

UV Radiation

Why You Should Always Protect Your Eyes

Prof. Albert Augustin is an ophthalmologist, visiting associate professor of the department of Ophthalmology at the Sackler Faculty of Medicine in Tel Aviv, and heads the Eye Clinic at Karlsruhe City Hospital. In 2017, Focus magazine named him one of Germany's top doctors for retinal diseases. Prof. Augustin knows which eye diseases can be triggered by UV radiation. He spoke to us about what acute and chronic damage is favored by invisible, ultraviolet light emitted by the sun.

ZEISS Vision Care: Prof. Augustin, what short-term diseases can be brought on by UV radiation?

Prof. Augustin: When it comes to eye diseases, we distinguish between damage to the front and the back of the eye. Short-term damage to the front of the eye primarily concerns the cornea, e.g. snow blindness. Acute damage to the back of the eye relates of course to the retina, the sharpest point of vision, and hardly ever affects healthy people. However, there is one exception: watching a solar eclipse with the wrong visual aids can result in acute damage such as burns at the sharpest point of vision.

ZEISS Vision Care: And what long-term damage may occur?

Prof. Augustin: Long-term damage is distinguished by damage to the conjunctiva and cornea, the lens and the retina. Damage to the conjunctiva can be summarized briefly: so-called Pinguecula¹ is caused by UV rays. It is also suspected that the Pterygium conjunctiva², the "surfer's eye" on the cornea, is triggered by ultraviolet radiation. Other factors also play a role, but UV light is a major factor.

The eye's lens becomes cloudy over the course of our lives; this clouding is probably exacerbated in part by UV radiation, at least in terms of speed. This means cataracts form over the course of our lives, and this is exacerbated by UV light.

In terms of the retina, this is certainly linked to age-related macular degeneration. UV radiation is one of the major factors behind age-related macular degeneration. Today, we know that it definitely occurs earlier, or faster. However, there is no proof that UV radiation is the sole cause. Other factors come into play here, but there is no doubt that UV radiation is a major cause.

ZEISS Vision Care: So is there a correlation between cataract formation and exposure to UV radiation?

Prof. Augustin: First of all, we can assume that the lens is a subject to aging. So cataracts is a physiological process that develops over the course of our lives. At the same time, we know that UV light fuels different processes that promote cataract formation.

ZEISS Vision Care: Can cataracts be treated?

Prof. Augustin: There is only really one way to treat cataracts, and that is to remove the cloudy lens and replace it with an artificial lens, also known as an intraocular lens (IOL).

ZEISS Vision Care: How important do you think it is to protect ourselves against UV radiation?

Prof. Augustin: I believe it's essential to protect ourselves against UV light: we should reach for our sunglasses whenever the sun is out, and ensure they have an excellent UV filter. Ideally, clear glasses without sun protection will also be equipped with a UV filter.

ZEISS Vision Care: We're often told it's particularly important to protect children. Why are they so at risk?

Prof. Augustin: Kids are certainly more at risk when exposed to UV radiation, especially when it comes to the retina. It has been proven that the lens in a child's eye has a window to the UV range that lets in significantly more UV light than the lens in an adult eye. That's why special care is needed as far as kids are concerned.

ZEISS Vision Care: So is there a correlation between UV radiation among young people and age-related macular degeneration?

Prof. Augustin: Nowadays, major studies have shown us that UV damage suffered at a young age definitely increases the risk of macular degeneration in late adulthood, or in old age. A large group of people who often suffered from sunburn between the ages of 10 and 20 has been examined. More of these people have gone on to develop macular degeneration than people who did not get sunburned so often, or at all.

¹ Conjunctival degeneration

² Triangular tissue growth on the cornea



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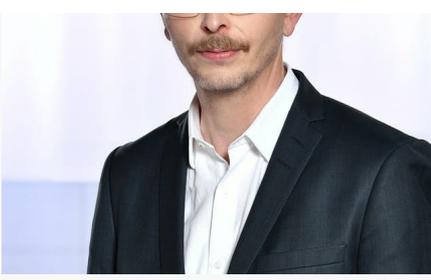
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