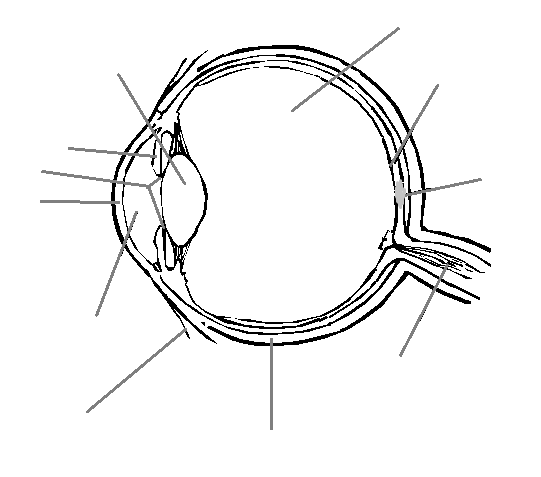
# Notes: Eye Anatomy

**The eye:** is the related to vision

* Picks up light rays by light sources or by objects
* This is how we see!



## Sclera

* \_ , & outer layer
* Gives the eye a shape
* \_
* Provides a place to attach the muscles

## Cornea

* Here the sclera becomes like a window
  + It bulges out slightly in front
* The anterior (front) chamber is filled with a liquid called
  + It’s clear and watery and the cornea

## Choroid

* Dark and pigmented of the eye
  + Very thin
* Contains a lot of that nourish the eye
* Prevents light from inside the eye
* In some animals there is a bright strip called the
  + It’s found in nocturnal animals. It catches the light and shines it back through the retina.
* That’s why animals eyes glow in your headlights

## Iris

* The of your eye
  + It’s derived from the
* It controls the entering the eye
* It has two sets of 
  + One the inner ring of the iris
  + One  the inner ring

## Pupil

* The pupil is the 
  + This is where
  + It appears because the inside of the eye 
    - Like looking inside

## Lens

* Is
* It is behind the pupil
* It is held by
* Controlled by 
  + They make the lens fatter or thinner
    - This focuses the image on the retina

## Retina

* Innermost layer
* Very , like wet tissue paper
* Contains
  + They respond to light (convert light to )
  + Transmit a **nerve impulse** to the brain
  + Two types of receptor cells:
    - and

### Rods

* Sensitive to  **and** 
  + Important for
* Contain (pigment)
  + Rhodopsin is made from vitamin A (eat your carrots)
* 125,000,000 rods in each eye

### Cones

* Sensitive in
* Detect ,
* Three kinds of cones:  **, ,**
* Concentrated behind the pupil in an area called the .
  + This is where your vision is most  **.**

**Cones and Rods**

* + We have many than cones (about 20x!)
  + The  are relatively across the retina but the are really concentrated in the

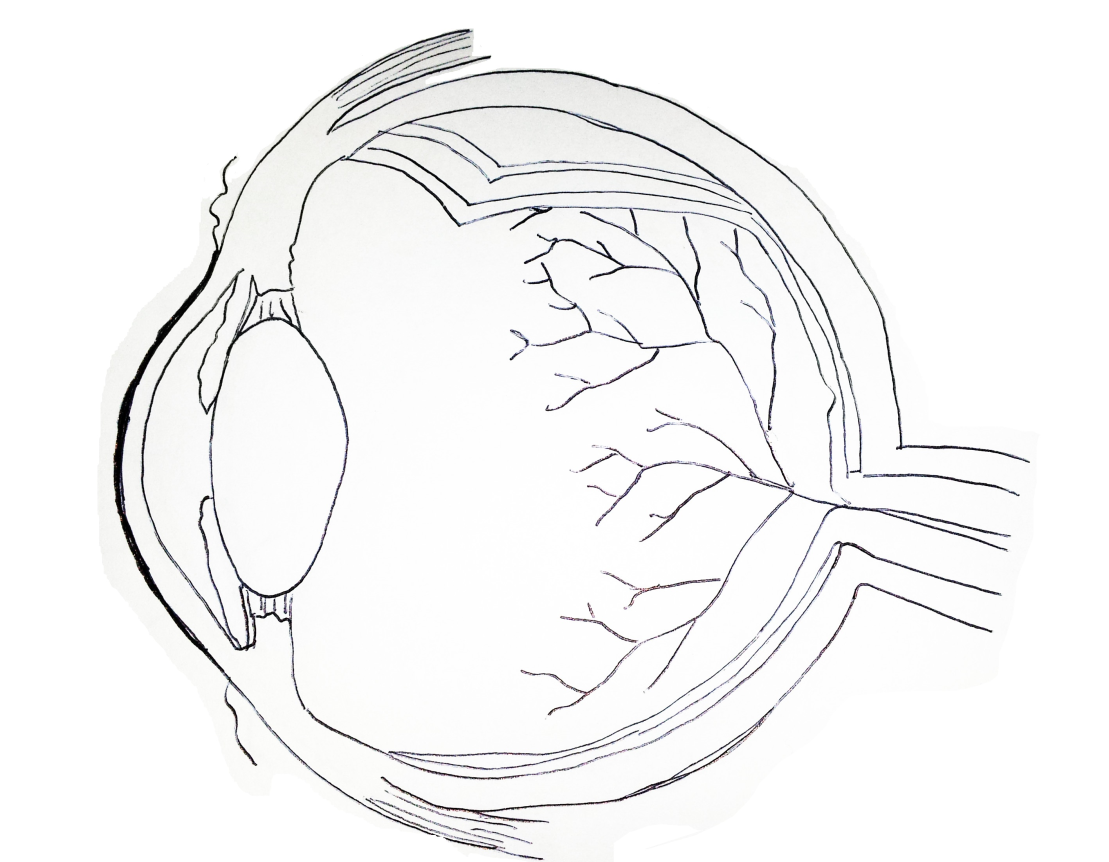
**Blind spot**

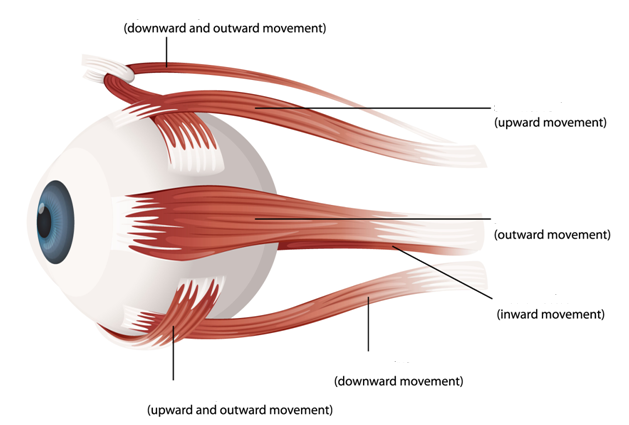
* there is also a part of the retina that has 
  + This is where the \_\_\_\_\_\_\_is attached to the
  + Because there are there, if light hits this part of the retina you

## Eye muscles

Eye muscles and to move the eye and the lens.

**Intrinsic Eye Muscles**





**Extrinsic Eye Muscles**

## Protection of the Eye – Auxiliary Structures

**Eyelids & Eyelashes**

* Protect the eye from like dust & dirt
* Also protect the eye from
* Blinking also helps to keep your eye moist and comfortable

**Eyebrows**

* Also believed to help keep , and other debris from falling into the eye
* Also important in human (think facial expressions)

**Lacrimal tear glands**

* Produce tears that keep eyes
* Tears protect the eyes from and
  + Have properties
  + Also foreign bodies
* Transport and to surface of the eye (no blood vessels)
* Tears allow for light to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ properly so we can see!

**Tear sac and tear ducts**

* \_ the extra tears and them into the nose