



HEALTH & FITNESS

Sunglasses: More than just a fashion statement

By Carolyn LoBocchiaro O.D.

The sun supports all life on our planet, but its life-giving rays also pose dangers. The sun's primary dangers are in the forms of ultraviolet radiation (UV light) and high energy visible radiation (HEV) or blue light. Most people are aware of the harm UV radiation can do to the skin, but many do not realize that exposure to UV and HEV radiation can harm the eyes and affect vision.

There are three types of UV radiation:

1. UV-C is absorbed by the ozone layer and does not pose any threat. However, this also means depletion of the ozone layer potentially could allow high-energy UVC rays to reach the earth's surface and cause serious UV-related health problems.

2. UV-A, UV-B and HEV can have long- and short-term effects on the eyes and vision.

What are some of the ocular conditions resulting from UV & HEV exposure?

- cataracts: a clouding of the lens inside the eye

- macular degeneration: a retinal disease which is the leading cause of blindness in adults

- photokeratitis: a painful inflammation of the cornea

- pingueculae and pterygia: growths on the eye's surface which can become unsightly and cause corneal problems as well as distorted vision

- eye cancer

- skin cancer of eyelids and skin around eyes

The American Optometric Association cautions that the effects of sunlight exposure are cumulative. Children and teenagers are particularly susceptible to the sun's damaging rays because they tend to spend more time outdoors and their eyes are more transparent so they let more blue light reach the retina.

The risk for serious damage from solar radiation is greatest between the hours of 10 a.m. to 3 p.m. and during the summer months. Fresh snow can reflect 80 percent of UV radiation so sunglasses are also important in the winter. Believe it or not, sunglasses should be worn even when you're in the shade. This is because shade reduces your UV and HEV exposure to some degree, but

your eyes still will be exposed to UV rays reflected from buildings, roadways and other surfaces.

What to look for when purchasing sunglasses

To properly protect your eyes from harmful solar radiation, sunglasses should block 100 percent of UV rays and also absorb most HEV rays. The lenses should have a uniform tint, not darker in one area than another, and should be free of distortions. Larger frames with a close-fitting wraparound style provide the best protection because they limit how much stray sunlight reaches your eyes around the sunglass lenses. To ensure that sunglasses are 100 percent UV absorbing, be sure to purchase them from reputable companies, specialty sunglass stores or from an optical professional.

The amount of UV protection sunglasses provide is not related to the color and darkness of the lenses. However, for HEV protection, color and darkness do matter. If you can see your eyes easily through the lenses while looking in a mirror, they are not dark enough. All sunglasses block a portion of HEV rays, but some tints block more blue light than others. Most sunglass lenses that

block a significant amount of blue light will be bronze, copper or reddish-brown. In addition to sunglasses, wearing a wide-brimmed hat on sunny days can reduce your eyes' exposure to UV and HEV rays by up to 50 percent.

Polarized sunglasses contain special filters that block glare. Light reflected from flat surfaces such as a road or water travels horizontally to the eyes, creating annoying glare. Polarized sunglasses cut glare and haze so your eyes are more comfortable and you can see clearer.

Don't neglect your eyes. It is recommended that infants have their first comprehensive eye exam at six months of age, followed by age 3 years and before kindergarten. After that, an eye exam is recommended every year. Comprehensive eye exams are necessary to monitor eye health, maintain good vision and eye teaming abilities keep patients abreast of new advances in eye care.

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