

Batch: IS-DB-47

# GSA (Biological Sciences)

Assignment #1: Disorders of Eye.

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## Short Sightedness:-

→ Scientific name: Myopia

→ A condition in which distant objects are not clearly visible.

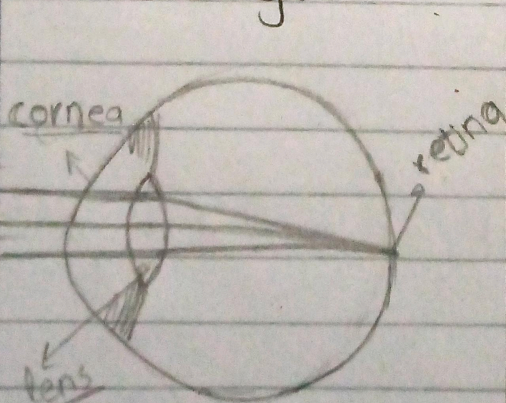
→ Causes:

It is caused usually due to:

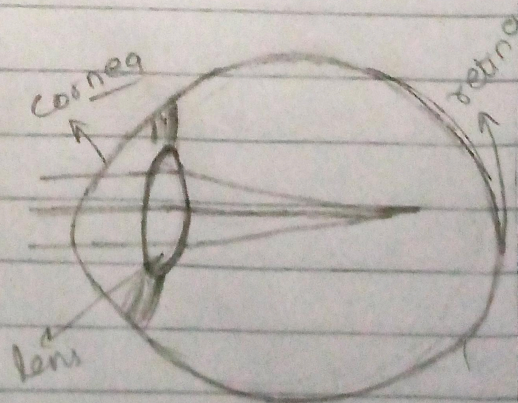
→ eyeball grows too long or oval shaped rather than round.

→ Cornea being too steep.

It results in light rays coming to focus in front of retina. The messages sent from the retina to the brain are perceived blurry.



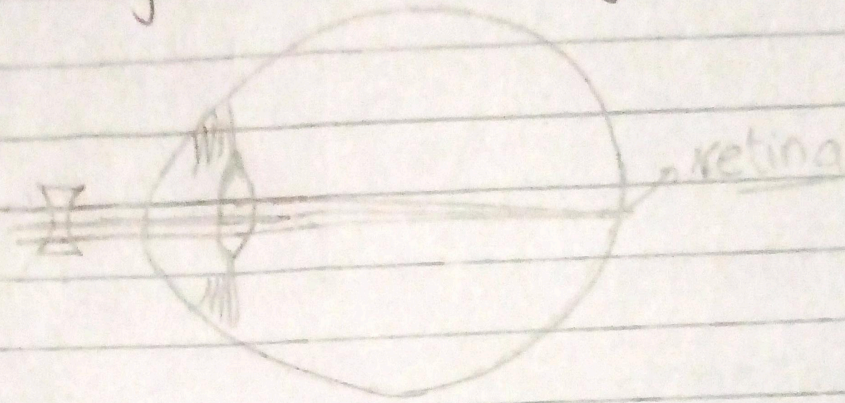
Normal eye



Myopic eye (Light focused in front of retina)

Treatment:-

- Myopia can be treated by:
- using concave lens
  - refractive surgery
  - Single vision glasses



Corrected with concave lens.

## Far-Sightedness:-

- Scientific name:- Hyperopia/Hyperm<sup>etr</sup>opia
- A condition in which the nearer objects are not clearly visible.

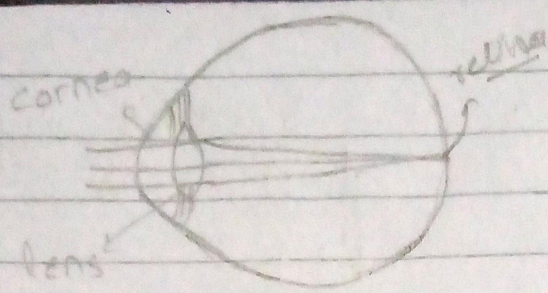
→ Causes:

Hyperopia is caused due to:

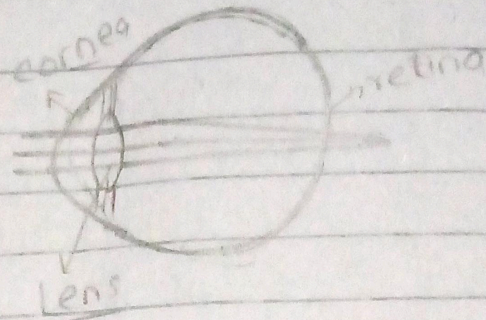
→ eye-ball grows too short

→ Cornea is curved too little than the normal.

It results in light rays coming to focus behind the retina.



Normal eye

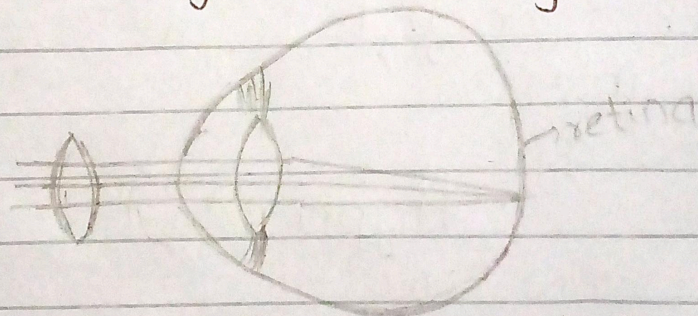


Hyperopic eye (light rays focus behind retina)

### Treatment:

Hyperopia can be treated by:

- Using convex lens
- ~~to~~ Refractive surgery
- Single vision glasses.



Correct by convex lens.

### Night blindness:-

- Scientific name: Nyctanopia/ Nyctalopia.
- A condition of poor vision at night or in dim light.

## Causes:

Night blindness may be caused due to:

- Retina problem
- Myopia (near-sightedness)
- Cataracts
- Vitamin A deficiency
- Diabetes
- Genetic causes

## Treatment:-

Night blindness can be treated depending upon the cause. However:

- Night blindness due to cataract can be cured by eating Vitamin A rich food as Vitamin A helps in the vision.

- eat zinc rich food.

## Colour blindness:-

Scientific name: Achromatopsia

- All the objects around seem to be grey in colour.

## Causes.

Colour blindness is caused due to:

- Partial or complete lack of cones in the retina

→ Sickle cell anemia

→ Diabetes

→ Glaucoma.

### Treatment:

Colour blindness has no treatment, yet it can be improved by:

→ using enchroma glasses.

→ taking vitamin A rich diet.