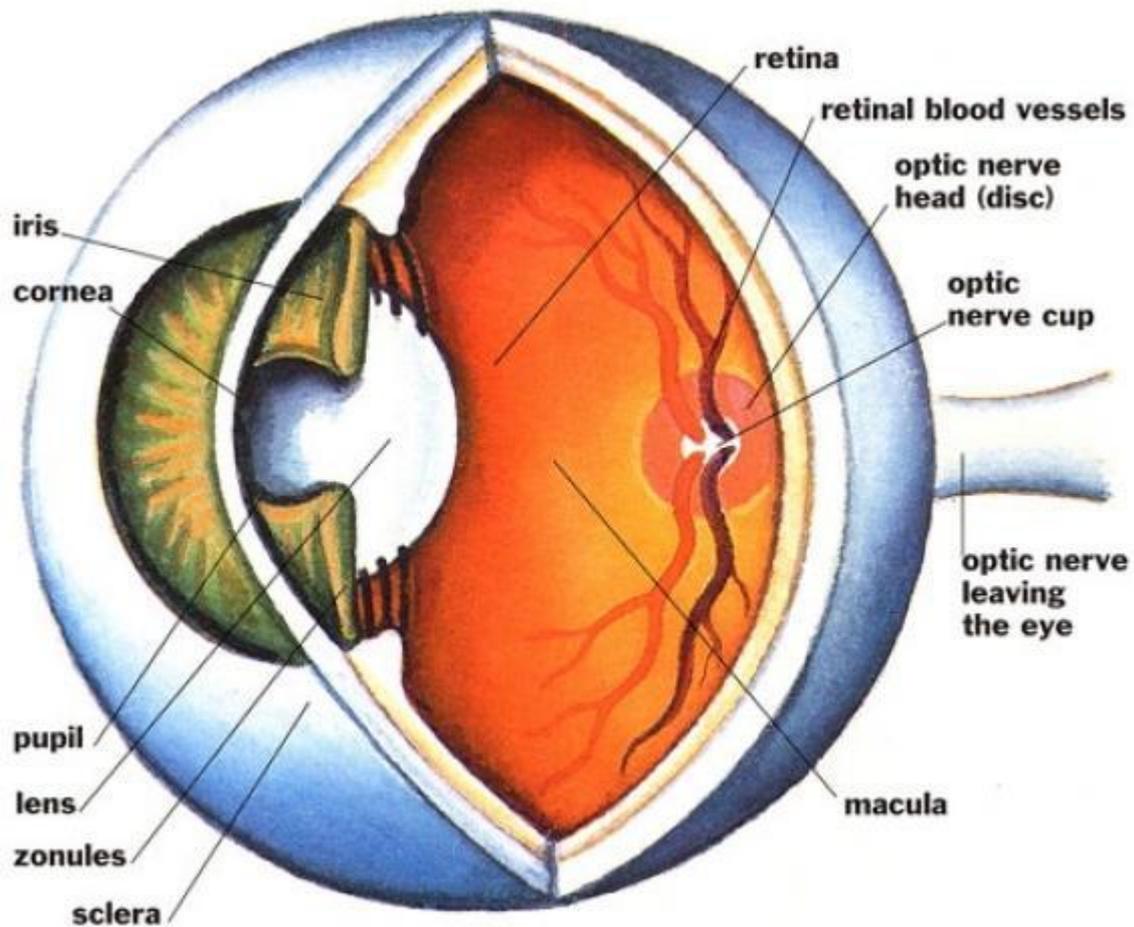


## The Eye



**TABLE SHOWING THE PARTS OF THE EYE AND THEIR FUNCTIONS**

Part of the Eye	Function
Choroid	Contains lots of blood vessels nutritive layer and a black pigment to prevent reflection of light inside the eye.
Sclera	It is made up of tough, white fibrous coat which protects the eyeball.

Retina	It contains light cells called rod and cones.
Iris	The coloured disc composed of muscles which control the amount of light entering the eye.
Optic Nerve	Carries impulses from the retina to the brain
Ciliary Muscle	It alters the shape of the lens during accommodation
Suspensory Ligaments	Attached lens to ciliary body.
Fovea	It contains cones only. The most sensitive part of the retina, most light rays focuses on it.
Lens	Transparent, elastic biconvex structure. It focuses light on the retina.
Pupil	Allows light to enter eyeball
Cornea	Refracts ( bends) light rays onto the retina
Conjunctiva	Protects the cornea

### **ACCOMMODATION**

Accommodation is the process of changing the focal length of the lens. It allows the eye to focus on objects over large range point at which objects can be seen.

#### **Far object:**

1. Ciliary muscles relax
2. Lens is stretched thin

#### **Near object:**

1. Ciliary muscle contract
2. Lens become thick

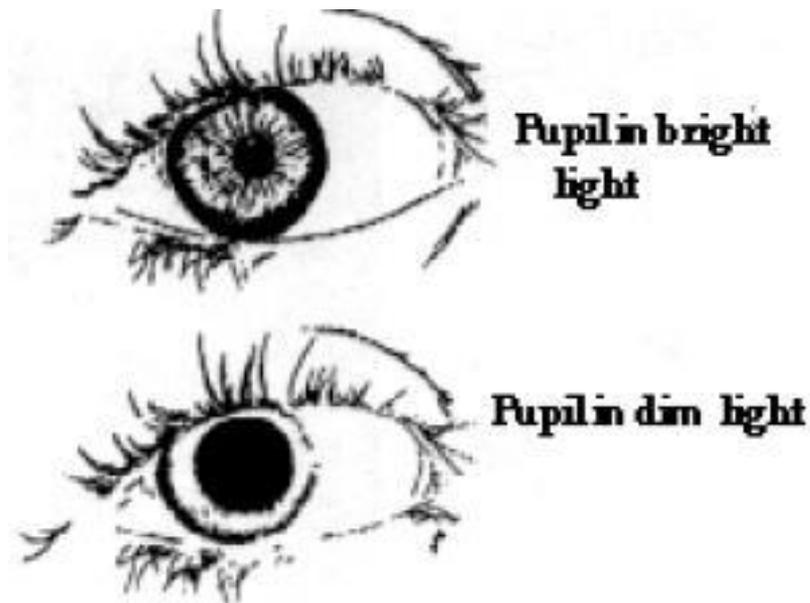
### **CONTROLLING THE AMOUNT OF LIGHT THAT ENTERS THE EYE**

#### **Dim Light**

1. Radial muscles contract
2. Circular muscle relax
3. Pupil gets bigger to increase the amount of light that enters the eye

### **Bright Light**

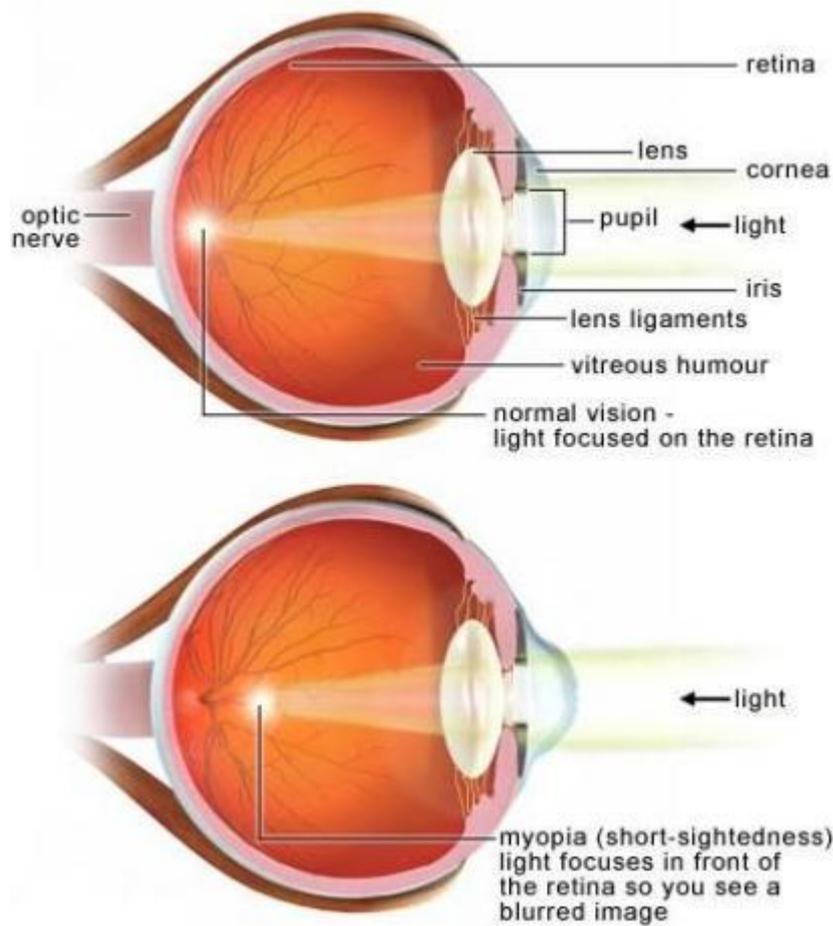
1. Radial muscle relax
2. Circular muscle contract
3. Pupil decreases in size allowing only a small amount of light to enter the eye



### **DEFECTS OF THE EYE**

#### **Short- Sightedness or Myopia**

In this condition the cornea is too sharply curved or the eyeball is too long. When a person has short sight, light from a distant object is focused in front of the retina. A diverging lens (concave lens) is used to correct this eye defect.

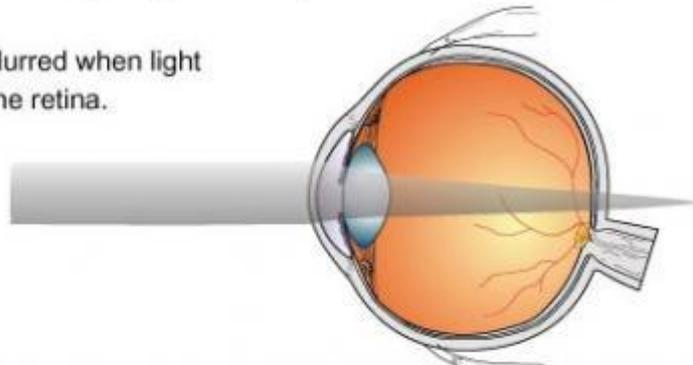


### **Long- Sightedness or Hypermetropia**

When a person is long-sighted, light from nearby objects is focused behind the retina. This occurs when the eyeball is too short or the lens is too flat. A converging lens (convex lens) is used to correct this eye defect.

## Hyperopia (farsightedness)

Distance vision is blurred when light rays focus behind the retina.



Correction with a plus lens allows light to once again focus on the retina.

