

## A Guide to Safe Sun Vision

from

### The Eyecare Trust

#### The Trust's Top 10 Tips for Safe Sun Vision

1. UV Rays - Expensive sometimes means better, but not necessarily in the case of sunglasses. What really counts is the degree to which the lenses filter out harmful UV rays. Look out for glasses carrying the European Standard 'CE' Mark and the British Standard BSEN 1836:1997, which ensure that the sunglasses offer a safe level of UV protection.
2. Added Protection - For maximum protection wear a cap or wide-brimmed hat in addition to your sunglasses.
3. Stay Out of the Midday Sun - Try to avoid being outside when the sun's rays are strongest between 11am - 3pm.
4. Sunglasses for Driving - When buying sunglasses which will be worn for driving, make sure they are in the filter category range of 0-3. A lens carrying a filter category of 4 will be too dark for safe driving. Never wear sunglasses when driving at night or in poor light.
5. Lens Shade - Unless the glasses carry the British Standard BSEN 1836:1997, do not confuse the shade of the lenses with their ability to filter UV rays. Dark sunglasses may still allow UV rays to enter the eye and can be MORE harmful than wearing no glasses at all, because they cause the pupil of the eye to dilate which allows more UV rays to enter. Therefore, when buying sunglasses with very dark lenses it is more important than ever to ensure they offer good UV protection. Sunglasses are marked with a filter category number from 0-4, where 4 is the darkest lens. Category 4 offers more comfort in bright sunlight as it avoids straining the eyes.
6. Filtering Blue Light - Ideally sunglasses will also absorb high energy visible radiation, known as blue light. This will enable the glasses to be worn for extended periods without tiring the eyes. It is recommended that no more than 95% of blue light should be filtered to avoid colour distortion.
7. Avoid Scratches - Scratched lenses will scatter the sun's light and could cause glare around the area of the scratch. Look after sunglasses by keeping them in a case and cleaning them with a mild detergent and water or a special lens cleaner. When drying lenses, do not use a paper towel, as this will scratch the lens. The solution is to use a good cloth, preferably one made of microfibre.
8. Contact Lenses with Protection - Contact lens wearers can now also enjoy the added protection of in-built UV protection. Contact lens practitioners will have details of all the latest products available.
9. Prescription Sunglasses - If you already wear spectacles, you can have sunglasses made to your prescription.
10. Eye Examinations - Visit your local optometrist for regular eye examinations - this will ensure any long-term sun damage is detected early.

And most of all . . . .

Have Fun! Designs are getting more flamboyant and adventurous, so make the most of the wide range of sunglasses available and add a real twist to summer dressing, but make sure that the lenses are big enough to protect the eyes from stray light. Sunglasses may be vital for protecting the eyes, but they are also great accessories for looking stylish and individual.

# A Guide to Safe Sun Vision

## Why do we need to protect our eyes?

Excessive exposure to the sun's UV rays can lead to a sun-burn-like condition called photokeratitis. This can be extremely painful and make your eyes red, swollen and watery.

Although the symptoms of photokeratitis normally clear up quickly and cause no lasting damage to the eye, prolonged unprotected exposure to the sun can lead to permanently impaired vision.

Sunglasses give comfort in very bright conditions by reducing the amount of light reaching the eye and protect the eye from damaging UVA and UVB light.

UVB radiation is normally absorbed at the surface of the cornea but can also reach the retina. Excessive exposure can cause permanent damage to both the cornea and conjunctiva. However, UVB damage can be halted if further exposure is avoided.

UVA radiation penetrates more deeply and can cause damage to the crystalline lens and retina. This can accelerate the ageing process and increase your risk of developing cataracts and other age-related conditions which can seriously impair your vision.

## What should I look for when buying my sunglasses?

There are three types of sunglasses:

Cosmetic sunglasses these do not give significant protection against the sun and are worn as fashion accessories.

General purpose sunglasses for reducing glare in bright light. These should be fine for most occasions including driving and holidays abroad.

Special purpose sunglasses for activities such as skiing or for people abnormally sensitive to glare.

Always look for British Standard BSEN 1836:1997. This British Standard sets performance levels for quality, strength, stability, design and manufacture as well as the amount of UV they let through.

Non UV absorbing lenses can do more harm than not wearing anything at all. Behind a tinted lens, the pupil opens wider allowing in more UV light than would happen normally and thus reduces the eyes' natural protection.

Sunglasses sold under BS 2724 have a 'shade number'. Shade numbers relate to the tint of the lens. 0 is the lightest shade whilst 4 is the darkest.

## Does the colour of the lens make a difference?

Brown and grey are the most popular colours and green is one of the most effective. However, it is the 'shade number' that counts, not the colour of the lens.

## What about safety?

For safety choose plastic, toughened glass or laminated glass lenses. This is especially important if you have an active lifestyle or plan to wear your sunglasses for sports activities.

Are there such things as 'sun contact lenses'?

Yes. This area is developing quickly. Ask your contact lens practitioner about the latest products available. Sports people involved in open-air activities may find these particularly interesting.

## Should children wear sunglasses?

Yes, children are thought to be at the greatest risk from UV damage because the cornea, lens and fluids in their eyes are much clearer, allowing more light to reach the retina. In fact by the age of 18, more than half-a-lifetime's worth of UV light will have been absorbed by a child's eyes.

Ideally all children - and adults - should wear good quality sunglasses and a peaked hat when spending time outdoors. It's especially important for parents to safeguard their children's eyes when they are playing on the beach or by water where there is a lot of reflected light.

Don't let your child wear toy sunglasses. These offer little UV protection and can actually cause more damage because the tinted lenses dilate the pupil allowing more UV light to enter the eye.

## What about prescription lenses?

Both sunglasses and contact lenses are available to your normal optical prescription. Your practitioner will be pleased to advise you, but ensure that he or she knows that you wish to have UV protection built in.

## What are photochromic lenses?

These lenses darken on exposure to sunlight and should react efficiently in changing light conditions. They should not leave much tint present when the lens is not exposed to the sun.

## What are graduated tints?

These are tinted darker at the top than at the bottom and give useful protection from bright overhead light, leaving a lighter area for map reading or seeing the dashboard.

## Which sunglasses are best for driving?

The Highway Code states that tinted glasses should not be worn at night or in poor visibility. Sunglasses should not be used at night to stop headlamp glare. They should also be removed if driving from bright sun into a tunnel. Don't pick a very dark tint. A medium density is normally sufficient and it is safer as it transmits more light.

## Are polarising lenses suitable for driving?

These lenses reduce reflections from wet or polished road surfaces, but they reveal the stress patterns in the older types of toughened windscreens, which can be hazardous.