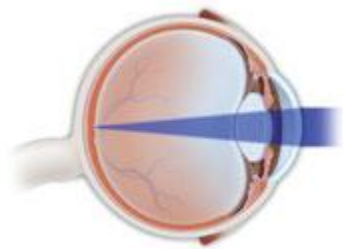
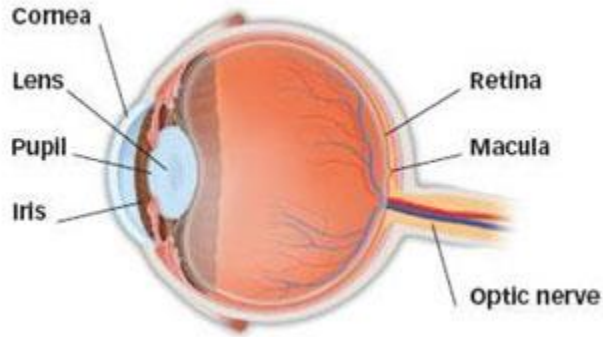


What Is Astigmatism?

Astigmatism is an imperfection in the curvature of your cornea — the clear, round dome covering the eye's iris and pupil — or in the shape of the eye's lens. Normally, the cornea and lens are smooth and curved equally in all directions, helping to focus light rays sharply onto the retina at the back of your eye. However, if your cornea or lens isn't smooth and evenly curved, light rays aren't refracted properly. This is called a refractive error.



In a normal eye, the cornea and lens focus light rays on the retina



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

When the cornea has an irregular shape, it is called corneal astigmatism. When the shape of the lens is distorted, you have lenticular astigmatism. As a result of either type of astigmatism, your vision for both near and far objects appears blurry or distorted. It's almost like looking into a fun house mirror in which you appear too tall, too wide or too thin.

People can be born with astigmatism — in fact, most people probably are born with some degree of astigmatism — and they may have it along with other refractive errors: [nearsightedness \(myopia\)](#) or [farsightedness \(hyperopia\)](#). While adults with a higher degree of astigmatism may realize their vision isn't as good as it should be, children who have [astigmatism symptoms](#) may not be aware they have this condition, and are unlikely to complain about blurred or distorted vision. But uncorrected astigmatism can seriously impact a child's ability to achieve in school and sports. That's why it is crucial that children have [regular eye exams](#) to detect astigmatism or other vision problems as early as possible.

What Causes Astigmatism?

Astigmatism is caused by an irregular curvature of the eye's cornea or lens. If your cornea or lens isn't smooth and evenly curved, light rays aren't refracted properly. This is called a refractive error. Astigmatism is one type of refractive error, with blurred or distorted vision at near and far distances.

Astigmatism is very common. In most cases, people with astigmatism are born with this condition. The reason why corneal shape differs from person to person is unknown, but the likelihood of developing astigmatism is inherited.

Sometimes, astigmatism can develop after an eye disease, eye injury or surgery. It is a myth that astigmatism can develop or worsen from reading in low light or sitting very close to the television.

Astigmatism Symptoms

Astigmatism symptoms may include blurry vision or areas of distorted vision, eyestrain, headaches, squinting to try to see clearly or eye discomfort.

Having these symptoms may not necessarily mean that you have astigmatism, but they do indicate the need for a visit to your Eye M.D. for a complete eye exam.

Astigmatism Diagnosis

Your eye doctor will do a comprehensive eye exam, and will use various instruments to measure how your eye focuses light.

Your visual acuity will be measured, where you will be asked to read letters on a distance chart to determine the clarity of your vision at a certain distances. You will also have the focusing power of your eyes tested with a series of lenses placed in front of your eyes. The curvature of your cornea will be measured with a keratometer, and corneal topography may be used to provide additional information about the shape of the surface of the cornea. With these tests, your eye doctor can diagnose astigmatism and will be able to determine the power of glasses or contact lenses you require for clear vision. He or she will also discuss other options for treatment, such as [astigmatism surgery](#).

Astigmatism Treatment

Usually, mild to moderate astigmatism can be corrected with eyeglasses or contact lenses.

While it used to be the case that [contact lenses for astigmatism](#) could only be rigid contact lenses (RGP, also called GP lenses), this is no longer true. Now, soft lenses called toric contact lenses can correct astigmatism. But while soft toric lenses may be appropriate for some, if you have severe astigmatism, rigid contacts or glasses may be a better option. Your eye doctor will discuss your lens options with you.

For some people with astigmatism, surgery may be an option to correct vision, including [LASIK](#). Your Eye M.D. can discuss the various types of refractive surgery procedures you may consider for astigmatism correction.