

## Assignment

### General Science

Biological Science

#### 1) Short sightedness:-

Short sightedness

is defined as:-

" Short sightedness is a common eye condition where distant objects appear blurry while close objects can be seen clearly."

#### Scientific name:-

Scientific name of short sightedness is myopia.

#### Symptoms:-

Symptoms of short sightedness are given below:-

1) Blurry vision when looking at distant objects.

2) Needing to squint or partially close the eyelids to see clearly

- 3) Headaches due to eyestrain
- 4) Difficulty seeing while driving especially at night.
- 5) Frequent blinking and eye rubbing.

### Causes:-

Causes of myopia are given below:-

- 1) The eyeball being too long relative to the focusing power of the cornea and lens.
- 2) Cornea and lens being too curved for the length of the eyeball.
- 3) Genetic factor as myopia tends to run in families.
- 4) Environmental factors such as prolonged near work, like reading or screening time.

### Treatment

Below are the treatments of myopia:-

- 1) Prescription glasses or contact lenses.
- 2) Refractive surgery to correct the

shape of the cornea.

3) Orthokeratology (wearing rigid contact lenses that reshape the cornea overnight.

4) In some cases, atropine eye drops might be used in children to slow the progression.

## 2 Far sightedness :-

Far sightedness

is given below :-

“ Far sightedness is a refractive error where distant objects can be seen more clearly than nearby objects due to the light entering the eye being focused behind retina. ”

Scientific name :-

Hyperopia is the scientific name of far sightedness

## Symptoms:

The symptoms of far sightedness are given below:

- 1) Blurred vision when looking at closing objects.
- 2) Discomfort after prolonged close up tasks.
- 3) Headaches or eye discomfort.
- 4) Need for brighter light when reading or doing close up work.
- 5) Younger people with high amount of hyperopia may find distant object blurry as well.

## Causes:

Hyperopia occurs when the eyeball is too short or the cornea has too little curvature. As a result, light entering the eye is not focused correctly. Genetics play a role as it often runs in families.

## Treatment:

Treatments are given below

- 1) The primary method to correct

DATE: \_\_\_\_\_

DAY: \_\_\_\_\_

hyperopia is corrected by contact lenses.

2) Refractive surgery such as LASIK or LASEK can correct

hyperopia by altering the shape of the cornea.

3) Those who are not candidates for LASIK or PRK, they might consider clear lens extraction where the eye's clear internal lens is replaced with an artificial lens.

### 3 Night Blindness:

It is defined as

below:

"Night blindness, refers to difficulty seeing in low-light conditions or at night. It is not a disease in itself

but a symptom of underlying conditions, mostly related to disorder affecting the retina."

Scientific name:

Nyctalopia is known

as night blindness.

## Symptoms:

Its symptoms are given below:-

- 1) Difficulty or inability to see in dim light or darkness.
- 2) Trouble driving at night due to oncoming headlights.
- 3) Reduced contrast sensitivity in low light conditions.
- 4) Difficulty adapting from bright areas to darker ones.

## Causes:

following are the causes of night blindness:-

- 1) Retinitis Pigmentosa is a genetic condition where the retina deteriorates and cause night blindness.
- 2) Vitamin A deficiency is also a cause of low light vision.
- 3) Cataracts is the clouding of the eye's natural lens which is one of the cause of night

blindness.

3) Myopia can make it more challenging to see in low light.

### Treatment:

Treatments are given below:

- 1) Dietary supplements are used for the treatment of night blindness.
- 2) Corrective lenses are used for treatment of night blindness.
- 3) Avoiding driving at night for those who experience significant impairment.

### 4) Colour blindness:

Colour blindness is defined as:

“The inability or reduced ability to see certain colors or difference in colour. is known as colour blindness.”

- It often affects an individual to distinguish between some shades

shades of red, green, blue or a combination of these.

### Scientific name:-

Scientific term for colour blindness is colour vision deficiency or dyschromatopsia.

### Symptoms:-

Symptoms are given below:-

1) Difficulty distinguishing between colours, typically reds, green, blues or a mix.

2) Seeing many colors as a similar shade.

3) In rare cases, seeing everything in shades of gray.

4) Often, individuals might not be aware they have colour vision deficiency until tested.

### Causes:-

The causes are given below:-

1) Most of the cases are hereditary and are present at birth.

2) Ability to see colour can



diminish with age.

3) Certain diseases such as diabetes, glaucoma, Alzheimer's disease and alcoholism.

### Treatment :-

Treatments are given below :-

1) Coloured contact lenses can help differentiate between colours but won't provide normal colour vision.

2) Glasses with tinted lenses may improve perception of colours.

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