

Kelly Mitchell, M.D.

What are the risks of looking at an eclipse and is any damage reversible?

0:06

Looking at an eclipse there is a danger if you don't do it correctly, of causing what we know in ophthalmology as solar retinopathy, and that can be a severe and permanent loss of vision. And there is no treatment for that.

Why is it so dangerous?

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The danger of looking at an eclipse is that unlike looking at the normal Sun, which is physically uncomfortable looking at an Eclipse isn't as physically uncomfortable. And it's also interesting because it's pretty, but unfortunately, the harmful radiation that is emanating from an eclipse is just as dangerous, if not more so to your eye. And that radiation can cause permanent damage to your reading and driving vision that there are no treatments to improve.

Can people use sunglasses to look at the eclipse directly?

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The normal use sunglasses, even the darkest ones that you could buy, are not safe to use to view an eclipse. The only filters that are safe enough to look directly at an eclipse are those that I mentioned previously, this special filter 12312 dash 2 and a welder's helmet, filter 14 or darker. But even the darkest sunglasses that you could purchase at any of the local stores would not be dark enough to view an eclipse cycle.

What are other some other ways to view the eclipse?

1:52

The other broad way to look at the Eclipse safely is to do the indirect method which I think most people have who especially with school aged children, remember that's looking at the eclipse over your shoulder by a couple different ways. One, I think the most common way that we see is taking an appropriate size box and creating an effective pinhole camera in which you position let's take a copier paper box side and make the pinhole in one of the sides. That is the small side. And then inside the other side of the small side of the box, tape a piece of that copy paper. And then if you position your back to the Eclipse, and position the pinhole aimed at the eclipse, the image of the eclipse will be projected safely on the paper that you are looking at on the inside of the box. Another way is to take a colander from your kitchen and to the use of the colander and to, again with your back to the Eclipse so you're never looking directly at the Eclipse, allow the image of the eclipse to project through one of the many holes of the colander on a smooth concrete surface. I recommend using a plastic colander not a metal one as the reflection will be less so and so those are the two broad categories to view it safely.

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Anything else to add?

3:43

I would like to comment and stress. One way not to look at the eclipse is to use your cell phone in a direct mode like you're actually taking a picture of the eclipse because even though your cell phone, most of the current generation cell phones, will list in their features that they have an eclipse filter that's meant to protect the cameras of the cell phone it's not meant to protect your eyes if you're looking directly with the cell phone camera to the eclipse. The only way that you could use your camera to look at the Eclipse would be in the selfie mode, where again safely the eclipse is over your back and you're looking at the Eclipse as you would look at your own face and the selfie mode of your camera.