# 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