barrier in much the same way as keeping the skin covered. These are particularly suitable for people with sensitive skin. Sunblock or high-factor specialist products should be used on vulnerable areas such as the nose, lips, ears and cheeks, and for young babies and children with fair skin. Women who sunbathe topless should protect their nipples with a sunblock.

What else can I do?

Prevention begins in childhood. Babies and toddlers should never be exposed to direct sunlight. Use a sun umbrella over the pushchair when out walking on sunny days. Make sure that children wear T-shirts and hats when outside in the summer months, even when paddling and swimming.

- Babies and very young children need particular care

- Adults and children should use a high-factor sun protection cream with a three or four-star rating on all exposed skin when outside during the summer months.
- If you do want to tan, use sun protection creams to enable you to do so slowly and over a period of time so as to minimise the damage to your skin. On the first day of your holiday, limit your exposure to the sun to about 20 to 30 minutes. Build up from there.
- The sun is at its strongest between 11 am and 3pm. Try to stay indoors between these times.
- Remember the sun can burn your skin even when you are walking around or in the shade. It can penetrate cloud and even lightweight clothing.
- If you are going in the water, use a water-resistant sun cream, or reapply the cream when you get out.
- If you swim in salt water, wash the salt off afterwards if there is a shower on the beach or nearby. Salt makes the skin more prone to burning.
- Get out of the habit of sunbathing. Lie in the shade or under an umbrella. If you do lie in the sun, do so towards the end of the day when the rays are not so strong.
- Wear a broad-brimmed hat to protect your face when in the garden or walking outside on sunny days.
- If you notice any unusual skin changes, show them to your doctor.
- Do not forget that snow and water reflect the rays of the sun, so your skin will need extra protection in these environments.
- Keep out of the wind when it is sunny, as the combination of wind and sun is particularly damaging to the skin.
- Wear good quality sunglasses to protect your eyes and the delicate skin that surrounds them from damage by the sun.
- Sunbeds damage the skin, as the UVA rays cause long-term skin damage and ageing. Avoid them.
- If you have fair, freckly skin and burn easily, accept that you will not tan and cover up well in the sun.

When should I see my doctor?

If you burn your skin sufficiently for the skin to blister, you should see your doctor as it may need dressing. If you notice any unusual skin changes, or if moles change in size, shape or colour, become itchy or bleed, show them to your doctor. If you are taking medicines and develop a rash in the sun, discuss this with your doctor.

Types of sunlight

There are two main types of rays, UVA and UVB.

- **UVA** Long-wave rays which are responsible for ageing and wrinkles, as they cause long term damage deep in the skin. These rays are present all year round.
- **UVB** Short-wave rays which are responsible for burning and tanning, as they cause damage to the surface of the skin. These rays are present mainly in the summer. Damage to the ozone layer has meant that we receive more of these rays than we used to, which may explain the recent increase in skin cancer.

Simple steps for selecting sunscreens

- Work out what skin type you have (see the Sun Protection Factor guide below).

- Check how close your holiday destination is to the equator. The stronger the sun the more protection you will need.
- You will need a sunscreen carrying broad-band (UVA/UVB) protection with at least a three-star or four-star rating. For sports, choose water and sweat-resistant formulas.
- Stack up before you travel. When you are abroad, sun products which are often on display in full sunlight, could be less effective.
- Do not forget high-factor specialist products for your tender spots, such as lips, face and scalp.
- Pack plenty of SPF25 or higher for children because their delicate skin needs extra care.

	Moderate climate	Hot climate	Very hot climate
	N. Europe	S. Europe	Tropics
	UK	Mediterranean	Africa
			Australia
Children up to 10			
First three days	25+	25+	25+
Following days	25-15	25-15	25+
Allergy-prone skins			
First three days	25+	25+	25+
Following days	25-15	25-15	25+
Fair skin/burn easily			
First three days	25	25	25+
Following days	15	15	25
Tans/tendency to burn			
First three days	15	25-15	25-15
Following days	15	15	15
Tans easily			
First three days	15	15	15
Following days	15	15	15