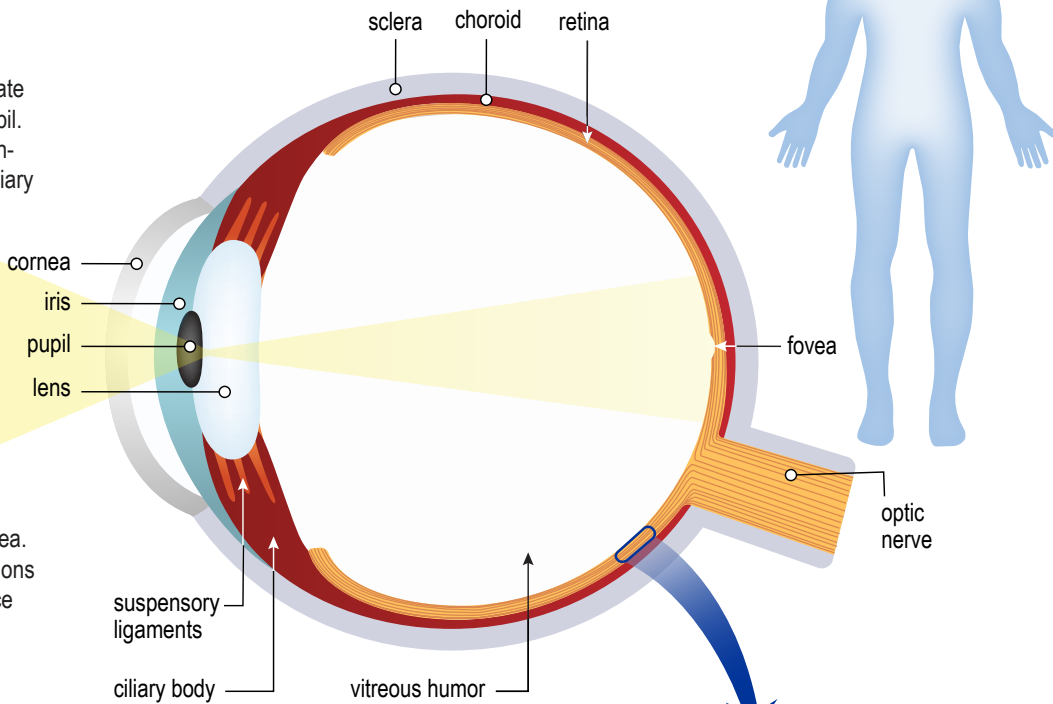


# Human Organs: Eye

The eye is a sensory organ within the nervous system responsible for converting light waves into nerve impulses. These nerve impulses are then transmitted to the brain's visual cortex via the optic nerve, producing images of color and form.

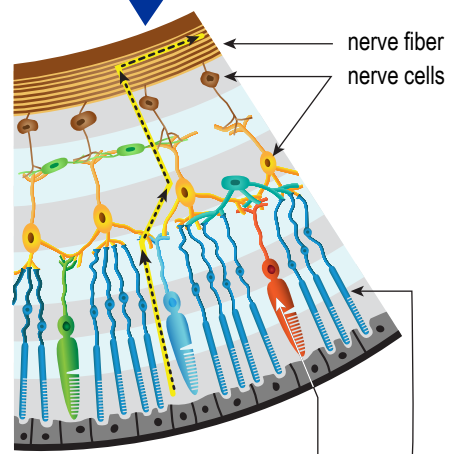
## Human Vision

Light passes through the cornea. The pigmented iris dilates or constricts to regulate the amount of light passing through the pupil. Light then passes through the lens. Suspensory ligaments attached to the muscular ciliary body change the shape of the lens so light properly hits the retina. After passing the vitreous humor, light is focused on the retina. Here specialized cells send visual impulses via the optic nerve to the brain for image formation.



## The Retina

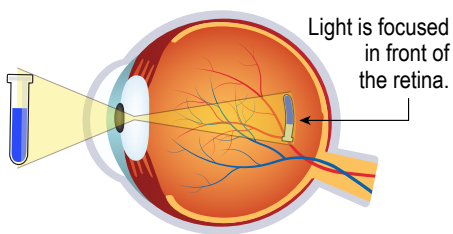
The retina has a layer of photoreceptor cells (rods and cones). Cones allow color perception and are concentrated at the fovea. Rods are more sensitive in low-light conditions and widespread throughout the retina. Once activated by light, signals are sent through several layers of nerve cells, down the connected nerve fibers, to the optic nerve.



## Common Eye Disorders

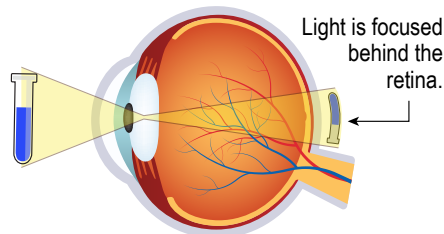
### Myopia

Nearsightedness. Distant objects are blurry and close objects are clear.



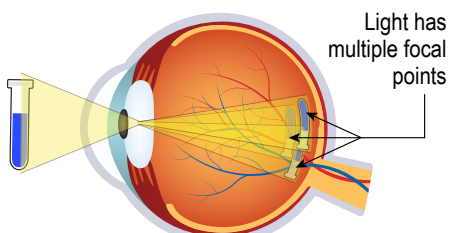
### Hyperopia

Farsightedness. Close objects are blurry and distant objects are clear.



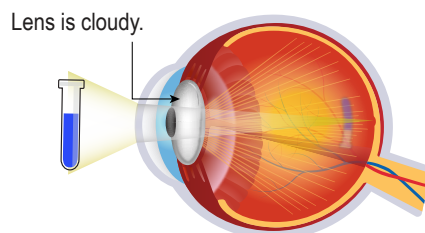
### Astigmatism

Objects are blurry at all distances.



### Cataracts

Objects may be cloudy, blurry, or less colorful.



## Cones

Three types of cone cells exist that are sensitive to a range of wavelengths of light: red cones, green cones, and blue cones. Colorblindness occurs when some or all cone cells are absent or malfunctioning.

