

Visual Impairment Fact Sheet for Medical Professionals



Visual Acuity/Field of Vision

Visual acuity refers to the smallest size detail a person can see. The ability to read a letter chart from a certain pre-specified distance is how the condition is measured. Impairments in visual function can result from an injury to the eye, cataracts, or end-stage glaucoma. The visual field is the entire area that can be seen when the eye is directed forward, including what is seen to the side with peripheral vision. In a visual field test, the person is asked to press a button as lights are flashed. Common eye diseases related to visual field loss include glaucoma, macular degeneration, and diabetes. Cataracts commonly affect visual acuity.

Impact on Driving

Visual acuity is associated with the ability to read highway signs. Drivers with the impairment are more likely to make errors in identifying signs at a distance. Other aspects of the roadway environment such as lane markings may also be difficult to see. Visual field impairment appears to elevate crash risk when it is serious (covers a great deal of the visual field with severe light sensitivity loss) and when it occurs in both eyes. Drivers with loss of peripheral vision due to glaucoma may have trouble noticing traffic signs, cars, and pedestrians that are about to cross their path.

Clinician's Role

- » Ensure all drivers follow State statutory requirements.
- » Recognize that any visual condition that leads to a lowering of visual acuity or visual field may render the driver unfit for driving without restrictions (driving to familiar surroundings, non-rush hour traffic, low-speed areas, daytime, and good weather conditions).
- » People with conditions that cause visual impairment, including those with cataracts, can drive without restrictions. People who have trouble with glare recovery should limit driving at night and under low-light conditions, such as adverse weather conditions.
- » In the case of cataracts, surgical treatment can help drivers remain safely behind the wheel.
- » Changes following stroke or traumatic head injury can result in cognitive changes, which may require an evaluation of visual processing speed.
- » Consider recommending that patients with decreased far visual acuity limit their driving to low-risk areas and conditions such as familiar surroundings, non-rush hour traffic, low-speed areas, daytime, and good weather.
- » Recommend an on-road assessment performed by a driver rehabilitation specialist for people with visual acuity below the standard 20/40.
- » The sudden loss of one eye may require a period of adaptation to monocular vision before resuming driving.

Source: *Driver Fitness Medical Guidelines, National Highway Traffic Safety Administration, DOT HS 811 210, September 2009; Physician's Guide to Assessing and Counseling Older Drivers, American Medical Association and NHTSA, 2nd Edition, 2010.*