

What Are the Symptoms?

A person who has astigmatism has trouble focusing on objects in the distance such as street signs, blackboards or television, and may also have difficulties with reading. Most people with astigmatism have more difficulties seeing at night or in poor lighting. Astigmatism often worsens a patient's existing nearsightedness or farsightedness, and it may be difficult for the patient to tell if the difficulty is from astigmatism or the other refractive problem. It is very important to detect astigmatism in children. If uncorrected, astigmatism can lead to amblyopia and improper development of the visual system. If a child is having difficulties seeing in school, watching television or is seen squinting, astigmatism may be the reason.

How Is it Diagnosed?

Periodic eye screenings at school or the Pediatrician's office will often detect astigmatism. Careful observation for

signs of squinting or difficulty seeing objects should warrant further evaluation with one of our Optometric Physicians to determine if astigmatism is the problem.

How Is Astigmatism Treated?

Astigmatism is often not significant enough to require treatment. When needed, corrective lenses (eyeglasses or contact lenses) are usually prescribed to treat astigmatism. Glasses or contact lenses are typically prescribed for full-time use to ensure the best vision at all times. There are a wide variety of soft contact lenses available (including disposables) to correct astigmatism. The best option for you depends on your lifestyle, occupation, types of recreational activities, your general health and other individual characteristics. Working with our doctors and staff will help assure that your corrective lenses contribute to clear sight and general comfort.

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Astigmatism

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What Is Astigmatism ?

Astigmatism is one of a group of conditions known as refractive errors. Refractive errors interfere with the way light rays are focused within the eye. If you have astigmatism, your vision will be blurry both close and far, but oftentimes, the problem with the distance vision is more noticeable. Astigmatism results from an irregularity in the shape of the front of your eye (usually the cornea) that prevents light from focusing properly on the retina. This irregularity in corneal shape is usually described as oval or like a football rather than round or like a basketball. Astigmatism often occurs in conjunction with nearsightedness or farsightedness.

What Causes Astigmatism?

The exact cause of this eyeball shape variation is not known, but it may be inherited in some cases. Anatomical factors such as the shape and tightness of the eyelids play a role

a role in astigmatism. A poorly fitted contact lens may also induce astigmatism. Research has not found a link between how we use our eyes (i.e. reading, television, computer, etc.) and the development of astigmatism. Astigmatism tends to change over the years, but exactly why is unknown.

How Does Astigmatism Affect Sight?

To fully understand why astigmatism causes a disturbance in sight, it is helpful to understand the process by which sight occurs. For clear vision to occur, the lens of the eye directs light rays towards the retina, and the light rays must come together in a fine point and must strike the retina in exactly the right place. If the curve of the front of the eyeball is oval rather than round, then there will be two points of focus rather than one. In between the two points of focus will be a blur circle. It is this unfocused image that makes it difficult to see. Small degrees of astigmatism create a slightly blurry picture that may not be noticeable; however, large amounts of astigmatism make it very difficult to focus without corrective lenses.



Who Is Affected by Astigmatism?

Most people have some degree of astigmatism; yet, it is a problem only if it significantly affects the ability to see well. Very often the effects of astigmatism will be noticed only at night. As the pupil of the eye enlarges in darkness, the effects of the irregular shape of the front of the eye are more prominent. When the pupil becomes small in bright light, the curvature effects of the cornea are minimized and the “pinhole effect” aids the visual acuity. The pinhole effect is the principle by which instamatic cameras give well-focused pictures at varying distances without a change of focus of the lens of the camera. Astigmatism has no age, race, or gender preferences, and tends to change over the years without any discernible pattern.



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