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**DEPARTMENT: NURSING**

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**DEFECTS OF THE EYE**

**ASTIGMATISM:** This defect is when the light rays do not all come to a single focal point on the retina. Instead some focus on the retina and some focus in the front or behind it. This is usually caused by a non-uniform curvature of the cornea. A typical symptom of astigmatism is if you are looking at a pattern of lines placed at various angles and the lines running in one direction appear sharp whilst those in the other directions appear blurred. Astigmatism can usually be corrected by using a special spherical cylindrical line; this is placed in the out-of-focus axis.

Astigmatism is a common and generally treatable imperfection in the curvature of your eye that causes blurred distance and near vision. It occurs when either the front surface of your eye(cornea) or the lens, inside the eye has mismatched curves. Instead of having one curve like a round ball, the surface is egg shaped. This causes blurred vision at all distances. Astigmatism is often present at birth and may occur in combination with near-sightedness or farsightedness. Often its not pronounced enough to require corrective action.

**SYMPTOMS**

Signs and symptoms of astigmatism may include:

* Blurred or distort vision
* Eyestrain or discomfort
* Headaches
* Difficulty with night vision
* Squinting

**CAUSES**

The eye has two structures with curved surfaces that bend (refract) light onto the retina, which makes the images:

* The cornea, the clear front surface of the eye along with the tear film.
* The lens, a clear structure inside your eye that changes shape to help focus on near objects.

**TREATMENT**

* Corrective Len
* surgery

**MYOPIA (near-sightedness):** This is a defect of vision in which far objects appear blurred but near objects are seen clearly. The image is focused in front of the retina rather than on it usually because the eyeball is too long or the refractive power of the eye’s lens too strong. Myopia can be corrected by wearing glasses/contacts with concave lenses these help to focus the image on the retina.

**SYMPTOMS**

Difficulty reading road signs and seeing distant objects clearly, but will be able to see well for close up tasks such as reading and computer use.

* Squinting
* Eye strain
* Headaches

**CAUSES**

Myopia occurs when the eyeball is too long relative to the focusing power of the cornea and lens of the eye. This causes light rays to focus at a point in the front of the retina, rather than directly on its surface.

Myopia typically begins in childhood and you may have a higher risk if your parents are near-sighted. In most cases, near-sightedness stabilizes in early adulthood but sometimes it continues to progress with age.

**TREATMENT**

* Eye glasses
* Contact lenses or refractive surgery