# Shopping Guide for Sunglasses

American Optometric Association

## Why People Need Sunglasses

We often buy sunglasses the same way we buy fashion accessories: a new pair every spring with an emphasis on *fashion* over *function*. But, being in the sun should always mean taking precautions against damaging ultra-violet (UV) radiation.

The American Optometric Association suggests you shop smart. When making that fashionable purchase, remember sunglasses protect your eyes. So, how well they work matters just as much as how they make you look.

### UV Protection

The sun's UV radiation can cause cataracts; benign growths on the eye's surface; cancer of the eyelids and skin around the eyes; and photokeratitis, sometimes called snow blindness, which is a temporary but painful sunburn of the eye's surface. Wide-brimmed hats and caps can block about 50% of UV radiation from the eyes, but optometrists say that is not enough protection.

### Blue-Light Protection

Long-term exposure to the blue and violet portion of the solar spectrum has been implicated as a risk factor for macular degeneration, especially for individuals who are "sun sensitive."


You should wear sunglasses outdoors whether you are working, driving, participating in sports, taking a walk or running errands.

### Comfortable Vision

The sun's brightness and glare interfere with comfortable vision and the ability to see clearly by causing squinting and watering of the eyes.

### Dark Adaptation

Spending just two or three hours in bright sunlight can hamper the eyes' ability to adapt quickly to nighttime or indoor light levels. This can make driving at night after spending a day in the sun more hazardous.

## Buying Lenses: What to Look for to Ensure Protection

- ❒ Don't be misled by faulty UV claims. To make sure that UV labels are accurate, buy sunglasses where there is equipment available to check the lenses' UV protection capabilities, or ask your optometrist for his or her opinion on a specific purchase.
- ❒ Check lenses to be sure the tint is uniform, not darker in one area than another. With gradient lenses, the tint should lighten gradually from top to bottom. Sunglass tints used for driving should be gray to allow proper traffic light recognition.
- ❒ Ensure that lenses are distortion free. Hold the glasses at arm's length. Look through them at a straight line in the distance. Slowly move the lens across the line. If the straight edge distorts, sways, curves or moves, the lens has imperfections.
- ❒ To be sure the lenses block enough light, try them on in front of a mirror. If you can see your eyes easily through the lenses, they probably are not dark enough. ***Note***: this test does not apply to photochromic (light-sensitive) lenses.
- ❒ At a *minimum*, look for sunglasses that:
  - ✔ Block at least 99% of both UV-A and UV-B radiation.
  - ✔ Screen out 75% to 90% of visible light.
  - ✔ Are gray for proper color recognition and free of distortion and imperfection.
- ❒ Certain *contact lenses* can provide additional UV protection; ask your optometrist for more information.



243 N. Lindbergh Blvd. | St. Louis, MO 63141

# Sunglass Options

*You don't need a lot of sunglass extras. But, there are some extras that are worth the added protection.*

## Polarized Lenses

Polarized lenses effectively combat reflected glare. They can provide added comfort and better vision for those who do a lot of driving or boating. For certain sports such as golf, polarization has the potential to cause a loss of visual information that may reduce performance.

Polarization may not be the best choice for all situations, and should not be used for certain activities such as piloting an airplane.

## Photochromic Lenses

Some people like the convenience of photochromic lenses, which darken or lighten with the amount of available light. These lenses don't darken or lighten instantaneously when going from indoors to outdoors or vice versa. Also, car windshields interfere with the darkening process, making photochromic lenses less effective.

Image courtesy of Luxotica Group.

**Cleaning your glasses**: Remember to only use cleaning products that have been recommended by your optometrist.

## Polycarbonate lenses

Polycarbonate lenses are a must for sunglasses worn for sports and activities that are potentially hazardous at work and around the home. These lenses provide excellent impact protection, but are not a substitute for occupational or sports safety eyewear.

## Wrap-around frames

Wrap-around frames provide added side protection from bright light and UV radiation.

# Buying Sunglasses Can Be Complicated

Image courtesy of Marchon Eyewear.

**Lens color or darkness** is no gauge of the level of UV protection.

There are currently no federal sunglass requirements regarding UV protection, light transmission levels or lens quality. The only federal regulation concerns lens impact resistance.

Voluntary industry standards are not very strict. The American Optometric Association, the American Academy of Ophthalmology and Prevent Blindness America recommend that sunglasses block 99% to 100% of UV radiation.

There is no uniform labeling of sunglasses with regard to UV protection. There are almost as many UV labels as there are sunglass manufacturers, and studies have found many of the labels are misleading.

Price is no gauge of UV protection or of lens quality. Studies have found that some higher-priced sunglasses have poor quality lenses or inadequate UV protection, while some relatively inexpensive sunglasses are quite good in both categories.

For questions about this guide, please contact the AOA Associate Director of Public Relations, Susan Thomas (slthomas@aoa.org), or call (800) 365-2219, ext. 4263.

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