

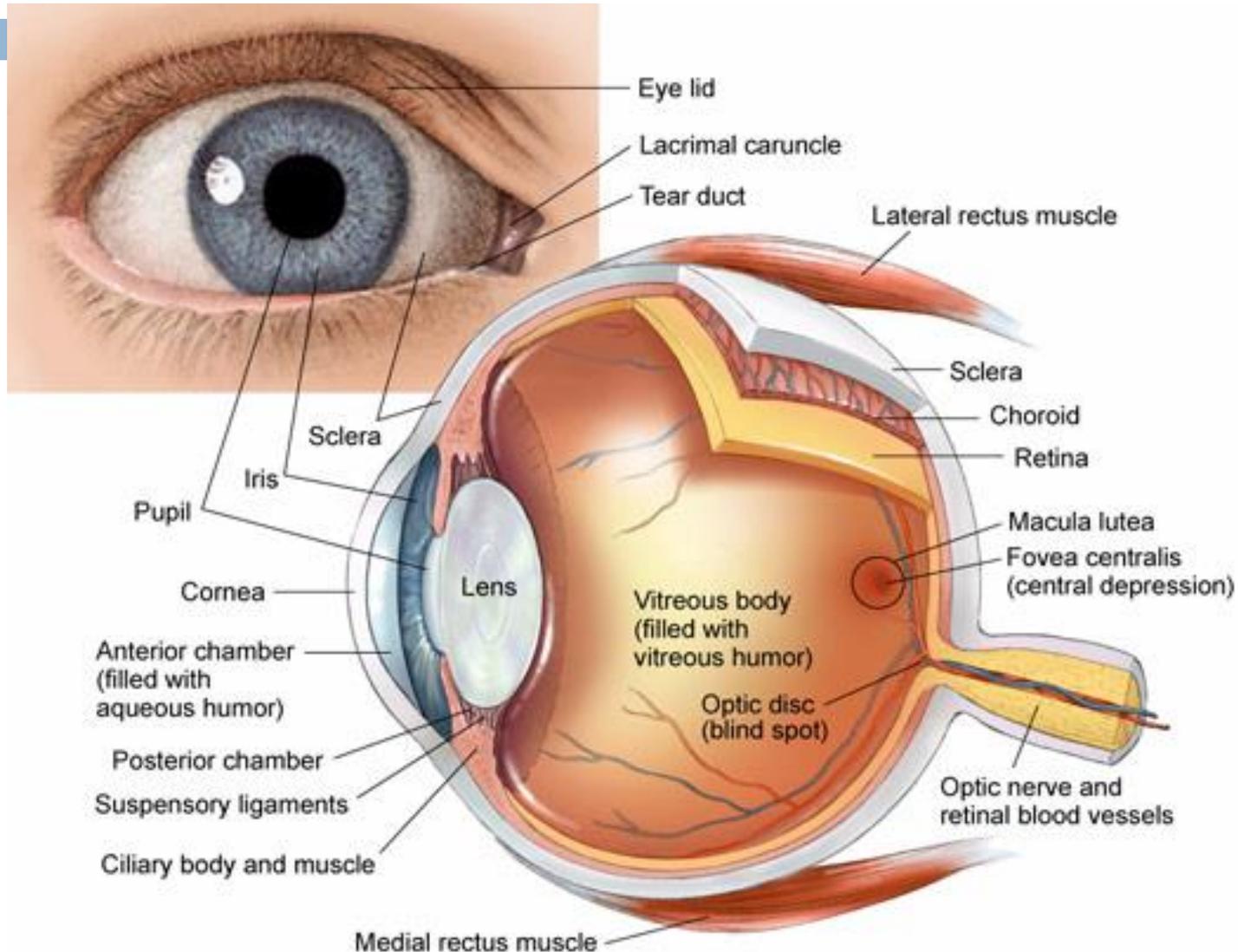
Sensory System II – Eye Anatomy 2



Review from Last Class



Inside of the eye

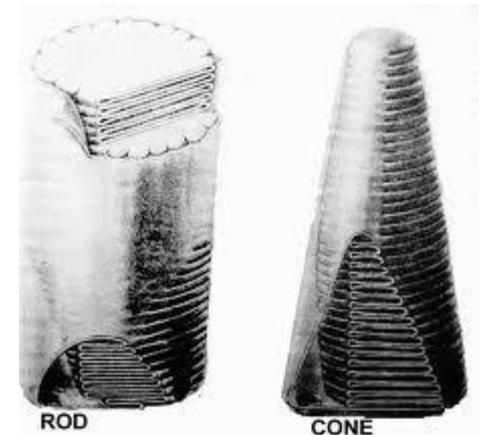
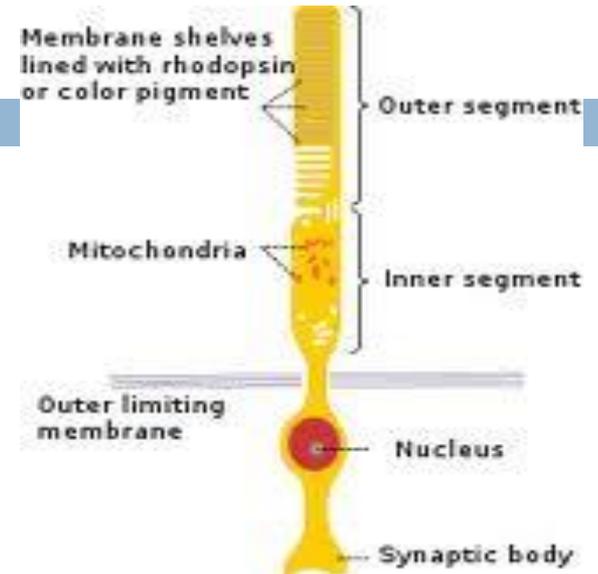


Right Eye (viewed from above)

Rods & Cones

□ Rods

- Sensitive to low light, movement
- Contain rhodopsin (pigment)
 - Rhodopsin is made from vitamin A (eat your carrots!)
- 125,000,000 rods in each eye

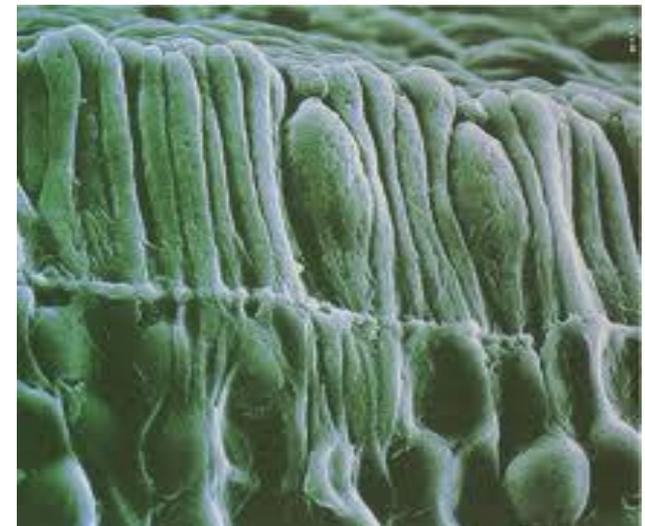
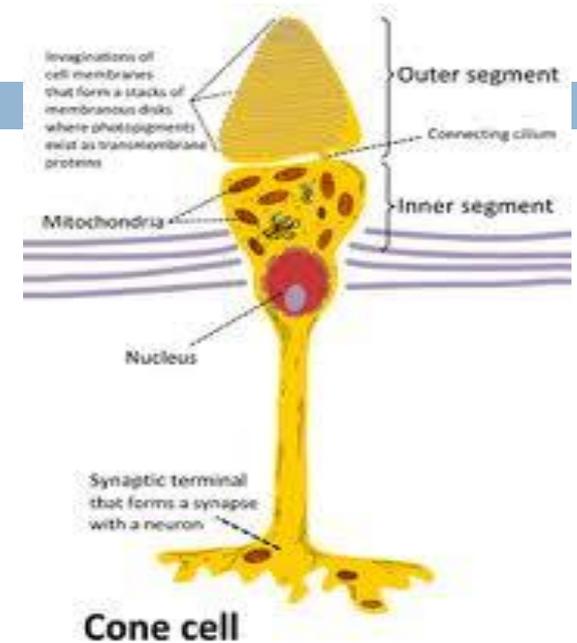


Rods & Cones

□ Cones

- Sensitive in bright light
- Detect colour, detail of image
- Three kinds of cone: cyan, green, magenta
- Concentrated behind the pupil in an area called the Macula. In the middle is a yellow spot called the Fovea. This is where your vision is most acute.

Cones = Colour

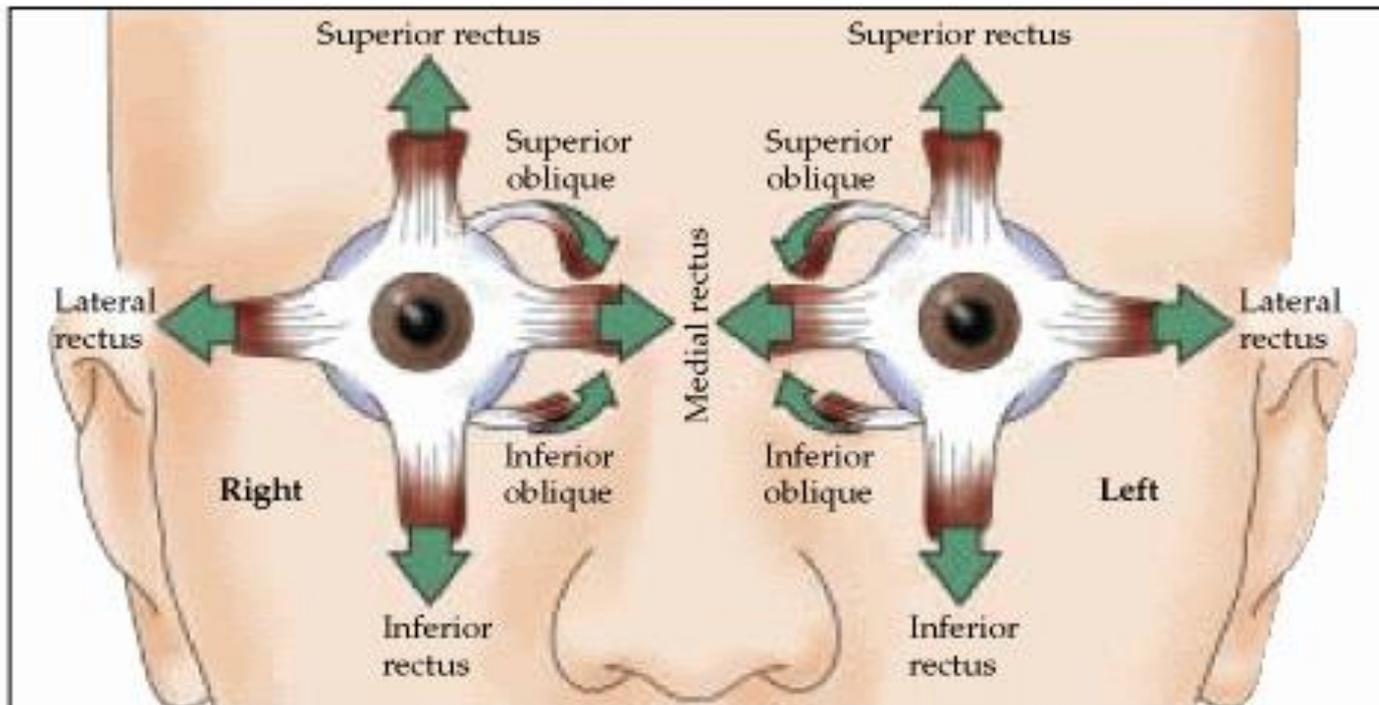


Eye muscles

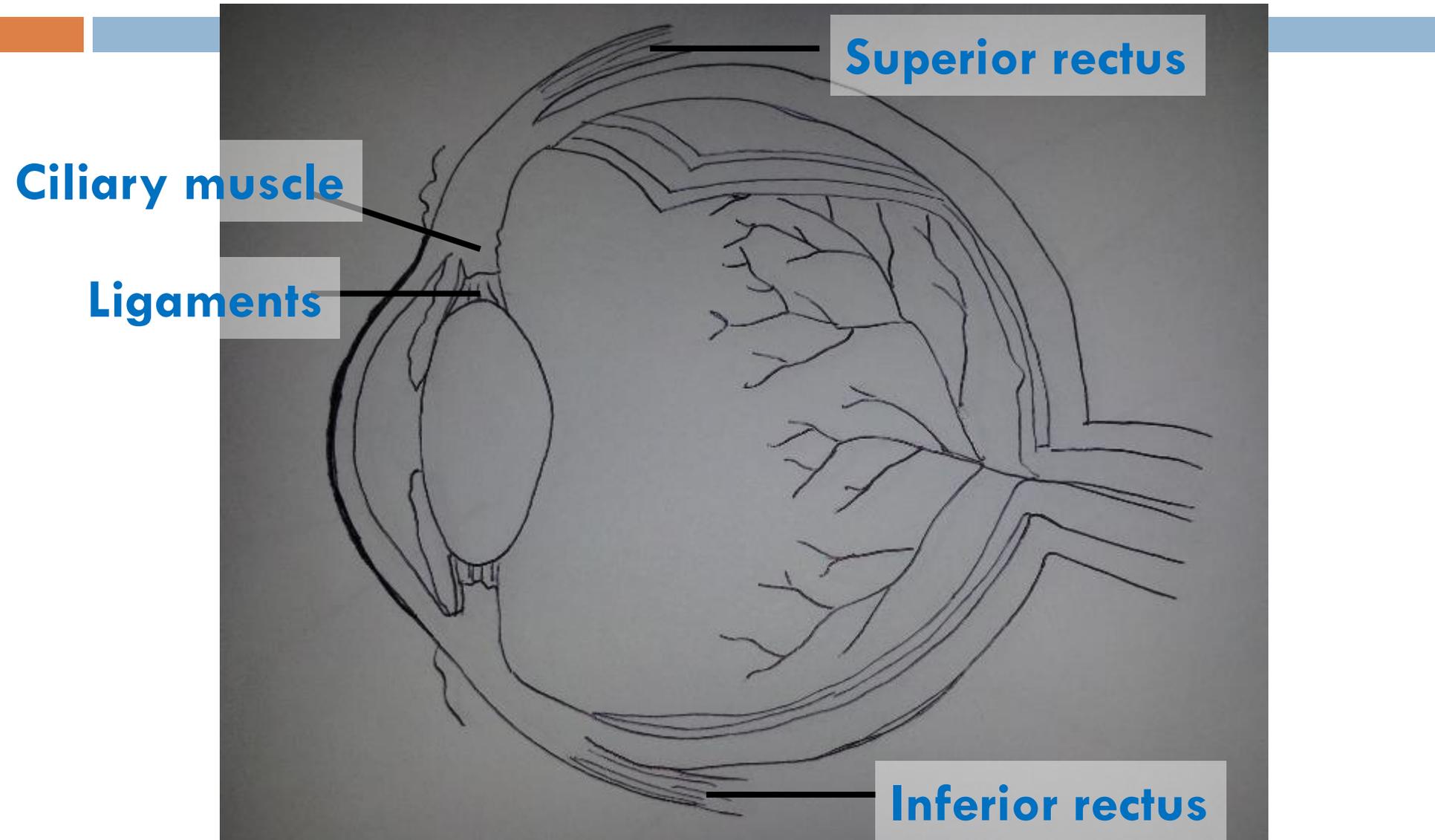


Eye muscles

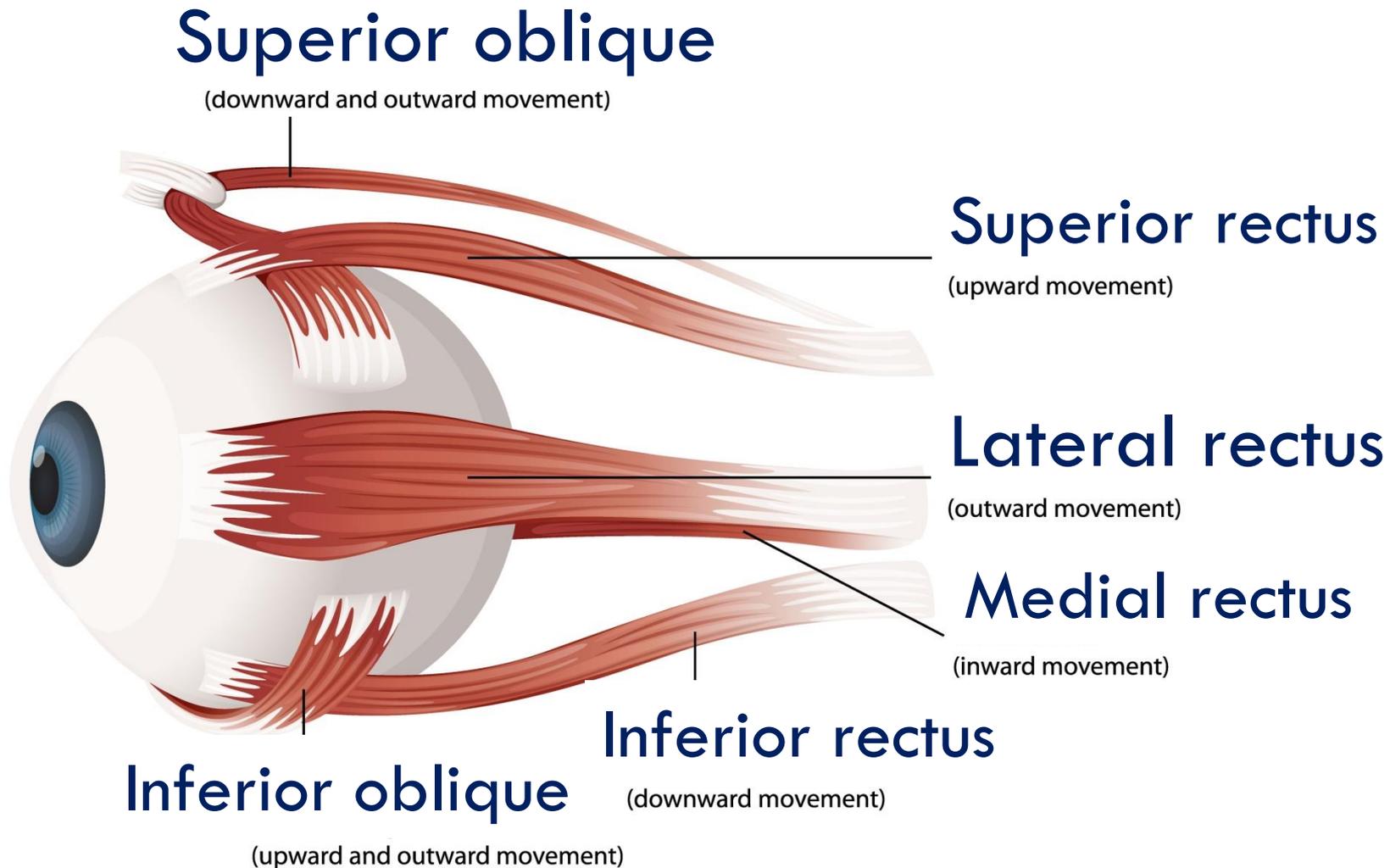
- Eye muscles **contract** and **relax** to move the eye and the lens
 - We will revisit the lens when we talk about vision



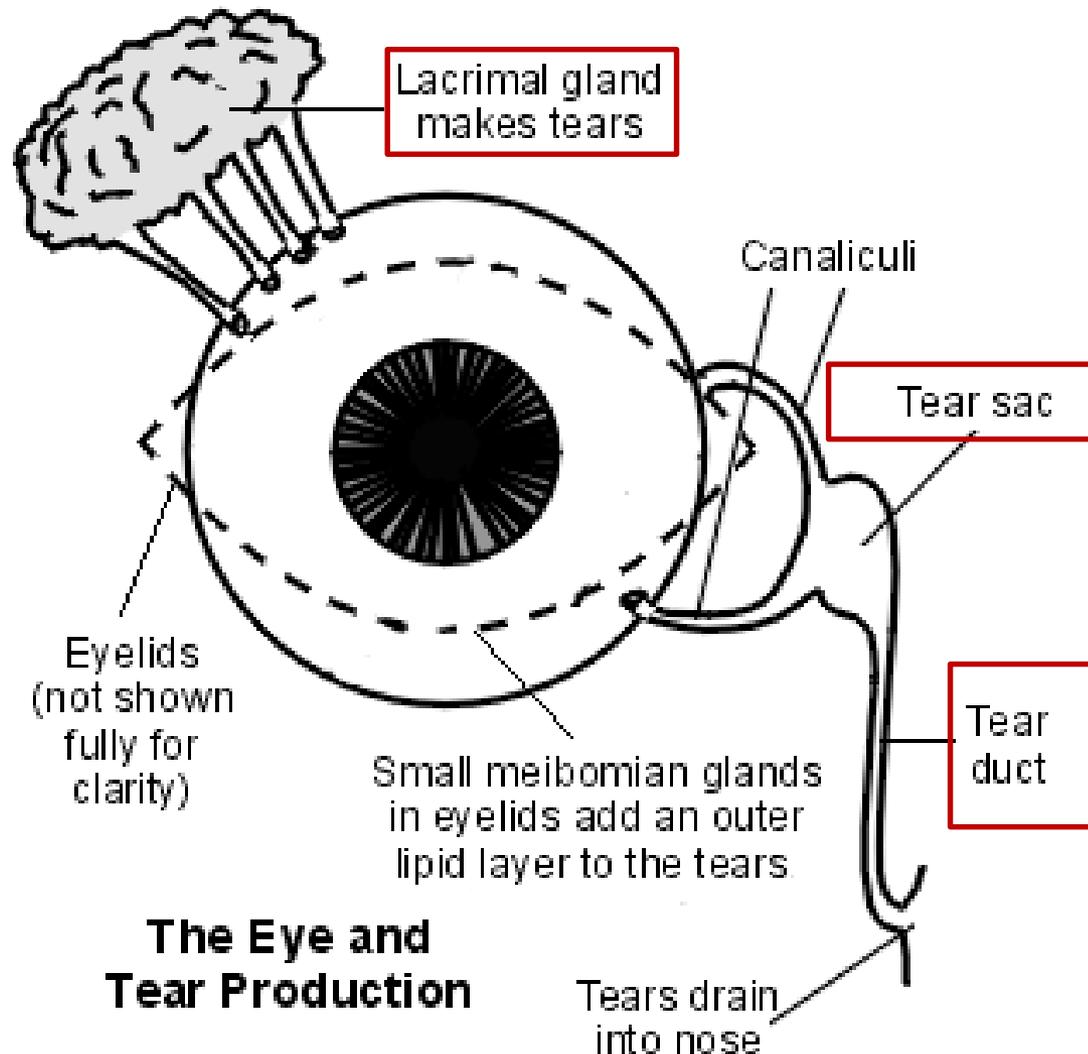
Intrinsic Eye Muscles (inside eyeball)



Extrinsic Eye Muscles (outside eyeball)



Protection of the eye



Auxiliary Structures

These structures help protect the eye:

- **Eyelids & Eyelashes**
 - Protect the eye from foreign materials like dust & dirt
 - Also protect the eye from bright light
 - Blinking also helps spread tears to keep your eye moist and comfortable

Auxiliary Structures

These structures help protect the eye:

□ Eyebrows

- Also believed to help keep sweat, water and other debris from falling into the eye
- Also important in human communication
 - Facial expressions!



Auxiliary Structures

- Lacrimal tear glands
 - Produce tears that keep eyes moisturized
 - Tears protect the eyes from irritants and infection
 - Have antibacterial properties
 - Also wash out foreign bodies

Auxiliary Structures

- Lacrimal tear glands
 - ▣ Transport oxygen and nutrients to surface of the eye (no blood vessels)
 - ▣ Tears allow for light to be refracted (bent) properly so we can see!
- Tear sac and tear ducts
 - ▣ Collect the extra tears and drain them into the nose