

WINTER SUN PROTECTION FOR EYES

BY GARY HEITING, OD

Protecting eyes from the sun is just as important in winter as it is in summer.

Most people are aware that sunglasses should block the sun's invisible ultraviolet (UV) rays. But for maximum eye protection, they also should shield the eyes from high-energy visible (HEV) rays. Sometimes called "blue light," HEV light rays contribute to glare and can damage the retina.

Here are key points to discuss with patients about the importance of winter sun protection:

WINTER WEATHER FACTORS

- Weather conditions can change quickly in winter—gray mornings often are followed by bright sunny afternoons that can be harmful to unprotected eyes.
- The sun's damaging UV and HEV rays can penetrate clouds, so sunglasses are important on overcast days, too.
- When trees drop their leaves, there is less shade to protect the eyes from direct sunlight.
- Because the sun is lower in the sky in winter, drivers often face highglare situations with the sun shining directly into their eyes.
- Snow sports enthusiasts especially need protective sunglasses because they spend many hours in conditions of high UV and HEV exposure.

SNOW AND ALTITUDE: DOUBLE TROUBLE

- Exposure to the sun's UV and HEV rays is increased in winter because snow reflects significantly more solar radiation than grass, sand or pavement.
- Snow reflects approximately 80 percent of sun's UV rays, compared with grass, soil or water, which reflect less than 10 percent, and sand that reflects about 20 percent. [Source: World Health Organization]
- UV exposure increases about 4 to 5 percent for every 1000 feet increased elevation above sea level. [Source: National Oceanic and Atmospheric Administration]
- Due to these factors, a person skiing near Flagstaff, Arizona, is exposed to roughly 200 percent more UV than he or she would receive hiking in the desert near Phoenix on the same winter day.

EYE PROBLEMS FROM WINTER SUN

The eye is very susceptible to UV and HEV damage, and too much winter sun can cause both short-term and permanent vision problems, including:

- Photokeratitis ("snow blindness")
- Cataracts

Also, overexposure to the sun's UV rays can increase the risk for skin cancer of the eyelids and other tissues surrounding the eyes.

RECOMMENDED FEATURES

Sunglasses for active winter wear should have the same protective features as those worn in summer, including:

- Lenses that block 100 percent UV and at least 80 percent HEV rays.
- Lenses made of a lightweight, shatterresistant material, such as polycarbonate.
- Shatter-resistant frames with a shape that helps shield the eyes from sunlight, drying wind and airblown debris.

The color of sunglass lenses is a matter of personal preference, but most people prefer neutral gray, which provides the most accurate color vision, or copper or brown, which enhance contrast. The tint should reduce visible light by 75 to 90 percent for optimum comfort in snow-covered areas. Polarized lenses provide added protection from reflective glare. But they can make icy patches on sidewalks or ski slopes more difficult to spot. Be sure to discuss this during the eyewear selection process.

START THEM EARLY...

Eye damage from solar radiation is cumulative over a person's lifetime, so wearing sunglasses year-round is as important for children as it is for adults. In fact, it may be more important, since research suggests people get as much UV and HEV exposure by age 20 as they do the rest of their lifetime. Also, younger eyes may be more susceptible to UV and HEV damage than older eyes, due to age-related changes in the light absorbing characteristics of ocular tissues.

AND REMIND EVERYONE...

Sunglasses that block UV and HEV rays aren't just for skiers and winter sports enthusiasts. People of all ages and lifestyles should wear them—whether for work, play, driving, or simply going for a walk. In addition to reducing the risk of serious eye problems, sunglasses that shield the eyes from UV and HEV increase visual comfort, clarity and safety outdoors, which is always a good thing.

Gary Heiting, OD, has more than 20 years experience as a clinical optometrist.

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