

PROTECTING YOUR EYES FROM UV RADIATION

Don't Fry Day



The National Council on Skin Cancer Prevention (National Council), which is comprised of more than 45 organizations, associations, and federal agencies and represent the nation's premier researchers, clinicians and advocates for melanoma and skin cancer prevention, is proud to sponsor the annual *Don't Fry Day* campaign. The Friday before Memorial Day is "*Don't Fry Day*". As millions of us enjoy the great outdoors on Memorial Day weekend and throughout the summer, the National Council reminds us to practice sun-safe behaviors.

The sun supports all life on our planet, but its life-giving rays also pose dangers. The sun's primary danger is in the form of Ultraviolet (UV) radiation. UV radiation is a component of solar radiation, but it can also be given off by artificial sources like welding machines, tanning beds and lasers.

Most people are aware of the harm UV radiation can do to the skin, but many may not realize that exposure to UV radiation can harm the eyes or that other components of solar radiation can also affect vision.

If your eyes are exposed to excessive amounts of UV radiation over a short period of time, you are likely to experience an effect called *photokeratitis*. Like a "sunburn of the eye", photokeratitis may be painful and include symptoms such as red eyes, a foreign body sensation or gritty feeling in the eyes, extreme sensitivity to light and excessive tearing. Fortunately, this is usually temporary and rarely causes permanent damage to the eyes.

Long-term exposure to UV radiation, however, can be more serious. Scientific studies and research have shown that exposure to small amounts of UV radiation over a period of many years increases the chance of developing a cataract and may cause damage to the retina, a nerve-rich lining of the eye that is used for seeing. Additionally, chronic exposure to shorter wavelength visible light (i.e. blue and violet light) may also be harmful to the retina.

The longer the eyes are exposed to solar radiation, the greater the risk of developing later in life such conditions as cataracts or macular degeneration. Since it is not clear how much exposure to solar radiation will cause damage, it is recommended to wear quality sunglasses that offer UV protection and wearing a hat or cap with a wide brim whenever you spend time outdoors. Also, certain contact lenses can provide additional UV protection.

To provide adequate protection for your eyes, sunglasses should:

- block out 99 to 100 percent of both UV-A and UV-B radiation;
- screen out 75 to 90 percent of visible light; *
- be perfectly matched in color and free of distortion and imperfection; and
- have lenses that are gray for proper color recognition.

* How can a consumer tell what the visible and UV transmissions are?

A visible transmission check can be done subjectively: the consumer tries the eyewear and checks if it is too dark (or not dark enough) for him/herself. UV must be verified with an instrument, since it cannot be seen or detected with the human eye: many clinics and retail opticals will have a simple testing device that either indicates pass/fail or gives an actual value; those clinics and opticals may provide this service for a nominal fee or even at no cost (especially if the eyewear was purchased there). In any case, virtually all major sun eyewear manufacturers have no difficulty complying with either the visible or UV transmission requirements, and consumers should feel confident about the performance of the eyewear IF they purchase it from a reputable vendor (clinic or established retail outlet, e.g., Macy's).

The lenses in sunglasses should be made from polycarbonate or Trivex® material if you participate in potentially eye-hazardous work or sports. These lenses provide the most impact resistance.

If you spend a lot of time outdoors in bright sunlight, wrap around frames can provide additional protection from the harmful solar radiation.

Don't forget protection for children and teenagers. Children and teenagers are particularly susceptible to the sun's damaging rays because they typically spend more time outdoors than adults, and the lenses of their eyes are more transparent than those of adults. The transparent lenses allow shorter wavelength radiation to reach the retina of the eye. The effects of UV radiation are cumulative, so it's important to develop good protection habits early in life, such as wearing sunglasses with UV protection.

Be sure to see your doctor of optometry yearly for a comprehensive eye examination. It is a good way to monitor your eye health, maintain good vision and keep track of your solar radiation protection needs as well as new advances in eye protection.

UV Radiation Checklist

If you can answer “yes” to one or more of the following questions, you could be at higher risk for harm to the eyes from UV radiation:

- Do you spend a great deal of time outdoors?
- Do you spend time skiing, mountain climbing or at the beach?
- Do you use a sunlamp or tanning parlor?
- Do you live in the mountains or the United States Sunbelt?
- Are you a welder, medical technologist or do you work in the graphic arts or in the manufacture of electronic circuit boards?
- Do you take prescription or over-the-counter drugs that can increase your sensitivity to UV radiation (check with your optometrist, pharmacist, or physician)?
- Have you had cataract surgery in one or both eyes?

Thanks in advance for helping to spread the message of sun safety on *Don't Fry Day* and everyday!