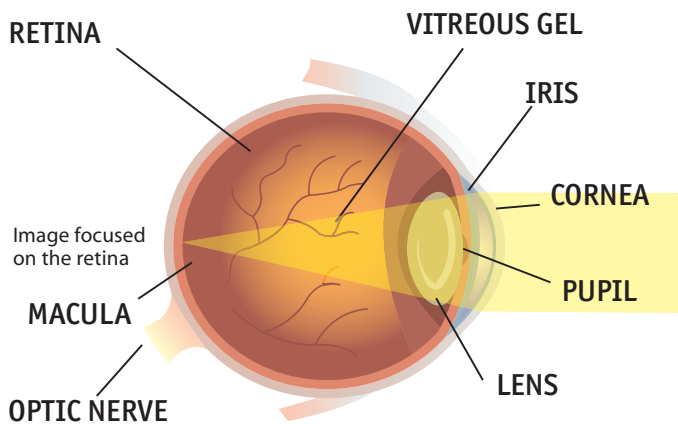


# Presbyopia

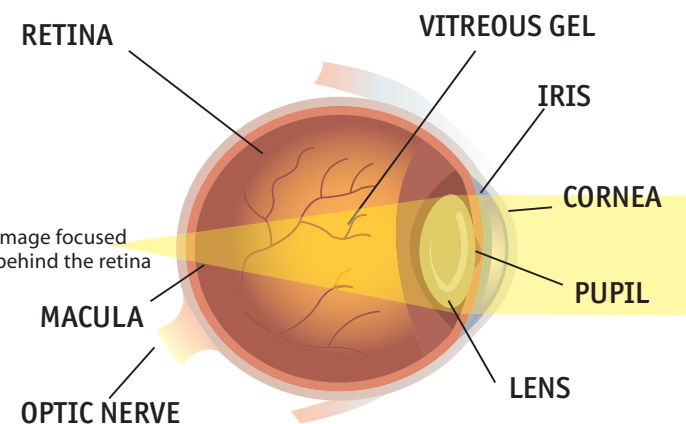


## What is presbyopia?

Presbyopia is a common type of vision disorder that occurs as you age. It is often referred to as the aging eye condition. Presbyopia results in the inability to focus up close, a problem associated with refraction in the eye.



**Normal**



**Presbyopia**

The cornea and lens bend (refract) incoming light rays so they focus precisely on the retina at the back of the eye.

## What is refraction?

Refraction is the bending of light as it passes through one object to another. Vision occurs when light rays are bent (refracted) by the cornea and lens. The light is then focused directly on the retina, which is a light-sensitive tissue at the back of the eye. The retina converts the light rays into messages that are sent through the optic nerve to the brain. The brain interprets these messages into the images we see.

## How does presbyopia occur?

Presbyopia happens naturally in people as they age. The eye is not able to focus light directly onto the retina due to the hardening of the natural lens. Aging also affects muscle fibers around the lens, making it harder for the eye to focus on up-close objects. The ineffective lens causes light to focus behind the retina, causing poor close-up vision.



When you are younger, the lens of the eye is soft and flexible, allowing the tiny muscles inside the eye to easily reshape the lens to focus on close and distant objects.

## Who is at risk for presbyopia?

Anyone over the age of 35 is at risk for developing presbyopia. Everyone experiences some loss of focusing power for near objects as they age, but some will notice this more than others.

## What are the signs and symptoms of presbyopia?

Signs and symptoms include the following:

- Hard time reading small print
- The need to hold reading material farther than arm's distance
- Problems seeing objects that are close to you
- Headaches
- Eye strain

If you experience any of these symptoms, you may want to visit an eye care professional for a comprehensive dilated eye examination. If you wear glasses or contact lenses and still have these issues, a new prescription might be needed.

## Can I have presbyopia and another type of refractive error at the same time?

Yes. It is common to have presbyopia and another type of refractive error at the same time. There are several other types of refractive errors: nearsightedness (myopia), farsightedness (hyperopia), and astigmatism. An individual may have one type of refractive error in one eye and a different type of refractive error in the other.

## How is presbyopia diagnosed?



Presbyopia can be found during a comprehensive dilated eye exam. If you notice any changes in your vision, you should visit an eye care professional.

Exams are recommended more often after the age of 40 to check for age-related conditions.

## How is presbyopia corrected?



Eyeglasses are the simplest and safest means of correcting presbyopia. Eyeglasses for presbyopia have higher focusing power in the lower portion of the

lens. This allows you to read through the lower portion of the lens and clearly see distant objects through the upper portion of the lens. It is also possible to purchase reading eyeglasses. These types of glasses do not require a prescription and can help with reading vision.

For more information about refractive errors and eye health, visit <http://www.nei.nih.gov/healthyeyes>.