

Defects of vision is the loss of power of accommodation of the human eye. There are many eye related problems and defects of the eye, the main few are briefly discussed below:

**Defects of the eye:**

**[?] MYOPIA:** (nearsightedness) 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.

**[?] HYPEROPIA:** (farsightedness) This is a defect of vision in which there is difficulty with near vision but far objects can be seen easily. The image is focused behind the retina rather than upon it. This occurs when the eyeball is too short or the refractive power of the lens is too weak. Hyperopia can be corrected by wearing glasses/contacts that contain convex lenses.

**[?] 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 front of 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 other directions appear blurred. Astigmatism can usually be corrected by using a special spherical cylindrical lens; this is placed in the out-of-focus axis.

**[?] CATARACTS:** A cataract is a clouding of the lens, which prevents a clear, sharp image being produced. A cataract forms because the lens is sealed in a capsule and as old cells die they get trapped in the capsule, with time this causes a clouding over of the lens. This clouding results in blurred images.

**[?] GLAUCOMA:** The eye produces a clear fluid (aqueous humor) that fills the space between the cornea and the iris. This fluid filters out through a complex drainage system. It is the balance between the production and drainage of this fluid that determines the eyes intraocular pressure (IOP). Glaucoma is a disease caused by increased IOP usually resulting from a malfunction in the eye's drainage system. Increased IOP can cause irreversible damage to the optic nerve and retinal fibers and if left untreated can result in a permanent loss of vision.

**[?] PRESBYOPIA:** Presbyopia generally is believed to stem from a gradual thickening and loss of flexibility of the natural lens inside your eye. Presbyopia usually occurs beginning at around age 40, when people experience blurred near vision when reading, sewing or working at the computer.