



Night Blindness

HS98-136C (01-07)

A 5-Minute Safety Training Aid

You are driving on a dark two-lane road. The glare of an oncoming vehicle's high beams suddenly appears. The vehicle flashes past and for the next few seconds, you're blind. You've just experienced a common hazard known as night blindness. Night blindness occurs when the eye is accustomed to low levels of light and the light intensity suddenly rises. The eyes adjust to the new light level by contracting the pupils, but if that level of intensity is only momentary, then the eyes have to readjust to the lower level again by dilating the pupil. While the eyes make these adjustments, there are several seconds that the vision is impaired.

During the day about 85 percent of the information we need to drive is visual, but at night this changes. Without enough light, we lose much of our contrast sensitivity (the ability to distinguish objects from the background) and peripheral vision (the ability to recognize objects at the edges of our visual field).

At night, headlights limit our visual range to the area that they illuminate, only 250 to 350 feet of the road ahead. At sixty miles per hour a car will cover 350 feet in four seconds. Therefore, slower driving speeds will allow you more time to spot a hazard and respond in a crisis. With this in mind, pedestrians should wear light-colored clothing or put reflective tape on their clothes to make themselves more visible in the darkness.

If a driver turns his or her head from side to side, it will help make up for the lost side vision that occurs at night. Also, if the driver must wear glasses to drive, frames that have thin sidepieces should be selected, since wide sidepieces will hinder side vision.

In addition to the problems listed above there is the fact that as we age, the lenses of our eyes become yellowed and we need more light to see. Most of us begin to notice this in our 40's. By the age of 65 we need 2.5 times the light that we needed when we were 20 to see the same level of detail. For this reason, older persons should drive slower when they find it necessary to drive at night. Whatever your age, precautions must be taken to avoid accidents. The following traffic safety dos and don'ts may help.

Do

- Drive within the range of your headlights, not by what you think you see beyond your headlights.
- Adjust your rear view mirror to the "night" setting to dim headlight glare coming from behind. When the glare is gone, readjust to the "day" setting.
- Focus your eyes on the right edge of the pavement to avoid being blinded by oncoming headlights.
- Clean your headlights.
- Clean your windshield (inside and out).
- Keep your eyes moving between the road and the rear- and side-view mirrors.
- Use your high beams when you can.
- Take off sunglasses at dusk.
- Turn your head from side to side to increase your peripheral vision.
- Dim your instrument lights to reduce brightness when you look at them.

Don't

- Drive faster than sixty-five miles per hour at night, slower on winding roads.
- Put dark aftermarket tinting film on windows and windshields.
- Depend on fog or parking lights when driving at dusk or dawn.
- Keep your high beams on when another vehicle approaches.
- Exceed the speed for driving conditions at night in rain, snow or fog.
- Turn your interior lights on while driving your vehicle.
- Wear sunglasses at night.
- Stare into your side-view mirrors as cars pass from behind.
- Use any type of medication that may change your night vision or cause drowsiness.

Humans are not designed to be creatures of the night, so remember to respect the road and the darkness.

The Texas Department of Insurance,
Division of Workers' Compensation (TDI/DWC)
E-mail resourcecenter@tdi.state.tx.us
or call 1-800-687-7080 for more information.

Safety Violations Hotline
1-800-452-9595
safetyhotline@tdi.state.tx.us