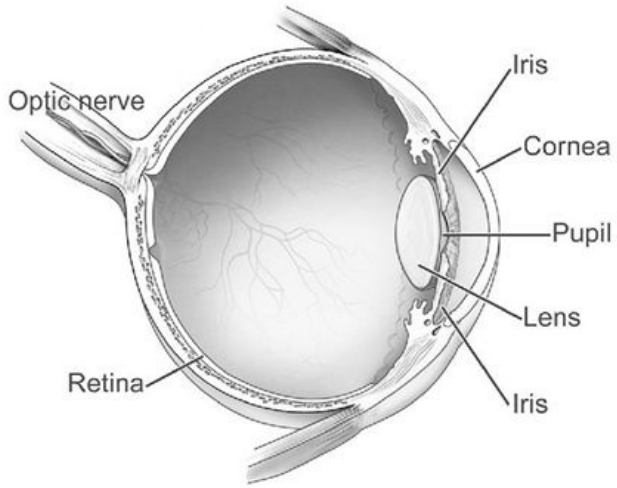
The Human Eye and Visual Impairments



- **After passing through the cornea, the light rays reach the pupil.**
- **The pupil is the opening in the iris.**
- **It is actually just a hole that allows light to pass into the eye.**
- **Eye colour= the colour of the iris.**
- **The iris controls the size of the pupil, and so it controls the amount of light that enters the eye.**
- **In dim light, the iris opens and the pupil dilates (becomes wider).**
- **In bright light, the iris closes and the pupil contracts (becomes smaller)**

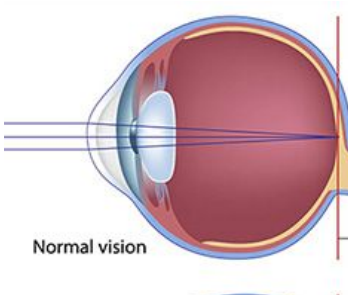
Seeing Things

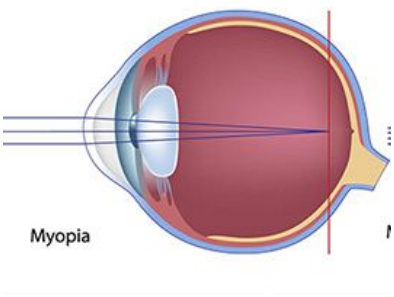
Our eye produces an inverted (upside down) image. Our brain flips it over so that it makes sense!

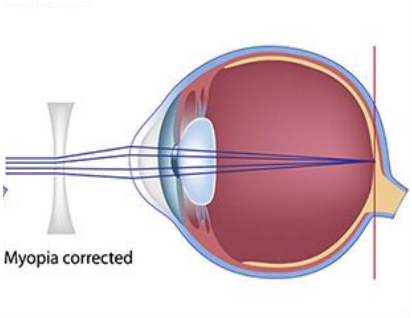
Visual Impairments

Myopia (nearsightedness): difficulty focusing on distant objects. The eyeball is too long and the image forms in in front of the retina.

Can be fixed with diverging lens

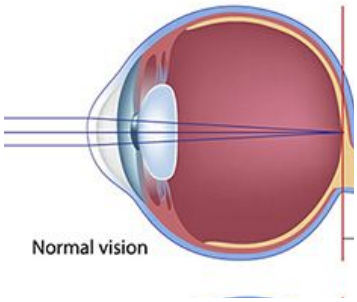


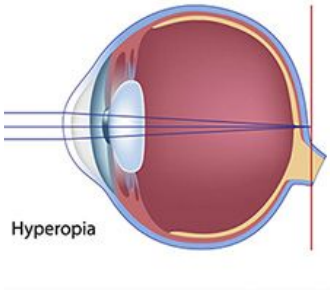


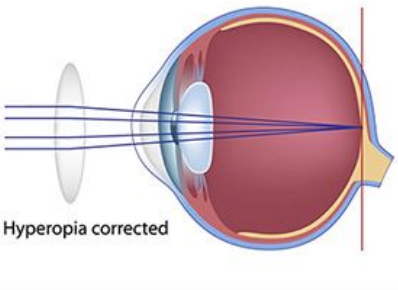


Hyperopia (farsightedness): difficulty focusing on nearby objects. The eyeball is too short and the rays focus at a point beyond the retina.

Can be fixed with converging lenses

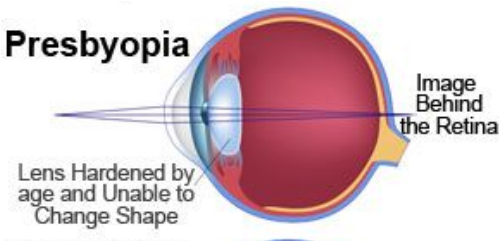


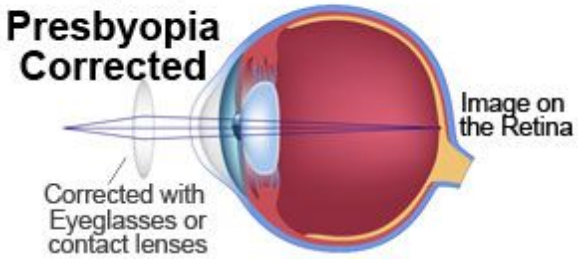




Presbyopia: As a person ages, the muscles that move the lenses in the eyes become weaker_____. Difficulty focusing on nearby objects.

Can be fixed with converging lenses





Astigmatism: blurred vision due to incorrectly shaped cornea. Part of the image might be in focus but other parts may be blurry.

Can be fixed with specially prescribed lenses or surgery