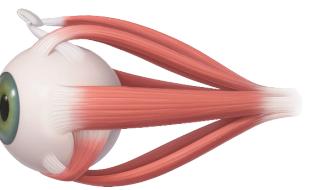


CONCEPT: OVERVIEW OF THE EYE

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
			

1. Eyelids & Eyelashes

- ◆ _____ barriers.
- ◆ Sebaceous glands lubricate eye surface.

2. Conjunctiva

- ◆ Protective _____ membrane.
- ◆ Cover underside of eyelids & anterior of eyeball.

3. Lacrimal Apparatus

- ◆ _____ glands & related structures.
- ◆ Wash & lubricate eyes.

4. Eye Muscles

- ◆ ___ skeletal muscles, connect eyeball to skull.
- ◆ Control eye movement.

EXAMPLE

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

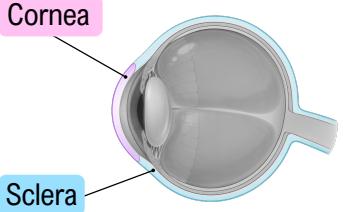
a) _____	Six smooth muscles attach eyeball to the skull and control eye movement.
b) _____	Conjunctiva is a mucous membrane that lines the underside of eyelids and anterior of eyeball.
c) _____	Eyelids and eyelashes are physical barriers that protect the eyes against foreign particles and injuries.
d) _____	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



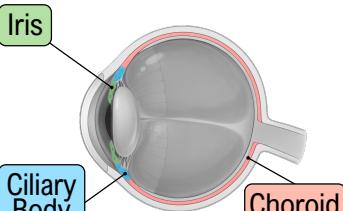
Cornea
Sclera

- ◆ 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



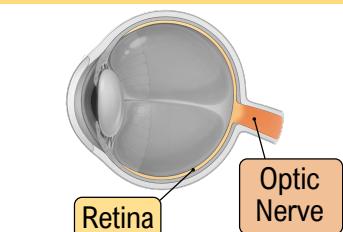
Iris
Ciliary Body
Choroid

- ◆ 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
Optic Nerve

- ◆ **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