Patient focus

UV Safety

While some exposure to sunlight can be enjoyable, too much is dangerous, causing immediate effects like blistering sunburns, as well as longer-term problems like eye damage.

Long-term exposure to ultraviolet radiation may contribute to the development of various eye disorders, such as: age-related macular degeneration, the leading cause of vision loss among older Americans; and cataracts, a major cause of visual impairment and blindness.

It is important to protect your eyes from acute damage caused by even a single outing on a very bright day. Intense, excessive exposure to ultraviolet light reflected off sand, snow, or pavement can damage the eye’s surface. Similar to sunburns, eye surface burns usually disappear within a couple of days, but may lead to further complications later in life.

To ensure your eyes are protected, wear sunglasses and a broad-rimmed hat. When selecting sunglasses, make sure they block 99 to 100 percent of UV-A and UV-B rays. But don’t be deceived by color or cost. The ability to block UV light is not dependent on the darkness of the lens or the price tag. Please visit our Optical Shop to check out the wide selection of sunglasses available.
UV Safety

Also, while out enjoying the sun in the water, remember to wear swimming goggles whenever you swim. Consider purchasing goggles or sunglasses that wrap around your temples because they block the sun’s rays from entering on the sides, offering better protection. Chlorine can make your eyes red and puffy, and ponds and lakes may have bacteria that can get underneath contact lenses and cause inflammation of the cornea.

Your eyes can be harmed by UV light sources other than the sun, such as welding lamps or tanning lights. So remember to wear eye protection when using these sources of invisible, high energy UV rays.

Try to keep children out of the sun between 10:00 am and 2:00 pm when the sun’s ultraviolet rays are the strongest. Choose sunglasses for your children that fit their lifestyle. The lenses should be impact resistant and should not pop out of the frames.

Sources: American Academy of Ophthalmology and Preventblindness.org
Eye Conditions Related to UV Ray Exposure

**Photokeratitis**, sometimes called Corneal Sunburn, is the result of high short-term exposure to UV-B rays. Long hours at the beach or skiing without proper eye protection can cause this problem. It can be very painful and may cause temporary vision loss.

**A pterygium** is a growth that begins on the white of the eye and may involve the cornea. Eventually, the growth may block vision. It is more common in people who work outside in the sun and wind. It can be removed surgically, but often recurs.

**Cataracts** are a cloudiness of the lens inside the eye that develop over a period of many years. Laboratory studies have shown that high exposure to UV radiation can be a factor in causing cataract formation.
Eye Conditions Related to UV Ray Exposure

Exposure to UV radiation is damaging to retinal tissue and chronic exposure may contribute to the aging processes in the retina and development of Age-related Macular Degeneration (AMD).

Source: American Academy of Ophthalmology

What’s happening in Eye Care Research?

Clinical trials that are currently underway at the Penn State Hershey Eye Center are listed on the website of the Clinical Trials Office along with contact information for each study at:

http://www.pennstatehershey.org/web/eyecenter/research/clinicaltrials
Sharks have an eye structure very similar to humans but it is modified to include a reflecting layer of cells behind the retina. These cells are filled with silver guanine crystals which reflect light that has passed through the retina and they send it back through the retina to boost the visual signal and give sharks high visual acuity, especially in low light levels. More than 40 years ago, attempts to use shark corneas as a donor source for humans were unsuccessful because they were too thin and flimsy to transplant into the human eye. Some sharks also have a nictitating membrane that covers and protects the eye when they pass close to objects or engage in biting or feeding. This membrane can be seen covering the eye of a tiger shark in the picture above.