
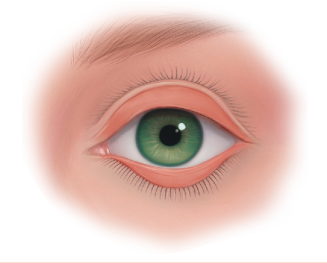
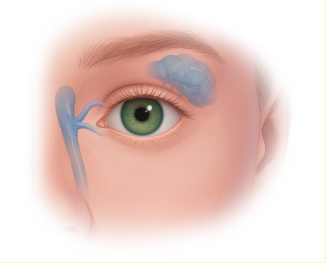
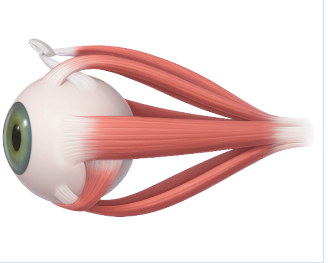


## CONCEPT: OVERVIEW OF THE EYE

### Introduction to the External Eye Structures

- ◆ **Special Senses:** Parts of nervous system with sensory \_\_\_\_\_ concentrated in a specific organ.
  - Sensory receptors for vision are concentrated \_\_\_\_side the eye.
- ◆ In addition to the eye, \_\_\_\_\_ structures also play important roles in vision.

1. Eyelids & Eyelashes	2. Conjunctiva	3. Lacrimal Apparatus	4. Eye Muscles
			
<ul style="list-style-type: none"><li>◆ _____ barriers.</li><li>◆ Sebaceous glands lubricate eye surface.</li></ul>	<ul style="list-style-type: none"><li>◆ Protective _____ membrane.</li><li>◆ Cover underside of eyelids &amp; anterior of eyeball.</li></ul>	<ul style="list-style-type: none"><li>◆ _____ glands &amp; related structures.</li><li>◆ Wash &amp; lubricate eyes.</li></ul>	<ul style="list-style-type: none"><li>◆ ____ skeletal muscles, connect eyeball to skull.</li><li>◆ Control eye movement.</li></ul>

### EXAMPLE

Identify each of the following statements as true (T) or false (F).

a) ____	Six smooth muscles attach eyeball to the skull and control eye movement.
b) ____	Conjunctiva is a mucous membrane that lines the underside of eyelids and anterior of eyeball.
c) ____	Eyelids and eyelashes are physical barriers that protect the eyes against foreign particles and injuries.
d) ____	Lacrimal glands provide chemical protection to the eyes by forming a fatty layer on the eyeball.

## CONCEPT: OVERVIEW OF THE EYE

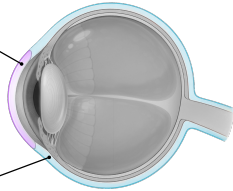
### Structure of the Eyeball

♦ **Eyeball:** Globe-shaped (fluid-filled) organ having \_\_\_\_ layers.

#### 1. Outer Layer

Cornea

Sclera



- ♦ Structure, protection, and \_\_\_\_\_ attachments.
- ♦ **Cornea:** Transparent anterior portion of outer layer, helps bend light rays.
- ♦ **Sclera:** \_\_\_\_\_ of the eye, provides a tough coating.

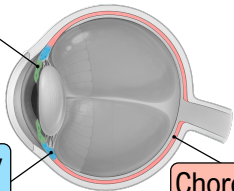
#### Memory Tool

Cornea i \_\_\_\_.

#### 2. Middle Layer

Iris

Ciliary Body



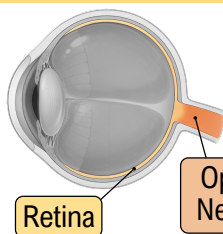
Choroid

- ♦ Also known as \_\_\_\_\_, controls light & blood supply.
- ♦ **Iris:** Colored membrane with opening at its center (\_\_\_\_) controls amount of light.
- ♦ **Ciliary Body:** Extension of the iris holds the \_\_\_\_\_ & produces aqueous humor.
- ♦ **Choroid:** Pigmented \_\_\_\_\_ layer, prevents internal light reflection.

#### Memory Tool

Iris \_\_\_\_ Colored.

#### 3. Inner Layer



- ♦ **Retina:** Contains \_\_\_\_\_ receptor cells.
  - **Rods:** Respond to \_\_\_\_\_ light, help to see in gray tones.
  - **Cones:** Respond to \_\_\_\_\_ light, responsible for color vision.



♦ **Optic Nerve:** Extends out from retina, transmits visual information to the \_\_\_\_\_.

## **CONCEPT: OVERVIEW OF THE EYE**

### **EXAMPLE**

Use the words in the word-bank to fill in the blanks and complete the sentences.

**Word-Bank:** Iris      Light      Sclera      Uvea      Brain      Retina

The \_\_\_\_\_ in the outermost layer of the eyeball provides shape & protection. \_\_\_\_\_ in the uvea is responsible for eye color and controls the amount of \_\_\_\_\_ that enters the eye. Photoreceptors in the \_\_\_\_\_ convert light stimulus to nerve impulses and transmit them to the \_\_\_\_\_ for interpretation.

### **PRACTICE**

Which of the following is the correct order of the light's path in the eye?

- a) Cornea → Iris → Sclera → Retina
- b) Cornea → Iris → Lens → Retina
- c) Cornea → Pupil → Lens → Retina
- d) Cornea → Sclera → Lens → Retina