

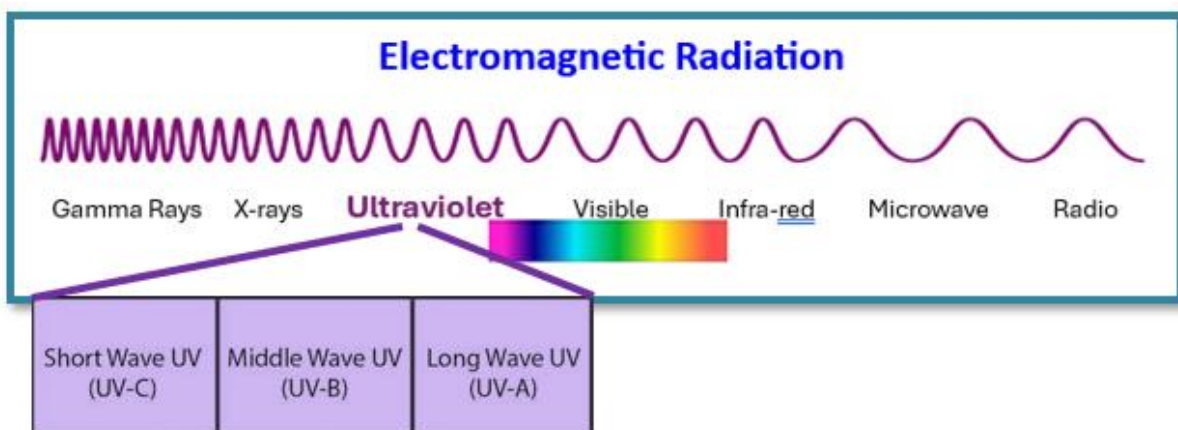
Ultraviolet Radiation and Your Eyes

Sunglasses are not just a fashion statement; they are essential in preventing eye damage caused by the sun's ultraviolet radiation. It is common knowledge that repeated sunburn causes skin cancers. Caused by UVB exposure basal cell carcinoma is the most common eyelid malignancy accounting for 90% of malignant eyelid neoplasms. Squamous cell carcinoma runs a distant. Per surface area eyelid skin cancers are the most common. Protecting your eyes with sunglasses also protects the eyelids. Other common changes caused by UV exposure include cataracts, pterygium, photokeratitis, and macular degeneration. Early signs of UV damage can be seen on slit lamp examination.



So, what is Ultraviolet Radiation?

UV radiation is a part of the electromagnetic spectrum produced by the sun and artificial sources like welding arcs, high intensity mercury vapour lights and tanning lamps. UV radiation consists of three main types: UVA, UVB and UVC. UVC and most UVB radiation from the sun is absorbed by the ozone layer. UVB causes sunburn and is largely responsible for causing skin cancer.



Effects of UV radiation on the cornea

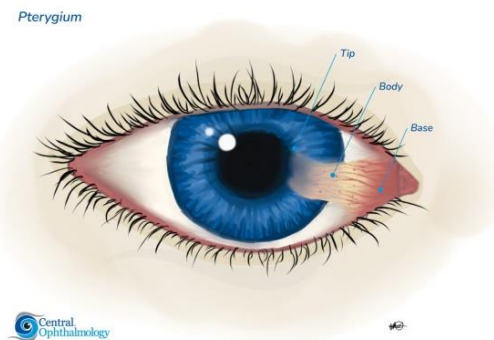
Most UV radiation striking the eye is absorbed by the cornea. High UV levels experienced when there is excess reflection, encountered in the snow or on the water can cause corneal burning. The condition is extremely painful and causes the eye to be highly sensitive to any light source. Although extremely uncomfortable, in the short term, without repeated exposure, the condition usually resolves itself in about 48 hours.

In the longer term the cornea and conjunctiva are primed for change and pinguecula, pterygia and dry eye are more likely to develop. It is advisable to have an eye examination by an optometrist or ophthalmologist to ensure that no significant damage has occurred and seek long term ocular surface protection.



Effects of UV radiation on the conjunctiva

Short-term exposure to UV radiation can damage the conjunctiva, while long-term exposure can cause it to thicken, forming a fleshy growth known as a pterygium. Progress of this condition is usually slow, with the pterygium growing until it starts to cover part of the cornea. When it can interfere with vision and become unsightly. The only treatment is surgical removal. The eye should be examined by an expert to differentiate between pterygia and other more serious growths.



Effects of UV radiation on the lens

UV radiation, particularly UVB, is associated with the formation of cataracts. These are opacities that form in the lens of the eye and interfere with vision. In severe cases, cataracts can be removed surgically, and the old, clouded lens replaced by an artificial one. Cataracts have always been more common among elderly people and were thought to be a natural result of ageing. Recent research suggests that while this may be partly true, they are much more likely to be caused by prolonged exposure to UV radiation.

Effects of UV radiation on the retina.

Accumulated UV damage to the retina - the delicate nerve-rich lining of the eye used for seeing, is mostly irreversible. Whether from acute solar maculopathy or slowly progressive

age-related macular degeneration the destruction to central vision can be catastrophic. Protecting your retina from high energy blue radiation and UVA and UVB light is important for long term retinal health.

How to avoid effects of UV Radiation:

- Avoid outdoor activities when the Sun is at its highest- midday.
- Follow the Cancer Council's Slip, Slop, Slap, Seek, Slide when outside. Slip on a shirt, slop on sunscreen, slap on a hat, seek shade, and **slide on sunglasses**.
- When near artificial UV radiation like welding eras, use the essential safety equipment like face shields.



Which sunglasses should you choose?

All sunglasses on sale in Australia must meet an Australian Standard that specifies how much UV radiation the sunglasses must block. Sunglasses should be close-fitting to prevent radiation getting around the edges of frames; wrap-around models are excellent depending on your prescription. We carry a vast variety of sunglass frames as well as tints and polarised lens options.

Should children wear sunglasses?

Yes. Children are particularly at risk from UV radiation because they spend so much of their time outdoors and are not aware of the danger it poses. It is up to parents to protect their children's eyes by ensuring the children wear hats and good-quality sunglasses. Be careful when choosing sunglasses for children, checking labels to be sure provide proper UV protection.

Our optometrists can give you advice about prescription and non-prescription sunglasses to suit your lifestyle and needs. We recommend looking at our information sheets on cataracts and pterygium which can be found on our website on our 'Digital Brochures' page.