

Understanding Ultraviolet (UV) Radiation and Eye Health

What Is Ultraviolet (UV) Radiation?

Light waves that are shorter than 380 nm (nanometers) are classified as ultraviolet (UV) radiation and are invisible to the human eye.

- Sunlight is the primary source of UV radiation to which humans are exposed.
- Over-exposure to UVA and UVB radiation can have a negative and often irreversible impact on your eye health.
- UVC radiation is absorbed by the Ozone Layer and does not impact us.

Eyeball
(Sagittal view)

Wavelength

780 nm

VISIBLE LIGHT

380 nm

UVA

315 nm

UVB

280 nm

UVC

100 nm

Adnexa:

Upper eyelid

Obicularis oculi muscle

Conjunctiva

Meibomian gland

Eyelash

Anterior Segment:

Cornea

Iris

Crystalline lens

Pupil

Posterior Segment:

Sclera

Choroid

Retina

Macula

Optic nerve

Vitreous body

Adnexa:

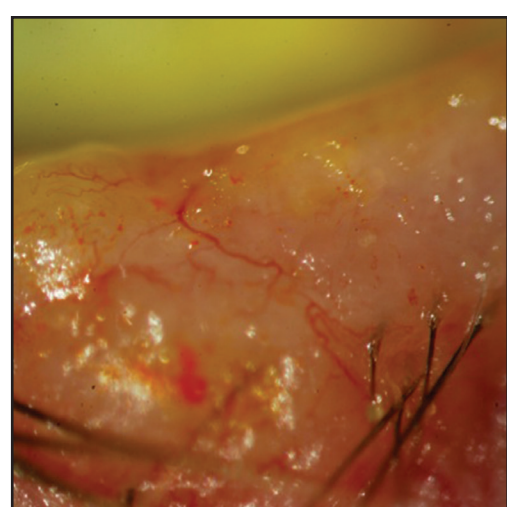
Lower eyelid

How Can UV Negatively Impact Your Eye Health?

Long-term exposure to UV radiation can damage the eye's surface (Adnexa) as well as its internal structures. UV can increase the risks of certain eye conditions and diseases, such as UV-related cataracts, growths on the eye, and even certain skin cancers on the eyelids or around the eye area.

UV related conditions affecting the Adnexa of the eye:

5-10% of all skin cancers occur on the eyelids



Basal Cell Carcinoma

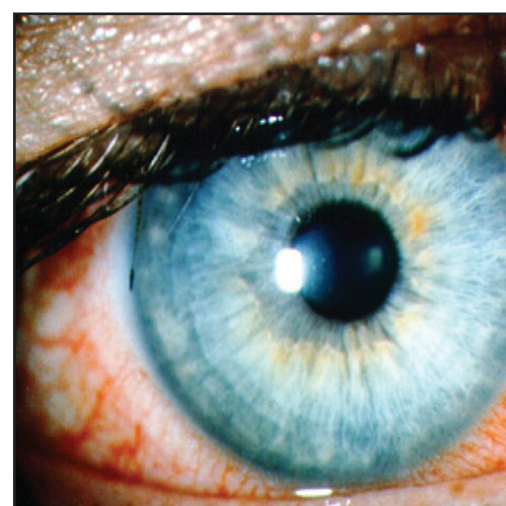
Photo provided by Paul M. Karpecki, OD, FAAO



Squamous Cell Carcinoma

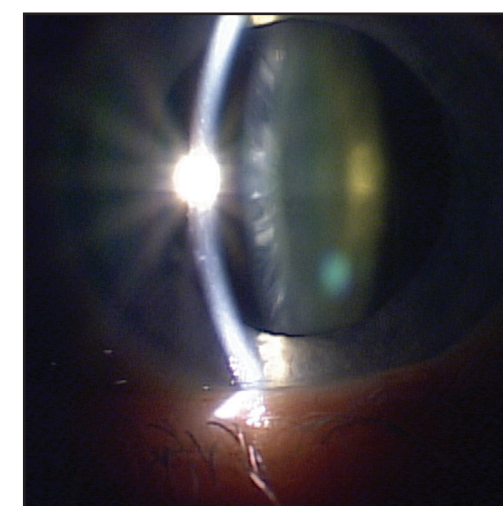
Photo provided by Paul M. Karpecki, OD, FAAO

UV related conditions affecting the Anterior Segment of the eye:



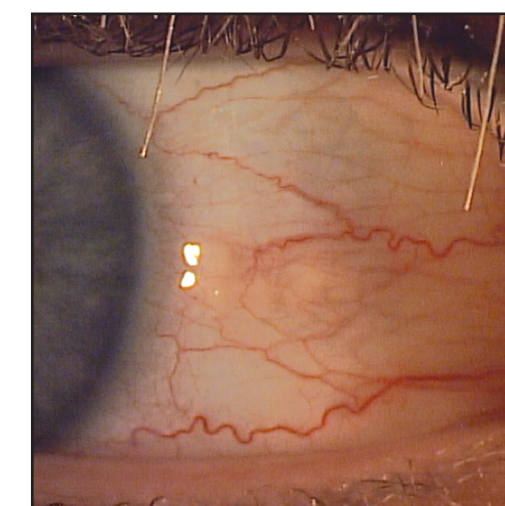
Photokeratitis
(Corneal Sunburn)

Photo provided by Paul M. Karpecki, OD, FAAO



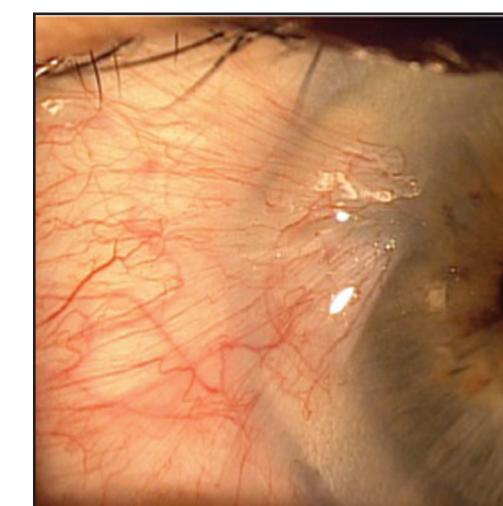
UV-Related Cataract

Photo provided by Paul M. Karpecki, OD, FAAO



Pterygium

Photo provided by Paul M. Karpecki, OD, FAAO



Pterygium

Photo provided by Paul M. Karpecki, OD, FAAO

Why Do Your Eyes Need Daily UV Protection?

UV radiation can seriously damage your eyes

- There is no amount of UV radiation exposure that is healthy for your eyes
- UV damage to your eyes is cumulative and may be irreversible
- Your eyes are exposed to UV radiation 365 days a year, even on cloudy days

Protect Your Eyes. Ask Us About the Most Comprehensive Daily UV Protection.

To learn more, visit essilorusa.com/crizal

