Get the best protection for your eyes

Very sensitive and completely irreplaceable: Hazards to the eye are manifold and can entail disastrous consequences

Anything could happen to our eyes in an instant, whether at the workplace or while engaging in recreation and sports. It is certain that our sight organs are too valuable to expose them to any unnecessary hazards. Those who opt for proper care are on the safe side.

A frequently used German saying - “Das kann ins Auge gehen” (literally, “That could get into your eyes,” which actually means “That could go wrong”) hits the nail on the head: Indeed, our eyes are exposed to all manner of risks. The power of the sun’s rays is not to be underestimated. Naturally, they entice us out of doors, they caress the sea and they put a smile on our face. Unfortunately, where there is a bright side, there is also a shadow side. Ultra-violet rays, called UV rays for short, can be especially harmful to our eyes.

Sun Protection for the Eyes

Sunlight is the most significant source of UV radiation and can damage various ocular tissues. The surface of the eye (snow blindness), the lenses (cataracts, also known as opacity) and the retina (solar maculopathy, macular degeneration) are in particular danger.

UV light consists of UV-A light (leads to skin tanning, but also skin ageing), UV-B light (leads to sunburn and skin cancer) and UV-C light (these are the most dangerous rays, but are almost completely blocked by the ozone layer).

What almost no one knows: Eyes can also get sunburn. The cornea and the conjunctiva are most affected. The highest risk is always when the sunlight is heavily reflected, something that can occur in a snow-covered landscape or when spending time by or in the water.
With the right glasses, however, everyone can optimally protect their eyes from dangerous UV rays. What you should keep in mind when purchasing a pair of sunglasses:

- **UV light protection**: Sunglasses that absorb at least 99% of UV rays or light rays up to 400 nm.
- **Yellow filter**: Also called blue blockers because they block all blue light. As a result, the eye perceives the surroundings in a yellowish tint. Benefit: Better contrast for very distant objects, especially on a cloudy or snowy day. Best suited for skiers, hunters, sailors and pilots.
- **Polarisation filters**: They block diffused light. For example, light reflected off water surfaces or cobble-stone pavement. Particularly useful for driving and fishing.
- **Mirror lenses**: They reduce the quantity of light reaching the eye, but do not offer any safe protection from UV radiation.
- **Side protection**: Sunglasses with this function protect the eyes from light entering from the sides.
  - **Gradient tint lenses**: They are dark-coloured in the upper part of the spectacles, light-coloured in the bottom. They thus block the glare from above, but permit normal downward vision for the eyes. They are useful for drivers, but are not recommended for the beach or in snow because a strong glare can come from below.
  - **Photochromatic lenses**: They darken automatically when it is bright and lighten when it is dark. Depending on the UV radiation and the temperature, these processes often take much less than five minutes thanks to new technologies.

Eye protection is also often recommended for medical reasons. This primarily applies to people with increased UV radiation risk. These include:

- **Patients with macular and retinal degeneration**: They should always wear glasses with a good UV filter when spending time outside.
- **Patients after a cataract operation**: These patients’ eyes are particularly sensitive to UV light because the natural lens has been removed and has been replaced by a plastic lens (intraocular lens). Sunglasses with 100% UV protection are necessary with older models because they absorb very little UV light. New intraocular lenses now have UV protection.
- **Patients who are taking certain medication**: Medication for psoriasis and active pharmaceutical ingredients such as tetracycline, doxycycline, allopurinol and phenothiazin are all so-called “photosensitive medications.” They increase the eye’s sensitivity to UV light. Your doctor will advise you about appropriate eye protection.

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Eye Protection on the Job
Special protection for the eye is also very important for certain occupational activities. The following pose a hazard:

- Dust, splinters, shavings or liquid particles that develop during grinding, sandblasting and cutting work as well as caulking and chiselling work. Working with explosive-actuated tools, fluid
apparatuses or steam-jet degreasers is also dangerous;
- Corrosive or irritant substances, for example when working with acids and alkaline solutions and when mixing and applying adhesives and coating materials using the spraying and spray coat method;
- Blinding light or damaging radiation, for example when welding and working with lasers;
- Effect of heat or flames;
- Laser radiation
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