



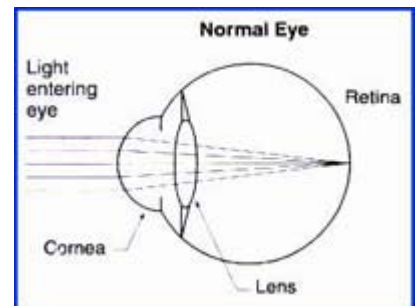
Eye Terminology

Normal Eye

In the normal eye, the cornea and lens of the eye focus light like a camera lens to form an image on the retina at the back of the eye. The cornea, where light first enters the front of the eye, provides about two thirds of the eye's focusing power, and the lens inside the eye provides the other third.

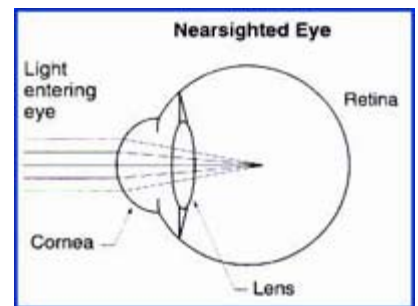
Myopia or nearsightedness

Myopia or nearsightedness occurs when the curve at the front portion of the eye, known as the cornea, is too steep. This causes light to focus in front of where it should, so the image on the retina is blurred. In a normal eye, the cornea and lens of the eye focus light to form an image on the back inside surface of the eye, known as the retina. With nearsightedness, the eye focuses or refracts light too much, causing images of distant objects to form in front of the retina and appear blurry.



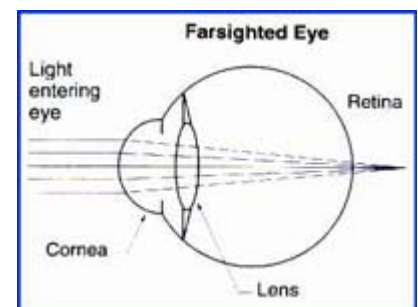
Hyperopia or farsightedness

With hyperopia or farsightedness, the shape of the eye causes light to focus too far back in the eye, behind the retina. Farsightedness occurs when the curve at the front portion of the eye, known as the cornea, is too flat. In a normal eye, the cornea and lens of the eye focus light to form an image on the back inside surface of the eye, known as the retina. With farsightedness, the eye focuses or refracts little light, causing images of distant objects to form in back of the retina and appear blurry.



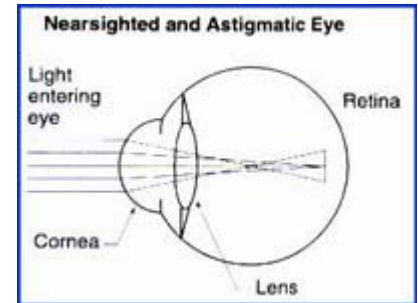
Presbyopia

Presbyopia (the need for reading glasses) can exist alone or with myopia, hyperopia and/or astigmatism. Onset typically occurs between 40 and 45 years of age. Prior to that age, the lens moves to keep objects in focus as they get closer to the eye. With presbyopia, the lens lacks sufficient flexibility or space to keep things in focus at close distance.



Astigmatism

Astigmatism causes light to focus at two different points - it may occur alone or with myopia or hyperopia.



LASIK (Laser Assisted In Situ Keratomileusis)

LASIK is laser surgery to correct nearsightedness (myopia) with or without astigmatism, farsightedness (hyperopia) with or without astigmatism or astigmatism alone. With LASIK, a flap is made in the outer layers of the cornea. Treatment takes place under the flap and then the flap is returned to its original position. For nearsightedness, an excimer laser beam is used to flatten the front of the cornea. The laser beam removes small amounts of tissue from the center of the cornea.

For farsightedness, the excimer laser beam is used to steepen the front of the cornea. To do this, the laser beam removes small amounts of tissue from a ring-shaped area around the center of the cornea. For astigmatism, the excimer laser beam is used in an elliptical pattern.

For more information on this procedure, please contact us or your eye care physician.

PRK (Photorefractive Keratectomy)

PRK is laser surgery to correct nearsightedness (myopia), with or without astigmatism, or farsightedness (hyperopia) with or without astigmatism or astigmatism alone. With PRK, some of the cornea is removed either with the laser or manually. Treatment takes place on the remaining layers of cornea to reshape it. The laser energy is delivered the same as for LASIK (see above).

WaveScan WaveFront technology

WaveScan WaveFront technology was originally developed for use in high-powered telescopes to reduce distortions when viewing distant objects in space. Using this technology, your doctor can detect and measure the optical distortions unique to your entire optical system.

For more information about the Eye Institute, please call **603.663.2020** or e-mail **eyeinstitute@cmc-nh.org**.