

The Basics about sunglasses

Cheap lenses don't filter out harsh glare or UV rays, which can be just as harmful to eyes as to skin. Good sunglasses also increase clarity and depth perception, which can mean the difference in how well you play any game.

Usage

Collecting sport-specific glasses can get expensive. Who wants to buy a different pair for biking, skiing, hiking, and to wear around town? You don't have to: Specialty eyewear is for specialists. Unless you spend your summer tromping across glaciers or crewing on a yacht, you can do quite nicely with a good pair of all-around sunglasses. If, however, you do a lot of running and cycling, you may want to break down and buy some more eye protection: a pair of sport shields.

Start with your favorite pastime. No single pair of sunglasses and shields will perfectly suit every sport or condition--so you should buy specs with your favorite outdoor pursuit in mind. For example, Skiing exposes you to a lot of brightness from above (the sun) and glare from below (the snow), so choose glasses with double-gradient lenses (dark on top and bottom). If you hike in and out of woods--or spend time in constantly changing weather--go with phototropic, which change from dark to light and back again, as conditions warrant.

Lens Material

Choose between glass and plastic. There are good reasons for going with either lens material.

Glass can be ground and polished to high optical standards and is both distortion-free and highly scratch-resistant. Such lenses are still a bit heavier than their lightweight plastic counterparts are--but new, thinner glass lenses are closing the weight gap.

Plastic won't shatter on high impact and is therefore the lens material of choice in many sunglasses and all sport shields. Plastic is more likely than glass to scratch, but good plastic lenses offer impressive clarity and are coated for some scratch-resistance. .

Some styles come with removable lenses that can be swapped out and replaced with lenses of other colors. These interchangeable systems allow you to tailor your sunglass protection to best match your activities and the current weather conditions. Consider one of these interchangeable systems if you need reliable performance in a wide variety of activities and conditions.

Get the right tint.

How and where you'll use your glasses dictates your choice of lens color. If depth perception or heightened contrast is important (say, for mountain biking or skiing), choose amber, yellow, rose, or vermilion lenses. Gray and green, classic watersport tints, don't distort colors. Brown and copper-colored lenses strike a balance between true color transmission and good contrast: They work well in all situations. And, whatever the hue you decide on, make sure that the lenses block out at least 99 percent of the sun's harmful ultraviolet rays (you should even seek that kind of protection from your eyeglasses) and that they transmit enough visible light that you can wear them while driving. In general, different tint colors can have different effects on your vision. The





specific lens color you choose will affect 1) how much visible light reaches your eyes, 2) how well you see other colors, and 3) how well you see contrasts.

Most all-purpose sunglasses let in approximately 15-25% of all visible light. Aim for glasses in this range if you need a pair for everyday uses and basic recreational activities.

Glacier glasses (special sunglasses designed specifically to protect your eyes from the intense light at high altitudes) let in only 4-10%. Most glacier glasses also have side shields to protect you from light sneaking in from the sides of your lenses. Because of their low light transmission, glacier glasses should not be used for driving or other everyday activities.

Photochromic lenses automatically adjust to changing light intensities to protect you in a wider range of conditions. These lenses actually get darker (to block more light) when things get brighter outside, and lighter when conditions get darker.

UV protection information should be printed on the hangtag or price sticker of any sunglasses you buy, no matter where you buy them. If it is not, find a different pair. Also, keep in mind that cheap, tinted sunglasses with little or no UV protection can actually do more harm than good, causing your eye lenses to open up wider, leaving them even more vulnerable to UV rays.

If you spend a lot of time around the water, seek glasses with polarized lenses to screen out surface glare. On the river you'll be amazed at what you can see below the surface. Polarized lenses have a special filter built into them that blocks flat, reflected light (off of snow, water, glass). These filters also optimize true colors, giving you a clearer view of the world around you no matter how bright or hazy it gets. Keep in mind, however, that polarized lenses reduce contrast between objects, which can be a hindrance in low-light conditions or when enjoying fast-paced activities like snowboarding, skiing, or driving

Get the biggest lenses that look good on your face--they'll catch more light, dust, and wind. Fit is important, too: The glasses should be snug enough to stay on your face when you are active, but not so tight and uncomfortable that you will forgo wearing them

There are no right or wrong answers when it comes to choosing the right lens shape. Lenses that wrap around your face block more of the light hitting your eyes from the side, and they also improve aerodynamics, cutting down on wind that can dry your eyes out. Wrap-around lenses also provide extra protection against rain, pebbles, sand and so on.

Get sturdy frames. Metal frames are easy to adjust to your specific face and head shape. Avoid thin metal rims on glasses you'll be using in the field. Instead, choose durable, lightweight composite frames that will stand up to some knocks. Nylon frames are not adjustable (unless they have an internal, adjustable wire core), but they tend to be more durable and less expensive. Look for such monikers as nylon, zyl, cellulose, resin, polycarbonate, and carbon graphite. They are all forms of resilient plastic.

Design and Dimensions.

It is important that you find a pair of sunglasses that fits you comfortably. Look for frames that grab you securely and fit snugly on your nose and ears, but that don't pinch or rub. Make sure the weight of your sunglasses is evenly distributed between your ears and nose. Opt for lightweight frames whenever possible to avoid excess friction on these contact points.

