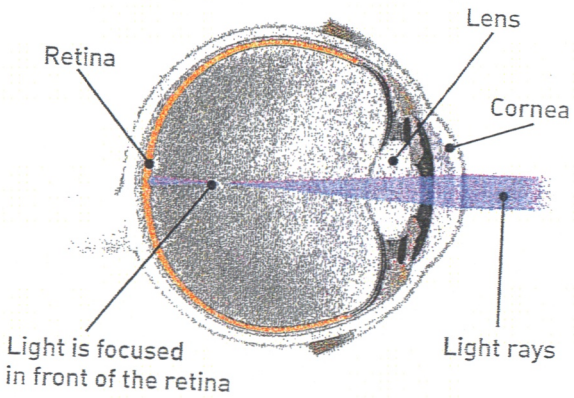
What are the different types of refractive errors?

MYOPIA (NEARSIGHTEDNESS)

A myopic eye is longer than normal or has a cornea that is too steep. As a result, light rays focus in front of the retina instead of on it. Close objects look clear but distant objects appear blurred.



In myopia, the eye is too long or the cornea is too steep. Distant objects appear blurry because images focus in front of the retina instead of on it.

Myopia is inherited and is often discovered in children when they are between ages eight and 12 years old. During the teenage years, when the body grows rapidly, myopia may become worse. Between the ages of 20 and 40, there is usually little change.

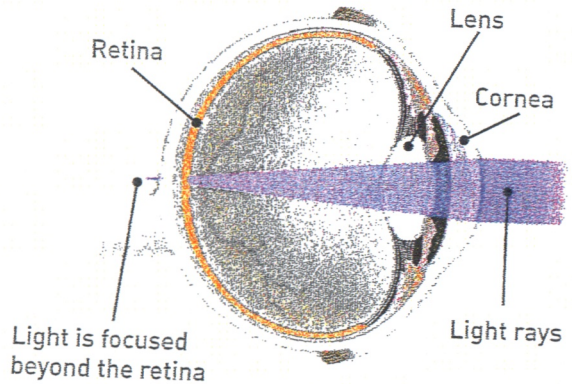
If the myopia is mild, it is called low myopia. Severe myopia is known as high myopia.

If you have high myopia, you have a higher risk of detached retina. Your ophthalmologist

(Eye M.D.) should discuss the warning signs of retinal detachment with you if you are in this risk category. If the retina does detach, a surgical procedure is the only way to repair it. It is important to have regular eye examinations by an ophthalmologist to watch for changes in the retina.

HYPEROPIA (FARSIGHTEDNESS)

A hyperopic eye is shorter than normal or has a cornea that is too flat. As a result, light rays focus beyond the retina instead of on it. Most children are farsighted, yet they do not experience blurry vision. With focusing (accommodation), children's eyes are able to bend the light rays and place them directly on the retina. As long as the farsightedness is not too severe, hyperopic children will have clear vision for seeing objects at a distance and up close. As we get older we slowly lose our ability to focus, and adults with hyperopia may experience increased difficulties with reading or other tasks up close.

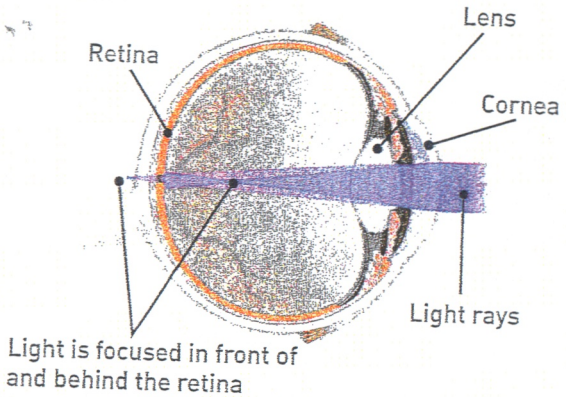


In hyperopia, the eye is too short. Close objects appear blurry because images focus beyond the retina.

Like nearsightedness, farsightedness is usually inherited. Babies and young children tend to be slightly hyperopic. As the eye grows and becomes longer, hyperopia lessens.

ASTIGMATISM (DISTORTED VISION)

The cornea is the clear front window of the eye. A normal cornea is round and smooth, like a basketball. If you have astigmatism, the cornea curves more in one direction than in the other, like a football.



In astigmatism, the cornea is uneven. Images focus in front of and beyond the retina, causing both close and distant objects to appear blurry.

Astigmatism distorts or blurs vision for both near and far objects. It's almost like looking into a fun-house mirror in which you appear too tall, too wide or too thin. It is possible to have astigmatism in combination with myopia or hyperopia.