

## What is Astigmatism?

Astigmatism occurs when the cornea (the transparent dome covering the eye) is shaped like a football instead of a basketball. This uneven shape bends light rays so they do not focus precisely on the retina, resulting in blurred or distorted vision up close and far away.

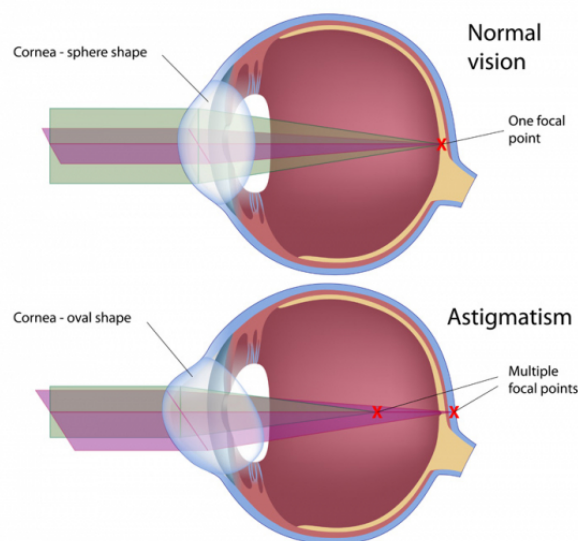
## Measuring Astigmatism with Corneal Topography

Corneal topography provides a detailed analysis of the corneal curvature. Using a sophisticated computer and software, thousands of measurements are taken and analyzed in just seconds. The computer generates a color map from the data. This information is useful to evaluate and correct astigmatism, monitor corneal disease, and detect irregularities in the corneal shape. The map is interpreted much like other topography maps. The cool shades of blue and green represent flatter areas of the cornea, while the warmer shades of orange and red represent steeper areas. Your doctor will use the corneal topography map to formulate a “3-D” perspective of the cornea’s shape and determine whether astigmatism correction could reduce your dependence on glasses. Your surgeon will analyze your test results to determine whether you are a candidate for correction of your astigmatism using limbal relaxing incisions or a toric lens.

## Treatment options

When correcting astigmatism, our goal is to reduce dependence on glasses. For most patients, correcting astigmatism means that they don’t have to wear glasses for many routine activities. However, correcting astigmatism will not completely eliminate the need for glasses. We expect that you will still require glasses to “fine tune” your vision to see your best for activities such as night driving and reading small print.

If astigmatism correction could help you, your doctor will use relaxing incisions and/or a toric intraocular lens. Your doctor will recommend one or both procedures depending on your level of astigmatism.



## Relaxing Incisions

One option for correcting astigmatism is to place one or more tiny incisions at the edge of the cornea. This technique is commonly referred to as relaxing incisions. Relaxing incisions can be performed along with cataract surgery, or as a separate procedure. Relaxing incisions work by allowing the cornea to heal in a more spherical shape, improving vision and reducing dependency on glasses. Because the outcome of the relaxing incisions depends on each individual’s own healing response, an enhancement procedure is performed in some cases to further reduce the astigmatism and improve vision without glasses.

## Toric Intraocular Lenses

Another option for correcting astigmatism is the toric intraocular lens. This lens implant has the astigmatism correction built in. In order to correct astigmatism, the toric lens must be rotated in the proper position in the eye, much like turning the hands on a clock. In some cases after surgery, the lens can rotate away from the desired position. If this occurs, a simple office procedure can be performed to dial it back into place. After about two weeks postoperatively, the healing process secures the implant in place, and it is unlikely to rotate. Toric lenses and relaxing incisions are sometimes used together to correct higher degrees of astigmatism. If you have astigmatism, your surgeon will assess your corneal measurements to determine which option is best for you.

# FAQ

## **Does Medicare or my insurance plan pay for astigmatism correction?**

No. Medicare and other health insurance plans do not consider astigmatism correction medically necessary, so it isn't covered.

## **Will I have 20/20 vision if my astigmatism is corrected?**

There are several variables that affect visual outcomes besides astigmatism, such as the power of the intraocular lens and the overall health of your eye. Our goal isn't to give you "superman" vision. By correcting astigmatism, we expect you to have more functional vision and greater independence from your glasses. You should however, expect to wear glasses to refine your vision

## **Will my recovery from surgery take longer if I have astigmatism correction?**

Probably not. If you have a small amount of astigmatism, or a toric lens implanted, recovery will be about the same as usual. Patients with higher amounts of astigmatism sometimes take a little longer to see their very best.

## **Is astigmatism correction recommended for everyone?**

Since everyone is different, we carefully evaluate your individual factors, lifestyle and needs to determine what strategy is best for you. Our surgeons have decades of experience in creating surgical plans to address your individual circumstances.

## **What if surgery doesn't fully correct my astigmatism?**

You will still need glasses to obtain your best vision. Even if your astigmatism is not fully corrected, the quality of your vision without glasses will be better if your astigmatism can be reduced.