

# DO I REALLY NEED SUNGLASSES?

By Christopher Wilcox, Classic Eyes

I am amazed at the small fortune that is spent on equipment: cyclists have carbon fibre frames to shave seconds off their times, while golfers have Titanium drivers to add a few yards. In their rush to buy the latest and greatest gear, sports enthusiasts often overlook a key factor in optimising their sports performance – their vision.

## Manage Light = Better Performance

Vision is about how we process light to create the images we see. All light is composed of a variety of electromagnetic rays of different colours, determined by wavelengths. Violet, indigo, blue, green, yellow, orange and red light each have a specific wavelength. When combined, these coloured rays create white light. Tinted performance sunglasses can diminish glare and enhance contrast sensitivity when the transmittance of certain wavelengths into the eye is selectively reduced. Increased contrast enables a person to see with greater speed, accuracy, clarity and comfort, giving athletes a key advantage over their competitors. This extra edge of better vision with sports sunglasses can manifest itself in different ways, depending on the sport. While biking, for example, sunglasses with the appropriate lenses may help you see better down the trail for a safer ride, especially when travelling downhill at high speeds.

## Make sure your sunglasses offer 100% UV protection

If you are into sports, you probably spend more time in the sun than the average person. The danger here is from ultraviolet (UV) radiation from the sun. These rays have been linked to conditions such as pterygia, cataracts and ocular tumours. Overexposure to UV radiation can also cause "sunburn" on your eyes (photokeratitis), which is very painful and can lead to the long-term damage of the cornea. The amount of UV protection offered by sunglass lenses are determined by the lens material and coatings or additives applied to the lens. A good choice is polycarbonate lenses. These lenses are lightweight and shatter-resistant, and they block 100% of the sun's harmful UV rays without extra additives or coatings being necessary.

## Selecting a tint is a matter of personal preference. Certain tints offer advantages for specific visual tasks and environments:

**Neutral grey:** If 100% accuracy in color perception is vital, a neutral grey tint is the best choice.

**Brown and copper:** For most athletes however,

contrast enhancement is the most desired feature for activities such as viewing the single track in the forest, or the upcoming pot-hole, or for a variety of other sports-specific tasks.

**Yellow, amber, orange, and red:** Depending on light conditions, yellow (for low-light and overcast conditions), amber, orange, and red tints are also good choices for enhancements.

## You may also want to consider adding other performance-enhancing features to your sports sunglasses

• **Photochromic lenses:** These tints lighten and darken automatically in changing light conditions, making them very beneficial for outdoor activities that last for several hours. As weather conditions change, or the sun begins to set, photochromic lenses will adjust to allow the optimum amount of light to enter your eyes for good vision. The largest manufacturer of plastic photochromic lenses is Transitions Optical, Inc. These lenses are often commonly referred to as "Transitions lenses", and are also available in polycarbonate material.

**Polarized lenses:** These lenses contain a special filter that selectively blocks light reflecting from horizontal surfaces, eliminating "hot spots" of glare. Polarized lenses are especially helpful in blocking glare from light reflected off water, sand, snow, tar and concrete.

**Anti-reflective coatings:** Applying an AR coating to the back surface of your sports sunglass lenses will eliminate glare from sunlight reflecting off this surface when the sun is behind you. To reduce the likelihood of this even further, choose a wrap-around frame design so that your lenses fit closer to your face.

**Mirror coatings:** For very bright conditions, such as hiking at high altitudes, consider adding a mirror coating to the front surface of your sports sunglass lenses. These coatings can block an additional 10 - 60% of visible light for greater comfort in highly reflective full-sun environments.

Try not to use "dress" or fashion sunglasses while taking part in sport

They are not made to the same protective standards as sports specific eyewear, and will probably not hold up under impact. The lenses of such sunglasses are not safety-rated and could shatter, causing serious eye injuries. Likewise, the frames can break upon impact or cause the lenses to come loose and damage your eyes or face.

When it comes to achieving your personal best in sports, remember that great eyesight is a key factor in athletic performance. You might want to put sports eyewear at the top of your list when you shop for gear and accessories to enhance your game.



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