

Take a clear look at vision



Nearly all of the sensory input needed to drive comes from visual cues. If your vision is impaired, so is your ability to drive safely.

Gear Up For Safe Driving: MIND • BODY • VEHICLE

DID YOU KNOW?

- 90% of a driver's reaction depends on vision.¹
- More than 50% of those who fail a Department of Motor Vehicles (DMV) vision exam are unaware that they have a vision problem.²
- 1 in 4 Americans said it has been more than two years since their last eye exam.³
- 1 in 5 U.S. adults mistakenly agrees that they do not need an eye exam unless they are having trouble seeing.⁴
- Passing the vision test required for licensing does not take the place of a full eye exam.
- When you obtain or renew a driver's license, it's typically standard to undergo a "vision test" that evaluates your visual acuity — your ability to see objects clearly. However, this does not detect other vision conditions that can seriously impact the ability to drive safely. To test for other issues, you need to have regular eye exams with your doctor at least every two years, and in some cases, annually.

HOW DIFFERENT VISION ISSUES CAN AFFECT YOUR DRIVING

Distance vision

Good distance vision allows you to see down the road and gives you time to adjust more gradually to your speed or change lanes. The sooner you can identify a potential hazard, the sooner you can react to it. This is particularly true when traveling on the highway where higher speeds increase the distance needed to slow or stop your vehicle. Distance vision also enables you to easily read street signs when navigating unfamiliar roads and helps avoid hard braking or sudden stops that can result in a crash.

Field of vision (peripheral)

The ability to see to both sides is important. You need to be able to see cross traffic, pedestrians, and animals at the roadside, without having to look away from the road ahead. Even with

mirrors positioned properly, vehicles have blind spots, and reduced peripheral vision can extend them.

Accommodation (near-vision focusing)

When driving, you need to look from the road to the dashboard and back again quite often. This ability to change focus from far to near is accommodation, and a problem in this area could slow your reaction time to potential hazards.

Night vision

You need to be able to see in low and variable light conditions and recover quickly from the glare of oncoming headlights. Night vision changes as we age and commonly becomes a debilitating issue for older drivers.

Color vision

Drivers must instantly recognize traffic lights, indicator signs, hazard warning lights and stop lights. If you have a color vision defect, your reaction time may be delayed or essential visual information could be missed.

Depth Perception

Our ability to visually perceive depth and distances comes from the fact that we have two eyes. Many vision problems involve some type of disturbance to a person's "binocular" vision. This is often accompanied by difficulties with a host of visual skills, including tracking, focusing, and, perhaps most importantly for driving, depth perception. Poor depth perception can have an effect on several areas of driving including parking, judging following distances and stopping at intersections.

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Age, vision and your driving

Recovery glare is best in drivers under the age of **30**, and night vision can deteriorate after the age of **40**.⁵

Between **15** and **65** years of age, the recovery time from glare increases from 2 to 9 seconds.⁶

Difficulty with near-vision focus starts in your **40's**. And it happens to everyone. Over **45**, you may need glasses to see the dashboard instruments clearly.⁷

Driving in the dark is not just an issue of concern for older drivers. More than one-third of drivers aged **18-49** report having difficulty driving in the dark most or all of the time compared to less than one-quarter of respondents aged **50** and older.⁸

By age **60**, eyes need three times as much light to see as they did at age **20**.⁹

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Even if you have 20/20 vision, environmental conditions can affect the ability to see clearly.

Experts say the sun is one of the most overlooked driving hazards. Glare from the sun can reduce vision and cause a serious safety issue. Be aware that the periods of dangerous sun glare typically coincide with heavy commuting time.

You gotta wear shades. Wearing sunglasses can help you manage early morning and late day glare. Brown and bronze lenses are best at enhancing contrast and depth perception. Polarized glasses are also excellent for driving.

Wearing sunglasses during daytime improves your night vision. Exposure to strong sunlight without adequate glare protection can sharply reduce your night vision. Even a few hours of exposure can slow your eyes' adaptation process as darkness falls.

Be sure you do windows. It is always a good idea to keep your windshield clean and streak-free, but it is more critical in high-glare conditions. Regularly wipe down both the inside and outside of the windshield.

Slow down. When driving at night and anytime your vision is reduced, slow down and increase your following distance.

Night driving can be tough on everyone. Glare from oncoming vehicles and even bright street lights and signs can reduce vision just like a setting or rising sun.

- **Keep your eyes moving and don't look directly into on-coming headlights, rather, shift your gaze slightly toward the curb or white line on the right side of the road (left side in a country where you drive on the left).**
- **Don't forget to use the night setting on your rear-view mirror to keep headlights from the vehicles behind you from shining in your eyes. And remember to dim your own headlights when vehicles approach from the opposite direction.**
- **Rain already creates a hazard by making roads slippery, and it also amplifies the glare from headlights, streetlights and signs — a dangerous combination. Slow down and increase your following distance, and if you can't see clearly, pull over until conditions improve.**



GET YOUR VISION CHECKED!

The American Optometric Association recommends that adults 61 and over receive comprehensive eye exams annually. For adults ages 18 to 60, an eye exam is recommended every two years for those without risk factors. If there is a risk for eye problems due to a personal or family history of eye disease, diabetes, high blood pressure, taking certain medications or contact lens use, more frequent exams may be necessary — always follow the recommendation of your eye doctor.

1 National Safety Council, *Shedding Light on Driving in the Dark*, 2007

2 Pennsylvania Dept. of Motor Vehicles

3 Americans' Attitudes & Perceptions About Vision Care survey, Harris Interactive, 2008

4 Americans' Attitudes & Perceptions About Vision Care survey, 2012

5 New Zealand Transport Agency Fact Sheet, 2009

6 Road Safety Research Report No. 25, *Older Drivers: A Literature Review*, 2001

7 AAA, aaadriving.com

8 National Safety Council, *Shedding Light on Driving in the Dark*, 2007

9 AAA, aaadriving.com

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