

## Refractive Errors of the Eye



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### Types

#### Myopia

##### [My Eye](#)

Myopia is a refractive error that causes blurred distance vision.

#### Focal Point Anterior to Retina

##### [Ant-eater Light Focus](#)

Myopia is a refractive error that causes blurred distance vision. Due to the increased axial axis of the eyeball, the focal point of the eye is shifted in front of the retina.

Etiologies includes axial, curvatural, positional, index, and spasmodic myopia.

#### Increased Risk for Retinal Detachment

##### [Up-arrow Risk Detached Red-tins](#)

In myopia the retina is more stretched due to axial elongation and is prone to peripheral retinal tears. This may lead to rhegmatogenous retinal detachment.

#### Hyperopia

##### [Hiker Eye](#)

Hyperopia is a refractive error that causes close objects to appear blurry.

#### Focal Point Posterior to Retina

##### [Focus Post-terrier to Retina](#)

Hyperopia is a refractive error that causes blurred near vision. Patients will have a decreased axial axis of the eyeball, thus shifting the focal point of the eye behind the eyeball.

#### Increased Risk for Angle-closure Glaucoma

##### [Up-arrow Risk Closed-angle Glock-eye](#)

In hyperopia, decreased axial length causes decreased space for the aqueous humor to flow. This can lead to intraocular pressure elevation and angle-closure glaucoma

## **Astigmatism**

### **Stick-Eye**

Astigmatism is a condition in which parallel rays of light cannot form a point image on the retina due to the existence of two or more focal points. It is associated with an abnormal corneal curvature.

## **Abnormal Corneal Curvature**

### **Abnormal Curved Corn**

Normally, the cornea has the same curvature along all axes. If the shape of the cornea becomes irregular, 2 or more different sized axes are produced, resulting in different points of convergence, or focal points. This will result in scattering of the image and blurring of vision in all axes.

## **Increased Risk for Amblyopia**

### **Up-arrow Risk Amber-Lazy-eye**

Amblyopia means lazy eye. If at birth, astigmatism is present, the brain will primarily use the input for depth perception from the normal eye. This leads to decreased nervous output to the abnormal eye, which may then suffer from amblyopia.