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ASTIGMATISM

Astigmatism is a common optical defect that interferes with the eye's ability to focus sharply. It occurs because the surface of the cornea is not perfectly round (like half a marble), but more oval (like a spoon). The cornea is the clear window-like structure that lies directly over the colored iris and is a major part of the focusing mechanism of the eye.

Astigmatism rarely occurs alone; it almost always accompanies myopia (nearsightedness) or hyperopia (farsightedness). Almost everyone is born with some astigmatism, though the amount may be so small that it isn't important. Heredity is the most common cause. Rarely, a teenager may develop progressive astigmatism from keratoconus, an usual condition in which the cornea becomes cone shaped.

Astigmatism does not come from reading, reading in dim light, or by using your eyes "too much." (You cannot harm your eyes by using them.) The amount and position (orientation) of the astigmatism can change throughout life.

What It's Like To Have Astigmatism

Astigmatic vision is never sharp and crisp, either close up or in the distance. If you have a large amount of astigmatism, your vision may be very blurred. Straight lines running in one direction may be more blurred than lines running in another; for example, only the vertical edges of a window may appear out-of-focus. As you try to overcome the blur and struggle to see more clearly, you might get a headache from continually contracting the muscles around your eyes and furrowing your brows (actions that may be so automatic that you aren't aware of them.)

How Is Astigmatism Corrected?

A small amount of astigmatism may require no correction if it does not affect your vision or cause eyestrain or headaches. Prescription eyeglasses can sharpen vision as well as reduce the ocular "pulling," dizziness, or difficulty with sustained reading. At first, glasses might make objects look a bit tilted or distorted, but after you get used to them, the distortion should disappear.

Contact lenses (rigid, gas permeable) can also correct astigmatic vision. However, soft lenses cannot be used, unless they are special "toric" lenses that are made to compensate for the astigmatic shape of the corneas.

Highly astigmatic children should be checked for glasses or contacts every year or so, and adults every 2 to 3 years - more frequently, of course, if you start having any symptoms that seem to be related to your eyes.

Refractive surgery now provides ways to permanently reshape the corneal curvature to correct any of the refractive errors. For astigmatism, one technique involves making precise straight or curved cuts in the cornea - it is called AK (for arcuate or astigmatic keratotomy). Newer and possibly safer and more predictable methods include PRK and LASIK, forms of excimer laser surgery. Surgical procedures are not appropriate for everyone, and they are not done on an eye that is still growing. Before making a decision to have any type of refractive surgery, you should learn all you can about the procedures available.