

TOPIC: VASCULAR LAYER

- *Recall:* Vascular layer is the _____ layer of the eye; also called the **uvea**.
 - Regulates _____ & supplies blood.

Iris: colored region around pupil.

Comprised of:

- _____: control size of pupil.
- Pigmented _____ fibers: block light.

Pupil: _____ where light enters.

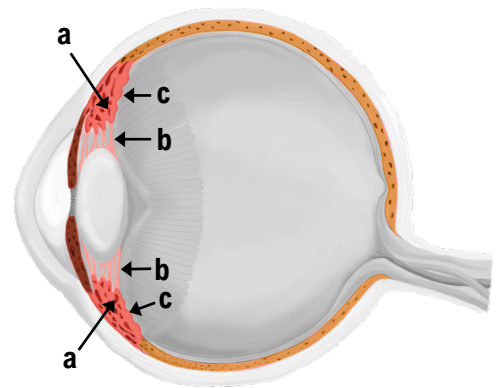


Ciliary Body: suspends the lens and produces fluid.

- Ciliary Muscles:** control lens' _____—focuses light.
- Ciliary Zonules (Suspensory Ligaments):** connect the _____ to the ciliary muscles.
Zonule = Latin for belt
- Ciliary Processes:** _____ fluid for the _____ portion of the eye.

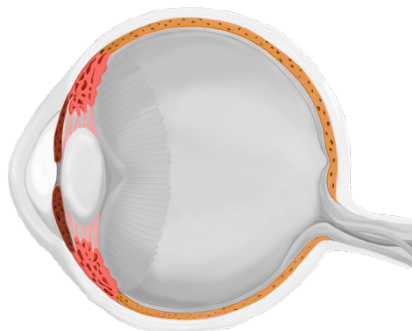
Choroid: _____ membrane.

- Prevents _____.
- Rich in blood vessels.



EXAMPLE: The table below lists the three parts of the vascular layer. How does each component help regulate or control the light coming into the eye?

Iris	Choroid	Ciliary Body
_____	_____	_____
_____	_____	_____



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PRACTICE: The aqueous humor is the fluid that fills the anterior portion of the eye between the lens and the cornea. This fluid is constantly regenerated and drains out through the *scleral venous sinus*. If the scleral venous sinus is blocked, aqueous humor can accumulate, putting pressure on the structures of the eye. Which structure of the vascular layer is responsible for producing the aqueous humor?

- a) Iris.
- b) Choroid.
- c) Ciliary Body.
- d) Ciliary Process.

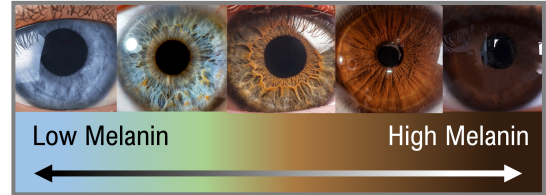
PRACTICE: Which structure(s) of the middle layer contains muscles?

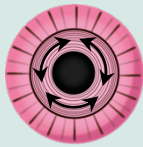
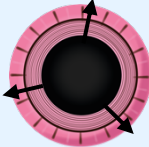
- a) Choroid & iris.
- b) Choroid & ciliary body.
- c) Iris only.
- d) Iris & ciliary body.

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Control of Light Entering the Eye

- Light enters through the pupil – _____ in the center of the iris.
- The color of the iris comes from _____.
 - More pigment = brown eyes.
 - Less pigment = _____ or _____ eyes.
- Changing the size of the pupil changes the amount of light coming into the eye.



Action	Muscle	Shape	Contracts for	Innervation	Emotional states
Constriction of Pupil	Pupillary Constrictor		Bright lights _____ vision	_____	Boredom _____ sight
Dilation of Pupil	Pupillary Dilator		_____ lights Distant vision	_____	_____ Desire Problem solving

EXAMPLE: Imagine that you are waking up from a nap in a dark room with heavy curtains drawn. You walk to the window and open the curtains, letting direct sunlight flood the room. Describe how the muscles of the iris would respond to the two light environments described.

Darkened Room:

- Contracted muscle: _____
- Relaxed muscle: _____
- Size of pupil: _____

Room with Sunlight:

- Contracted muscle: _____
- Relaxed muscle: _____
- Size of pupil: _____

PRACTICE: Which of the following would increase the total amount of light coming into the eye?

- a) Activation of the parasympathetic nervous system.
- b) Looking at something close to the face.
- c) Resting.
- d) Feelings of rage.

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PRACTICE: True or False: if false, choose the answer that corrects the statement.

Pupils enlarge when the pupillary dilators contract after receiving stimuli from the parasympathetic nervous system.

- a) True.
- b) False; pupils enlarge when the pupillary dilators contract after receiving stimuli from the sympathetic nervous system.
- c) False; pupils enlarge when the pupillary constrictors contract after receiving stimuli from the parasympathetic nervous system.
- d) False; pupils enlarge when the pupillary constrictors contract after receiving stimuli from the sympathetic nervous system.