

Basic Eye Exam

A basic eye exam is more than just testing a person's vision. While how well a person sees is important, there are many other aspects of the eye to examine in order to gather a complete idea of the health of the eye.

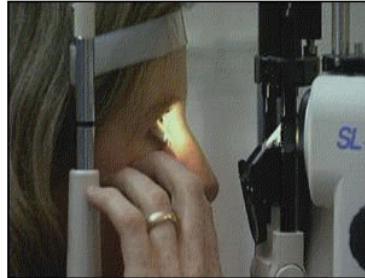
But before describing some of these aspects, it's a good idea to describe how we record vision as it is usually a source of confusion for people. We typically inform patients that their vision is "20/20" or "20/40" or "20/60". What exactly does this mean?

The vision is determined by a test known as a refraction. The refraction is the test where someone typically says "which is sharper, lens 1 or lens 2" as lenses are rotated about inside of an instrument called a phoropter. (At Newport Eye Center, Dr Jones does not use a technician, but instead does most of the refractions himself.)

But what exactly does "20/20" mean? It is a ratio to express the quality of vision, referencing a standard of 20 feet. If you can see at 20 feet what the average person can also see at 20 feet, your vision is 20/20. 20/40 means you see at 20 feet that which the average person can see at 40 feet, implying 20/40 vision is not as good as 20/20. (In metric, vision is recorded as 4/4 or 6/6 using meters instead of feet.)



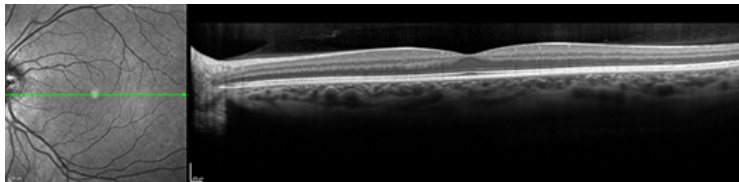
Heidelberg OCT



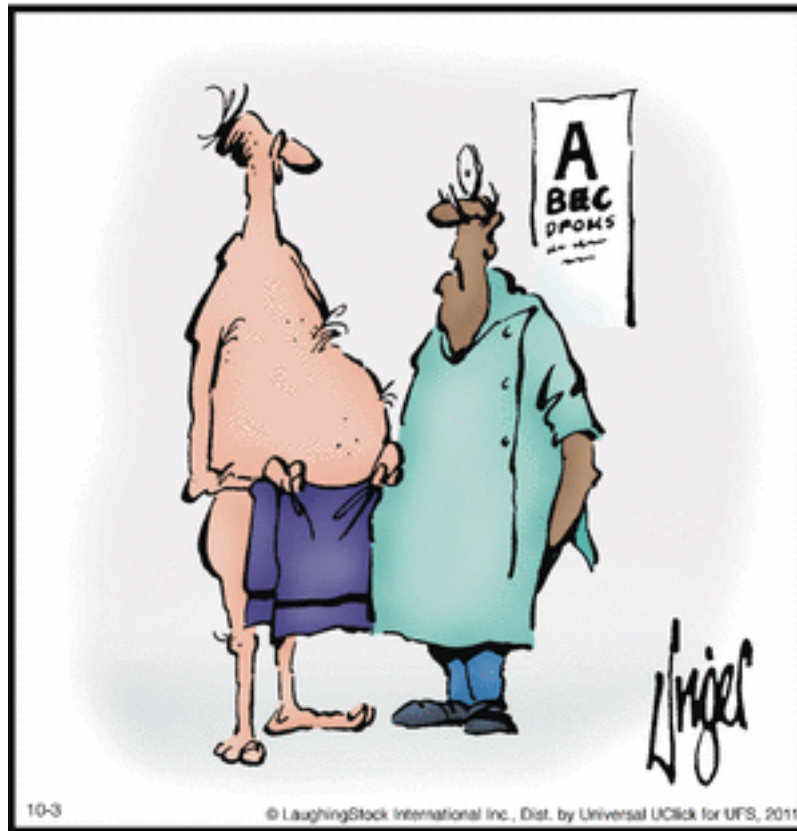
Slit lamp exam.

After determining the quality of the vision, the basic eye examination next checks eye pressure, eye movement, pupils, and a slit lamp (biomicroscopy) visualization of the eye. After the slit lamp step, the pupils may be dilated with eye drops, and the fundus (back of the eye) is then examined by indirect ophthalmoscopy. Newer lenses, which allow views of the fundus, when used with the slit lamp can reduce the need for dilation.

Additional testing may be appropriate, depending upon the findings and the history given by the patient. Such testing might include a visual field test to check peripheral vision, an optical coherence tomography (OCT) test to look in detail at the retinal layers of the macula or the optic nerve (nerve fiber analysis; NFL). The OCT test checks the macula (the center vision of the retina). This test can detect macular degeneration, epiretinal membranes, and various other pathologies of the macula. The OCT test for the NFL can detect and monitor glaucoma.



At Newport Eye Center, we use the latest OCT tests to augment our eye examinations with the Heidelberg Engineering "Spectralis" OCT. This OCT unit scans at 84,000 images/sec making it one of the most sensitive in the world (or out of this world, as the same unit is used on the Space Station).



**“Is this the first time you’ve had
your eyes tested?”**