



Kentucky Department for Public Health ALERT

Solar Eclipse and Eye Safety

April 8, 2024

A total solar eclipse is one of most spectacular astronomical events that most people will experience in their lifetime. A total eclipse occurs when the Moon passes between the Sun and the Earth, completely blocking the face of the Sun (totality). Most of Kentucky will experience a partial eclipse, when the Sun is partially blocked by the Moon. Although people are interested in watching an eclipse, it must be done safely.

There is no amount of time that people should stare at the Sun during a partial eclipse without eye protection. While most all of state will observe a partial eclipse on April 8, a narrow range of Kentucky will experience totality when the eclipse can be viewed; however, this time is only brief - less than 3 minutes. Before and after that time, the partial phases of the eclipse exposes the viewer to the crescent Sun that is intense enough to cause eye damage with development of **eclipse blindness** or **retinal burns**. Observing a partial solar eclipse can only be done with proper safety equipment or techniques. Viewing the partial eclipse through a cell phone, binoculars, or a telescope causes eye injury unless using a special-purpose solar filter secured over the lens. Sunglasses will NOT provide eye protection during a partial eclipse.

The danger to vision is significant. Because retinal eye injuries occur without the person feeling pain at the time of viewing (there are no pain receptors in the retina), the visual effects do not occur immediately and may not be evident for several hours or days after the damage is done.

Individuals most likely to sustain eclipse-related eye injuries are children and young adults. Eclipse glasses and handheld solar viewers verified to be compliant with the International Organization for Standardization **(ISO) 12312-2** international safety standard are safe products that must be used for viewing. The American Astronomical Society cautions the public when buying eclipse glasses on the online marketplace.

- [Safe Eclipse Glasses Suppliers List](#) (American Astronomical Society)
 - [Eclipse Glasses & Handheld Solar Viewers](#)
 - [Solar Filters for Optics](#)
 - [Solar Filters for Smartphones](#)

More information about safe solar observing:

- [How to View a Solar Eclipse Safely](#) (American Astronomical Society)
- [Eye Safety During a Solar Eclipse](#) (NASA)
- [How to Safely See a Partial Solar Eclipse](#) (Sky & Telescope)
- [How to Look at the Sun Safely](#) (Sky & Telescope)
- [How to Safely View a Solar Eclipse](#) (Exploratorium)

Our Mission: To improve the health and safety of people in Kentucky through **Prevention, Promotion, and Protection**

Our Vision: Healthier People, Healthier Communities.

Our REACH Values: Responsiveness Equity Accountability Collaboration Honesty

