Advice about Sun Protection for Kent Cricket Players

Cricketers can spend between 3 and more than 7 hours in the sun on one day, and for many days in the season and for many seasons. That has all the ingredients for severe skin damage. The advice here is therefore a very important part of a cricketer’s package of understanding.

UV, the sun and skin cancer

- Overexposure to ultraviolet (UV) radiation from the sun (or sunbeds) is the main cause of skin cancer.
- There are two main types of skin cancer: non-melanoma, which is very common, and malignant melanoma which is less common but more serious.
- Over 8 out of 10 melanomas in the UK (around 11,100 cases every year) are linked to too much exposure to UV rays from sunlight or sunbeds.

Who is most at risk of skin cancer?

Anyone can develop skin cancer, but some people are more vulnerable to it than others. These people tend to have at least one of the following:

- Fair skin that burns easily in strong sun
- Lots of moles or freckles
- Red or fair hair
- Light-coloured eyes
- A personal or family history of skin cancer
- A history of sunburn.

What if I don’t have fair skin?

If you have naturally brown or black skin you are much less likely to develop skin cancer. This is because people with naturally brown or black skin have more melanin pigment in their skin cells – which helps protect the skin from UV rays.

However, skin cancer can still affect people with brown or black skin.

How does UV cause skin cancer?

Too much UV radiation damages the genetic material (the DNA) in our skin cells. If the DNA builds up enough damage over time it can cause cells to start growing out of control, which can lead to skin cancer.

There are two main types of UV rays that damage our skin. Both types can cause skin cancer:

- UVB is responsible for the majority of sunburns.
- UVA penetrates deeper into the skin. It ages the skin, but contributes much less towards sunburn.
Both UVA and UVB can damage DNA in the skin, which can lead to skin cancer. A third type of UV ray, UVC, is the most dangerous of all, but it is completely blocked out by the ozone layer and doesn’t reach the earth’s surface – while there’s an ozone layer!

Our body has ways of repairing most of the damage, but it is not perfect; some damaged DNA can be left behind. Its attempt to repair this damage is what causes the painful symptoms of a sunburn. Getting a painful sunburn just once every two years can triple the risk of melanoma, so it is important not to get one.

**What is sunburn?**

Sunburn is a clear sign that the DNA in our skin cells has been damaged by UV radiation. It doesn’t have to be raw, peeling or blistering; if skin has gone red in the sun, it’s sunburnt.

We can’t feel UV rays – the heat we feel comes from infrared rays, which can’t burn us. This is why people can still burn on cool days.

**When do I need to protect myself?**

**Skin type and UV index**

The UV index is a useful tool that tells us how strong the sun’s UV rays are and when we might be at risk of burning. The higher the value, the greater the risk of sunburn and the less time it takes to damage our skin.

The index varies depending on where we are in the world, the time of year, the weather, the time of day and how far above sea level we are. A very hot day is not necessarily accompanied by a very high index.

*By knowing our skin type and using the UV index, we can work out when we need to protect ourselves from the sun.*

**Which skin type am I?**

Experts have identified six different skin types. Colour and tone vary a lot within each skin type, but it’s a useful guide. Choose the description that most closely matches your hair and eye colour and what would happen to your skin in strong sun if it were not protected. Then match your hand colour to the photo. This will tell you what your skin type is.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>Type I</td>
<td>Often burns, rarely tans. Tends to have freckles, red or fair hair, blue or green eyes.</td>
</tr>
<tr>
<td>Type II</td>
<td>Usually burns, sometimes tans. Tends to have light hair, blue or brown eyes.</td>
</tr>
<tr>
<td>Type III</td>
<td>Sometimes burns, usually tans. Tends to have brown hair and eyes.</td>
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<tr>
<td>Type IV</td>
<td>Rarely burns, often tans. Tends to have dark brown eyes and hair.</td>
</tr>
<tr>
<td>Type V</td>
<td>Naturally brown skin. Often has dark brown eyes and hair.</td>
</tr>
<tr>
<td>Type VI</td>
<td>Naturally black-brown skin. Usually has black-brown eyes and hair.</td>
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</tbody>
</table>
Check out this table of the different skin types and the UV index to see when you might be at risk of burning.

Between October and March in the UK, the UV index is normally lower than 3, so even people with fair skin shouldn’t need to protect themselves.

World UV App

Developed in conjunction with the Met Office, the British Association of Dermatologists created the World UV App which provides real time information on daily UV levels at over 10,000 locations across the globe.

It is available on both iPhone and Android operating systems and uses GPS to pinpoint your location and provide you with relevant UV information. In addition the app will educate you about skin type and provide you with best practice advice on protecting skin from the sun.

The app can be downloaded free from Apple’s App Store and Google Play.

About sun screens

How do sunscreens work?

1. *Organic* filters absorb harmful UV radiation and convert and give this energy back out as infrared radiation. These are sometimes known as ‘absorbers’, or ‘chemical’ sunscreens.

2. *Inorganic* filters (also known as ‘physical’, ‘natural’, ‘reflective’, ‘zinc’) contain titanium dioxide or zinc oxide, which reflect UV radiation away from the skin.
You can think of the difference this way:

- **Organic filters; sponges, mopping up the UV radiation.**
  (These are usually less visible when applied so if you apply them as you should, over the whole face, you won’t look like a white faced clown!)

- **Inorganic filters; mirrors, bouncing UV straight back off the skin.**

**What is SPF?**

Sunscreens in the UK are labelled with an ‘SPF’. This stands for ‘sun protection factor’, although the SPF is more accurately the sun burn protection factor as it primarily shows the level of protection against UVB, not that against UVA.

SPFs are rated on a scale of 6-50+ based on the level of protection they offer, with ratings between 6 to 14 the least protective end of the spectrum and ratings of 50+ offering the strongest UVB protection.

Recommended: A sunscreen with an SPF of 30 in addition to protective shade and clothing.

**UVA star system**

When you currently buy sunscreen containing UVA protection in the UK you may notice a UVA star rating on the packaging. The stars range from 0 to 5 and indicate the percentage of UVA radiation absorbed by the sunscreen in comparison to UVB, in other words the ratio between the level of protection afforded by UVA protection and UVB protection.

That’s why it’s important to choose a product with

- a high SPF
- a high UVA protection (eg a high number of stars).

Sunscreens that offer both UVA and UVB protection are sometimes called ‘broad spectrum’.

*A sunscreen with an SPF of 30 and a UVA rating of 4 or 5 stars is generally considered as a good standard of sun protection in addition to shade and clothing.*

**New sunscreen labelling**

A new EU Recommendation means that you will notice changes on the labelling of some manufacturers’ sunscreens. As well as the SPF number, the SPFs are categorised as providing low to very high protection, to make the SPF guide easier to understand. The table below illustrates this.

<table>
<thead>
<tr>
<th>New Label</th>
<th>SPF</th>
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</thead>
<tbody>
<tr>
<td>Low protection</td>
<td>6 to 14 (ie SPF 6 and 10)</td>
</tr>
<tr>
<td>Medium protection</td>
<td>15 to 29 (ie SPF 15, 20 and 25)</td>
</tr>
<tr>
<td>High protection</td>
<td>30 to 50 (ie SPF 30 and 50)</td>
</tr>
<tr>
<td>Very high protection</td>
<td>50+ (ie SPF 50+)</td>
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According to the EU Recommendation, the UVA protection for each sunscreen should be at least a third of the labelled SPF. A product that achieves this requirement will be labelled with a UVA logo, the letters “UVA” printed in a circle.
What is photostability?

You should also check that your chosen sun protection is photostable. ‘Photostability’ means that the filters do not break down in the sun.

One application a day sun protection products

Some products offer 8+ hours of protection from one application. It is important to remember that the majority of us do not apply sunscreen well: Often too thinly and at insufficient intervals – and we tend to miss sections of difficult-to-reach areas such as the back. But when products are tested for protection ratings they are, of course, applied correctly.

We also often overlook factors which cause premature removal of sun protection products; exposure to water, sweating, towel drying and any form of abrasion like diving around the outfield or avoiding being run out!

So the main issue with once-a-day sun protectors is that they do not account for poor application and accidental removal: If a section of skin is missed in the initial application or has protection removed then it will get raw sun exposure.

_The general advice is that sunscreen should be re-applied liberally every couple of hours to ensure that any exposed patches are protected._

What about SPF in moisturisers?

These products are unlikely to offer sufficient level of protection and are not recommended for the long exposure that cricketers experience.

How should I apply sunscreen?

Most people apply less than half of the amount required to provide the level of protection indicated on the packaging, often being sparing because they want the bottle to last! Areas such as the back and sides of the neck, temples and ears are commonly missed. _Be careful to apply it generously and be careful not to miss patches._

There is a vast range of product types available, including lotions, mousses, sprays and gels. Because of this it is impossible to state here the amount you should apply; make sure your preferred product provides clear instructions.

Also, up to 85 percent of a product can be removed by towel drying, so you should reapply after swimming, sweating, or any other vigorous or abrasive activity.

_Sunscreens should not be used as an alternative to clothing and shade, rather they offer additional protection._

Spotting skin cancer early

Finding skin cancer early saves lives, so it’s important to know the signs and see your doctor about any unusual or persistent changes to your skin.

It’s generally a good idea to be aware of how your skin normally looks (see app below) so you’ll be more likely to notice changes that could be signs of skin cancer. If you spot a change such as a new mole, or any moles, freckles or patches of normal skin that change in size, shape or colour it’s worth getting it checked out by a doctor, even if you don’t think it’s anything to worry about. It
may well not be skin cancer, but if it is, getting it diagnosed and treated early could make for a good outcome.

There is another type of skin cancer: squamous cell carcinoma (SCC). This is an uncontrolled growth of abnormal cells arising in the squamous cells, which compose most of the skin’s upper layers (the epidermis). SCCs often look like scaly red patches, open sores, elevated growths with a central depression, or warts; they may crust or bleed. They can become disfiguring and sometimes deadly if allowed to grow.

SCCs may occur on any area of the body, but are most common in areas frequently exposed to the sun, such as the rim of the ear, lower lip, face, bald scalp, neck, hands, arms and legs. Often the skin in these areas reveals telltale signs of sun damage, such as wrinkling, changes in pigmentation, and loss of elasticity.

SCC is mainly caused by cumulative UV exposure over the course of a lifetime. They are therefore more common amongst outdoor workers, army personnel, etc; so cricketers must also be at risk.

Embarrassing Bodies app: my mole checker

This is a very useful iPhone app for self-monitoring moles. You can download it free at www.channel4embarrassingillnesses.com/features/embarrassing-bodies-iphone-apps/

This advice

This advice is not meant to worry you, quite the opposite: It is meant to arm you with the knowledge that removes the need to be too concerned.

Get hit with a cricket ball and you know it; you may need hospital treatment for a break and you will try to avoid it happening again, perhaps with better protection.

Get “hit” with the sun and you may not know the damage for many years …… and it may not cross your mind to get better protection to avoid it happening again.

Further advice

As with all things about health, never hesitate to seek advice from your GP, even when you feel healthy; it’s a good way of staying healthy. If you have concerns about a mole ask your GP to make an appointment with a specialist (dermatologist).

David Turner FRSPH
On behalf of Kent Cricket
using the advice of SunSmart / Cancer Research UK