



**STATE SAFETY OFFICE**  
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# **SAFETY MESSAGE 17-13**

## **Solar Eclipse Viewing Safety Tips**

### **What is a Solar Eclipse?**

On Aug. 21, 2017, North America will have the opportunity to view a total solar eclipse. It will be the first total eclipse in the continental United States in nearly 40 years, and the first coast-to-coast eclipse in a century. The eclipse will make landfall on the west coast at 10:15 a.m. (PDT) just north of Newport, Oregon. Traveling at more than 1,600 mph, the shadow will move across the country in just over an hour and a half before leaving south of McClellanville, South Carolina, at 2:49 p.m. (EDT).

A solar eclipse occurs when the moon passes between Earth and the sun, obscuring the sun - either partially or totally - from a viewer on Earth. Most people in North America will be able to view at least a partial eclipse, while those in some states will see a total solar eclipse.

### **What is the danger?**

Viewing a total solar eclipse is a unique and worthwhile experience; but if not done correctly, eye injuries can occur. Most of us would never stare directly at the sun because we know it can cause permanent eye damage. During an eclipse, though, the lower light levels may tempt some to watch it without suitable eye protection. While most people gradually recover their normal vision within one to six months, some end up with permanent blurry vision and central blind spots.

Indirect viewing using the pinhole-projection method will be the safest way to enjoy this eclipse. NASA has put together an excellent resource showing how to make a pinhole camera using only cardstock, aluminum foil, tape and a paper clip or pin at <https://www.jpl.nasa.gov/edu/learn/project/how-to-make-a-pinhole-camera/>. This simple tool will allow eclipse viewers to experience the event without risking damaging their eyesight.

### **Using the correct PPE.**

While many manufacturers claim their eclipse glasses are specifically made for safe viewing, informal laboratory tests suggest that not all eyewear offers sufficient protection. Consider the following factors when purchasing solar eclipse eyewear:

- The best eclipse eyewear has the ISO 12312-2 certification.
- Some types of welding glass also offer sufficient protection for viewing an eclipse safely. The higher the shade number, the darker the lens and more protection provided at visible wavelengths. Use at least Shade 14 welding glasses to view the eclipse.
- **Sunglasses and safety glasses used for everyday sun protection and for occupational safety eye protection (including Military Combat Eye Protection sunglasses) do not provide the minimum protection to directly view the eclipse.**
- Avoid various do-it-yourself techniques for making your own eclipse eyewear, which can be found in instructional videos/websites on the Internet.

(Information above is from the article "Total Solar Eclipse - Are you Ready?", written by Anastacio Dalde III, U.S. Army Public Health Center, Aberdeen Proving Ground, Maryland)

For more information on Summer Safety, visit:

<https://safety.army.mil/OFF-DUTY/PMV-2.aspx>

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