

Astigmatism



What is astigmatism?

Astigmatism is a common type of refractive error. It is a condition in which the eye does not focus light evenly onto the retina, the light-sensitive tissue 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) as they pass through the cornea and the lens. The light is then focused on the retina. 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 astigmatism occur?

Astigmatism occurs when light is bent differently depending on where it strikes the cornea and passes through the eyeball. The cornea of a normal eye is curved like a basketball, with the same degree of roundness in all areas. An eye with astigmatism has a cornea that is curved more like a football, with some areas that are steeper or more rounded than others. This can cause images to appear blurry and stretched out.

Who is at risk for astigmatism?

Astigmatism can affect both children and adults. Some patients with slight astigmatism will not notice much change in their vision. It is important to have eye examinations at regular intervals in order to detect any astigmatism early on for children.

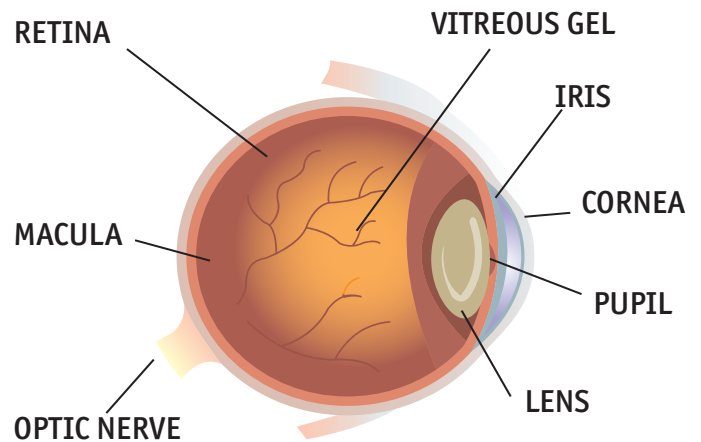


Diagram of the eye

What are the signs and symptoms of astigmatism?

Signs and symptoms include the following:

- Headaches
- Eyestrain
- Squinting
- Distorted or blurred vision at all distances
- Difficulty driving at night

If you experience any of these symptoms, visit your eye care professional. If you wear glasses or contact lenses and still have these issues, a new prescription might be needed.

How is astigmatism diagnosed?

Astigmatism is usually found during a comprehensive dilated eye exam. Being aware of any changes in your vision is important. It can help in detecting any common vision problems. If you notice any changes in your vision, visit your eye care professional for a comprehensive dilated eye examination.



Can you have astigmatism and not know it?



It is possible to have mild astigmatism and not know about it. This is especially true for children, who are not aware of their vision being

other than normal. Some adults may also have mild astigmatism without any symptoms. It's important to have comprehensive dilated eye exams to make sure you are seeing your best.

How is astigmatism corrected?

Astigmatism can be corrected with eyeglasses, contact lenses, or refractive surgery. Individual lifestyles affect the way astigmatism is treated.



Eyeglasses are the simplest and safest way to correct astigmatism. Your eye care professional will prescribe appropriate lenses to help you see as clearly as possible.



Contact Lenses work by becoming the first refractive surface for light rays entering the eye, causing a more precise refraction or focus. In many cases,

contact lenses provide clearer vision, a wider field of vision, and greater comfort. They are a safe and

effective option if fitted and used properly. It is very important to wash your hands and clean your lenses as instructed in order to reduce the risk of infection.

If you have certain eye conditions, you may not be able to wear contact lenses. Discuss this matter with your eye care professional.



Refractive Surgery aims to change the shape of the cornea permanently. This change in eye shape restores the focusing power of the eye by allowing

the light rays to focus precisely on the retina for improved vision. There are many types of refractive surgeries. Your eye care professional can help you decide if surgery is an option for you.

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