Photokeratitis

What is photokeratitis?

Photokeratitis is a painful eye condition that occurs when your eye is exposed to invisible rays of energy called ultraviolet (UV) rays, either from the sun or from a man-made source.

Photokeratitis is like having a sunburned eye. This condition affects the thin surface layer of the cornea — the clear front window of the eye — and the conjunctiva, which is the clear tissue covering the white part of the eye and the inside of the eyelids.

What causes photokeratitis?

Photokeratitis is caused by damage to the eye from ultraviolet (UV) rays. Sunlight is the main source of natural UV rays.

Photokeratitis can be caused by sun reflection from sand, water, ice and snow. It can also happen if you stare at the sun, such as watching a solar eclipse directly without using a special device. A solar eclipse can also cause a burn to the retina, which is long lasting and more serious than temporary corneal damage.

There are also many man-made sources of ultraviolet light, including tanning lamps and tanning beds, as well as arc welding.

Wearing proper eye protection can prevent damage to the eyes from UV rays.

Sunglasses or goggles that block 99 percent and higher of UV rays and protect from dry, freezing wind can help prevent snow blindness.

Snow blindness: a common form of photokeratitis

Snow blindness is a form of photokeratitis that is caused by UV rays reflected off ice and snow. Eye damage from UV rays is particularly common in the North and South Pole areas or in high mountains where the air is thinner and provides less protection from UV rays.

Snow blindness may also refer to freezing of the cornea's surface, as well as severe drying of the corneal surface due to extremely dry air. Skiing, snowmobiling and mountain climbing are activities commonly associated with this condition.

What are symptoms of photokeratitis?

Like a sunburn on your skin, photokeratitis is not usually noticed until well after the damage has occurred. Symptoms include:

- pain
- redness
- blurriness
- tearing
- gritty feeling
- swelling
- sensitivity to bright light
- headache
- seeing halos
- small pupils
- eyelid twitching
- rarely, temporary vision loss

In rare cases, you may also experience temporary color changes in your vision.

The longer you are exposed to UV rays, the more severe your symptoms will be.

How is photokeratitis diagnosed?

A doctor can diagnose photokeratitis by asking about your recent activities, examining yours eyes, and using an eye drop with fluorescein dye to look for UV damage.

How is photokeratitis treated?

Photokeratitis and snow blindness usually go away on their own, so treatment is focused on making you feel better as your eyes heal.

If you wear contact lenses, remove them immediately. Get out of the sun and into a dark room. For relief, you may try:

- placing a cold washcloth over your closed eyes
- using artificial tears
- taking certain pain relievers as recommended by your ophthalmologist
- using eyedrop antibiotics if your ophthalmologist recommends this

Avoid rubbing your eyes as you heal. Symptoms usually go away gradually in a day or two.

Photokeratitis prevention

Photokeratitis may be prevented by wearing eye protection that blocks UV radiation. This includes:

- sunglasses that block or absorb 99 percent or more of UV rays
- snow goggles designed to block UV rays
- welding helmets

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Summary

Photokeratitis is when your eyes get sunburned. This happens when your eyes are exposed to UV rays from the sun or from an artificial source like tanning beds. Snow blindness is another type of photokeratitis that happens when UV light is reflected off ice and snow. Symptoms of photokeratitis can include pain, redness, tearing, and sensitivity to light. Photokeratits usually goes away on its own in a few days. While your eye heals, you should avoid wearing contact lenses and rubbing your eyes. To help ease the pain, you can use artificial tears, pain relievers, or a cold washcloth.

To prevent photokeratitis, wear eye protection like sunglasses or snow goggles that block UV radiation.

If you have any questions about your eyes or your vision, speak with your ophthalmologist. He or she is committed to protecting your sight.

Get more information about photokeratitis from EyeSmart—provided by the American Academy of Ophthalmology—at **aao.org/photokeratitis-link**.

COMPLIMENTS OF:

BRYAN VEKOVIUS, M.D.

OCULOPLASTIC SURGERY AND
NEURO-OPHTHALMOLOGY

450 ASHLEY RIDGE BLVD.
SHREVEPORT, LA 71106

(318) 675-3733

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