

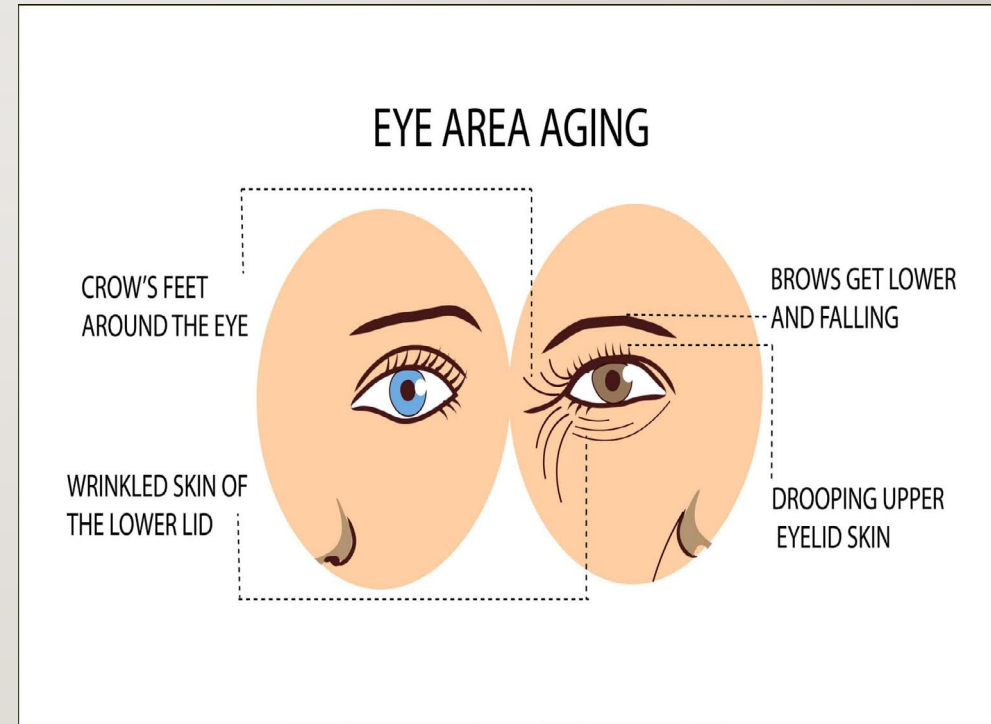
CHANGES TO VISION AS WE AGE AND BEYOND

HOW'S YOUR VISION? ARE YOU DRIVING IN THE DARK?
HOW CLOSE DO YOU HAVE TO GET TO THAT SCREEN?



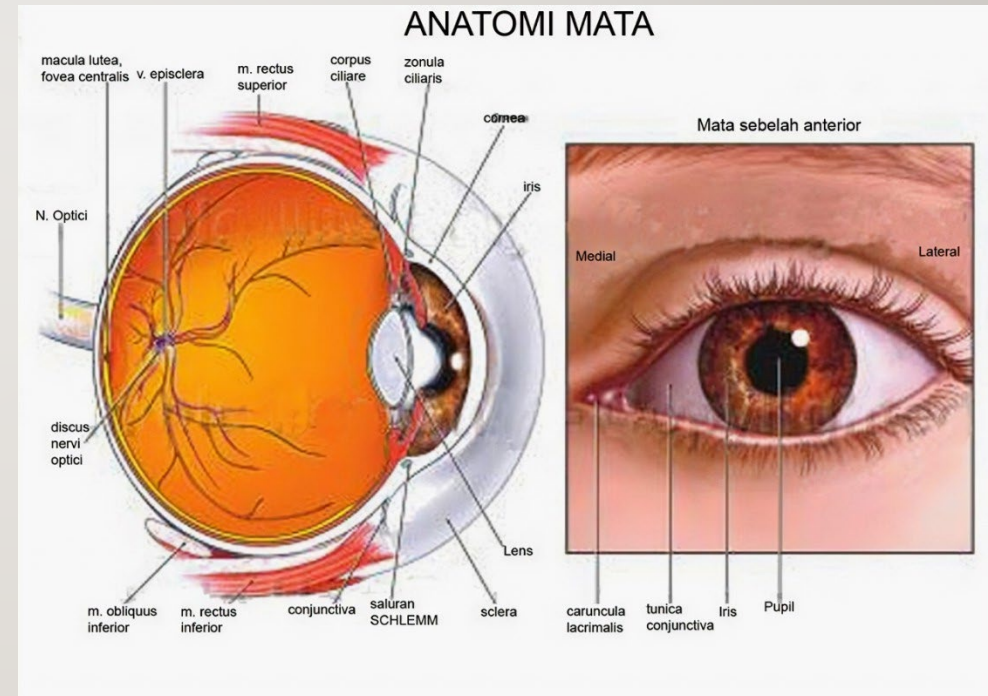
IS THE ASSUMPTION THAT AS WE AGE WE BECOME BLIND AS A BAT? NOT NECESSARILY!

- There are changes with aging, especially outward appearances.
- We start to lose the ability to see close up
- We begin to have trouble distinguishing colors, such as blue and black
- We need more time to adjust to varying levels of light.



WHAT ARE SOME OF THE COMMON AGE RELATED EYE CONDITIONS?

- Presbyopia (literally “old eye”)
- Glaucoma (increased IOP that can damage the optic disc and optic nerve)
- Dry-Eyes
- Macular Degeneration-age related
- Cataracts



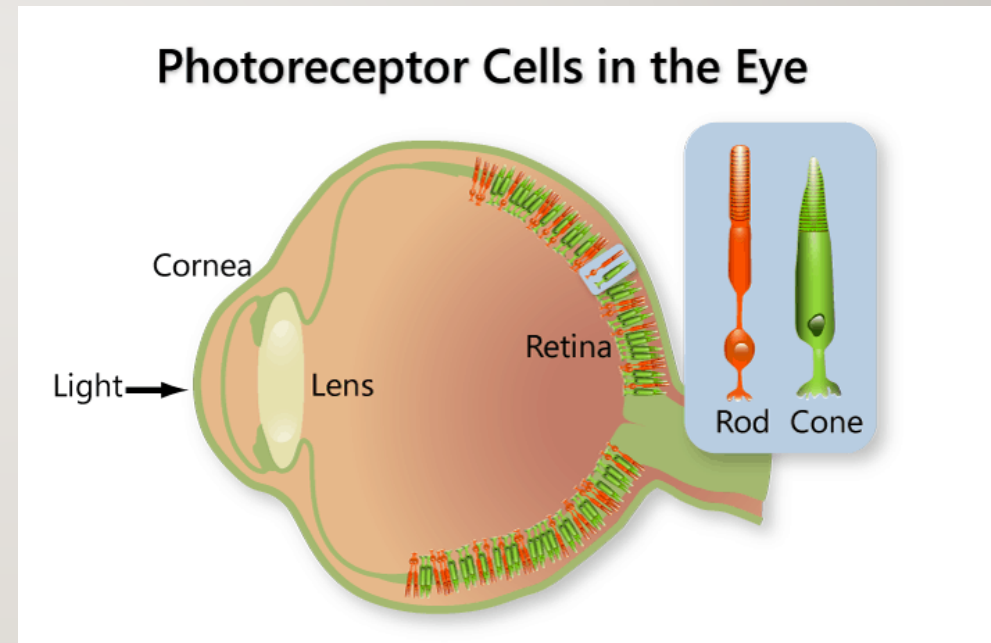
SELF-REGULATING AND EYESIGHT AS WE AGE: DRIVING A CAR AT NIGHT

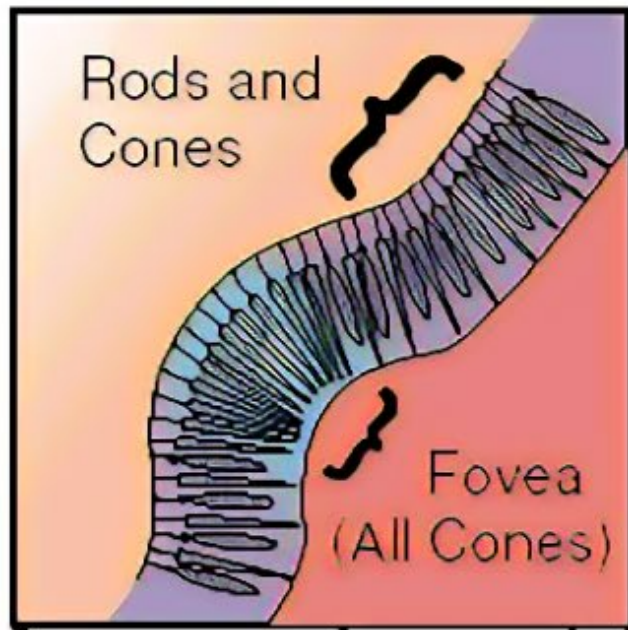
- Driving at night, even for the best driver is challenging and at least half of our car accidents occur at night (National Security Council)
- Self-regulating means taking yourself out of risky situations, including driving a night as we age. A common safety choice (Driving in the Dark: AARP, Oct/Nov 2023)



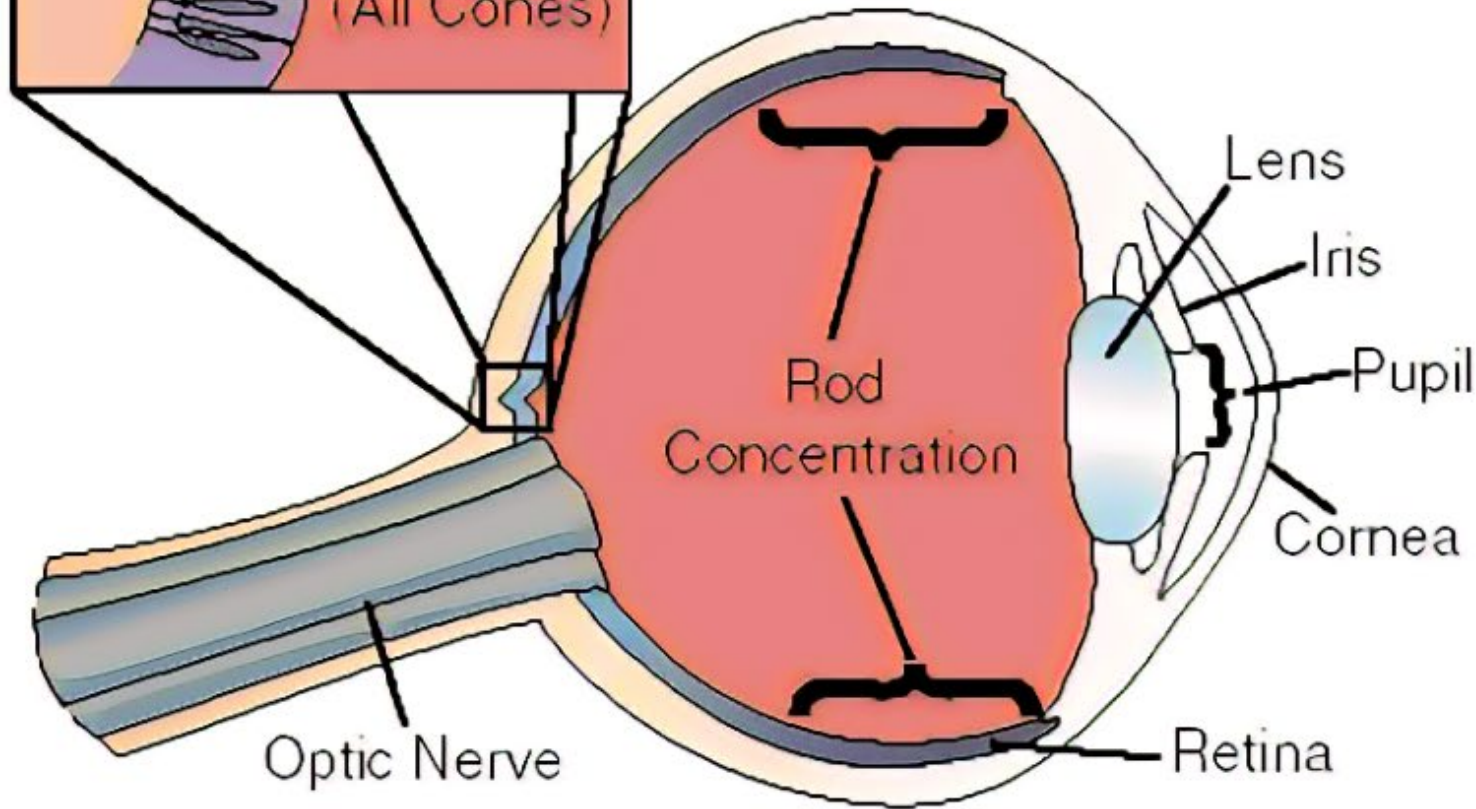
HOW DO WE SEE LIGHT AND COLOR?

- We are born with two types of photoreceptors: rods and cones.
- In the daylight we primarily use cones, structures that help us to see color.
- With the onset of night we use a mixture of rods and cones, but in very low light we primarily use rods to see and that is why things appear black and white in the dark. Rods are lost as we age, long before we lose cones. Why night vision is less acute.





The **rods** and **cones** (film) of the **retina** are the receptors which record the image and transmit it through the **optic nerve** to the brain for interpretation.

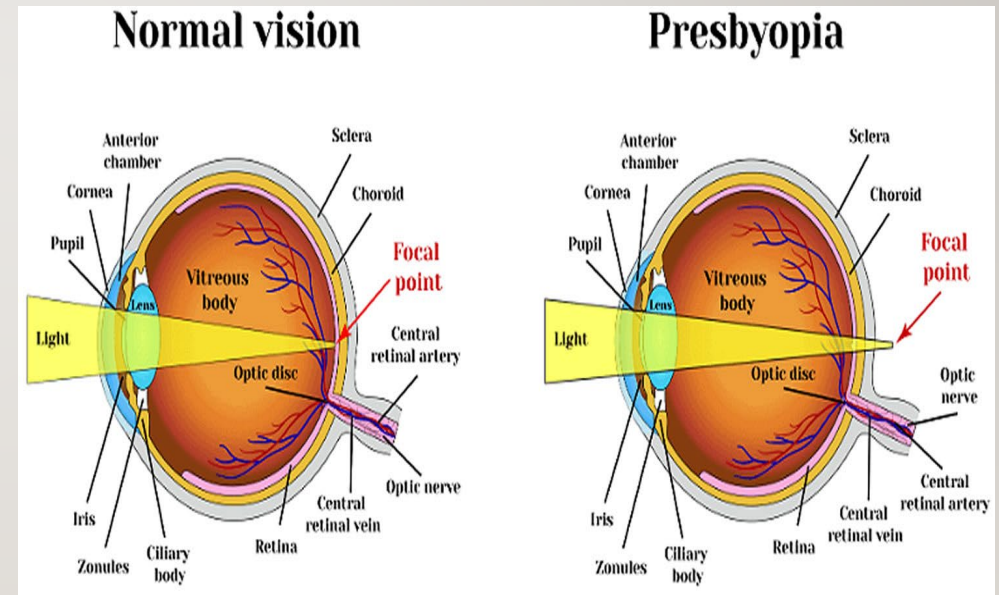


The **pupil** (aperture) is the opening at the center of the **iris**. The size of the pupil is adjusted to control the amount of light entering the eye.

Light passes through the **cornea** (the transparent window on the front of the eye) and then through the **lens** to focus on the retina.

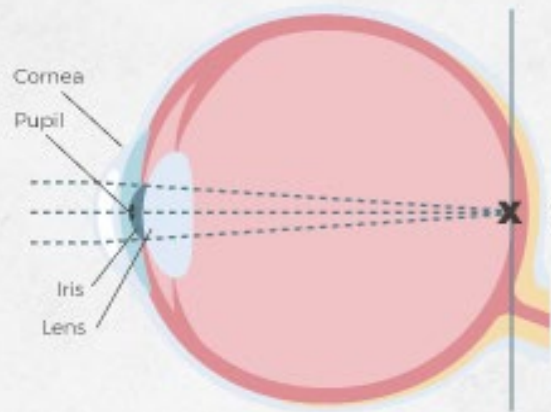
WHAT IS PRESBYOPIA? LITERALLY TRANSLATED: OLD EYES

- **Presbyopia**: An age related farsightedness resulting from changes in the lens of the eye. The lens becomes hardened and less flexible to changes in vision from closer to further away. Onset is around 40 and usually reaches its peak at about 65. This condition is so common that 100% of us deal with it after Age 40.



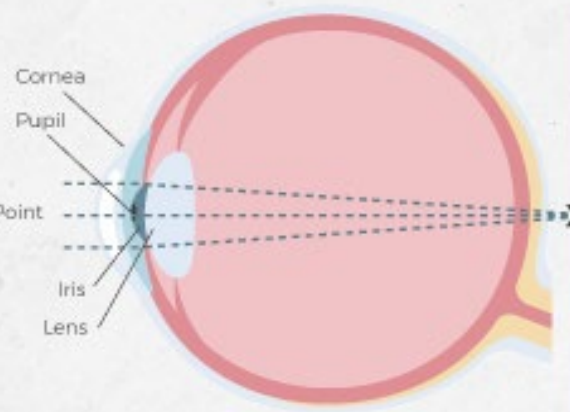


NORMAL VISION VS. HYPEROPIA & PRESBYOPIA



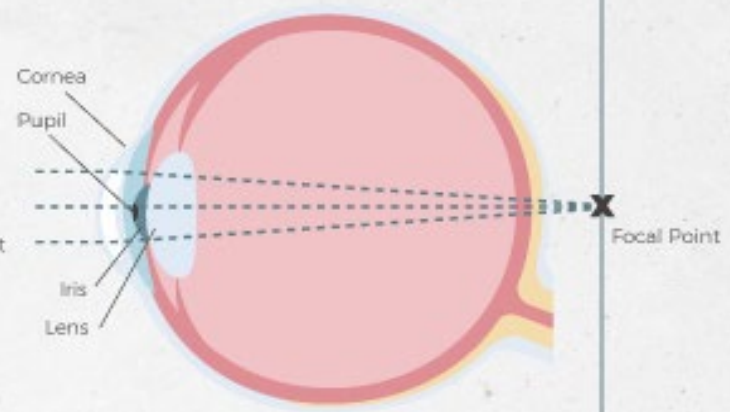
NORMAL VISION

With normal or 20/20 vision, light focuses directly on the retina's focal point.



HYPEROPIA

Hyperopia is usually present at birth and occurs due to the shape of the eye, either a flat cornea or a short eyeball.

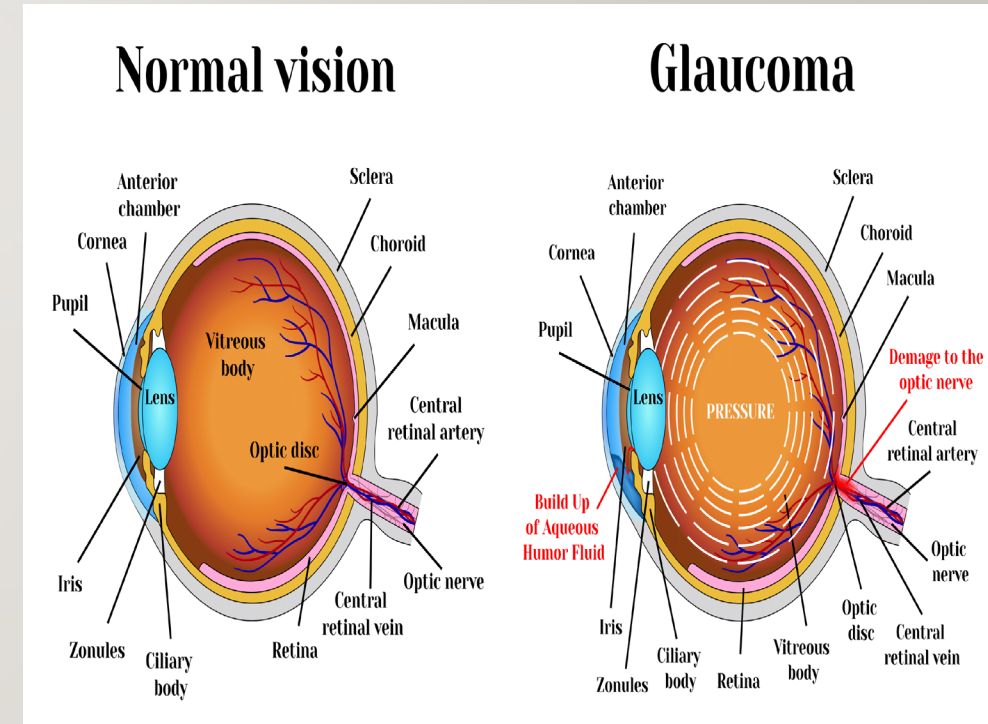


PRESBYOPIA

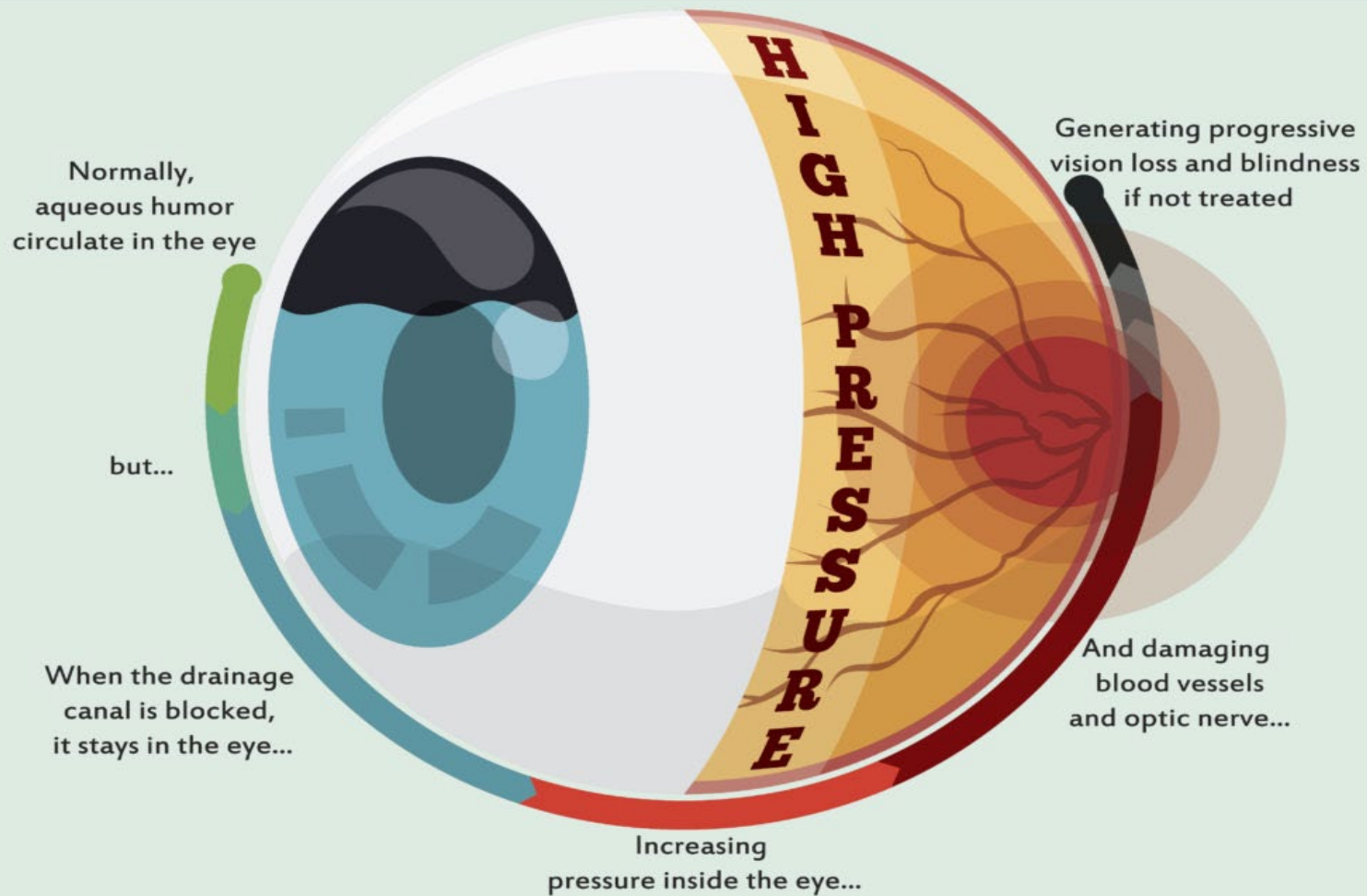
As you age, the eye's lens loses its ability to focus on nearby objects, causing them to appear blurry.

GLAUCOMA: WHAT IS THIS CONDITION THAT IS FAIRLY COMMON? DO CLOUDS GET IN YOUR EYES?

- **Glaucoma:** This condition can occur at any age, but is most common in older adults. IT is one of the leading causes of blindness in adults over 60.
- Glaucoma often has few red flag warning signs. Some of the warning signs overlap other eye conditions. In late stages the changes are quite apparent. This is why annual exams are necessary to detect any visual changes and monitor chronic eye conditions.

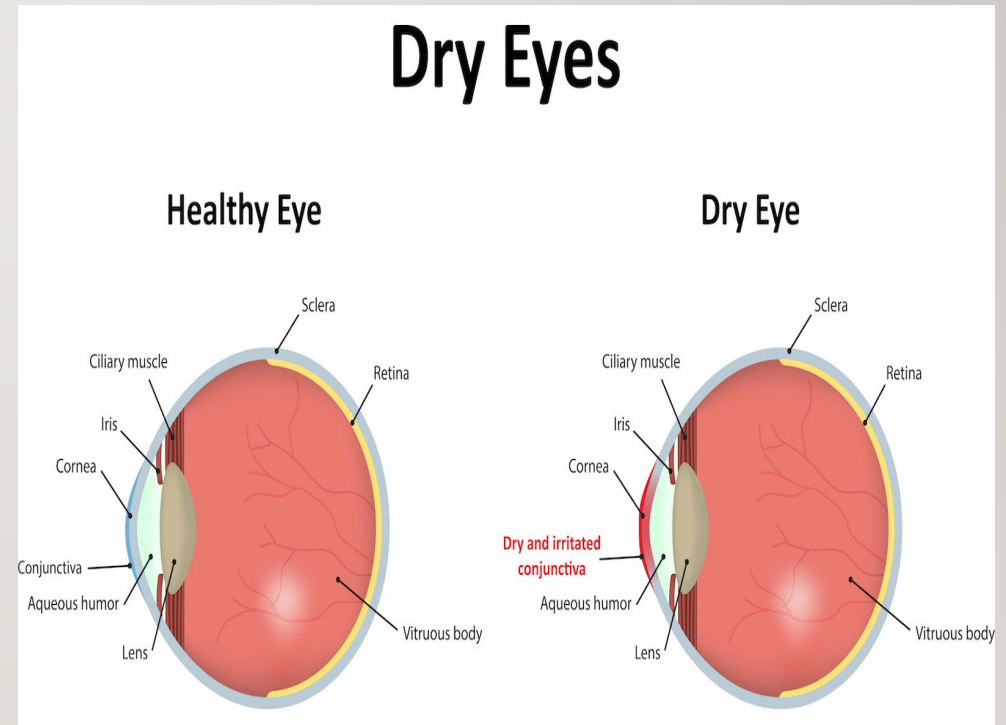


DEVELOPMENT OF GLAUCOMA



DRY EYE SYNDROME (THIS IS A CONDITION “EYE” HAVE, PUN INTENDED)

- **Dry Eye Syndrome**: Usually caused by tear ducts producing less amounts of natural tears. This might be due to an autoimmune response that shuts down the tear ducts, or sometimes the ducts get blocked and will not allow tears to flow normally. S/S include: blurred vision, red eye express, sandy or gritty eyes, and stinging or burning eyes.



8 SIGNS OF DRY EYE



1. Blurriness

2. Sensitivity of light

3. Irritation of windy conditions

4. Fatigued eyes at the end of the day

5. Problems wearing contact lenses

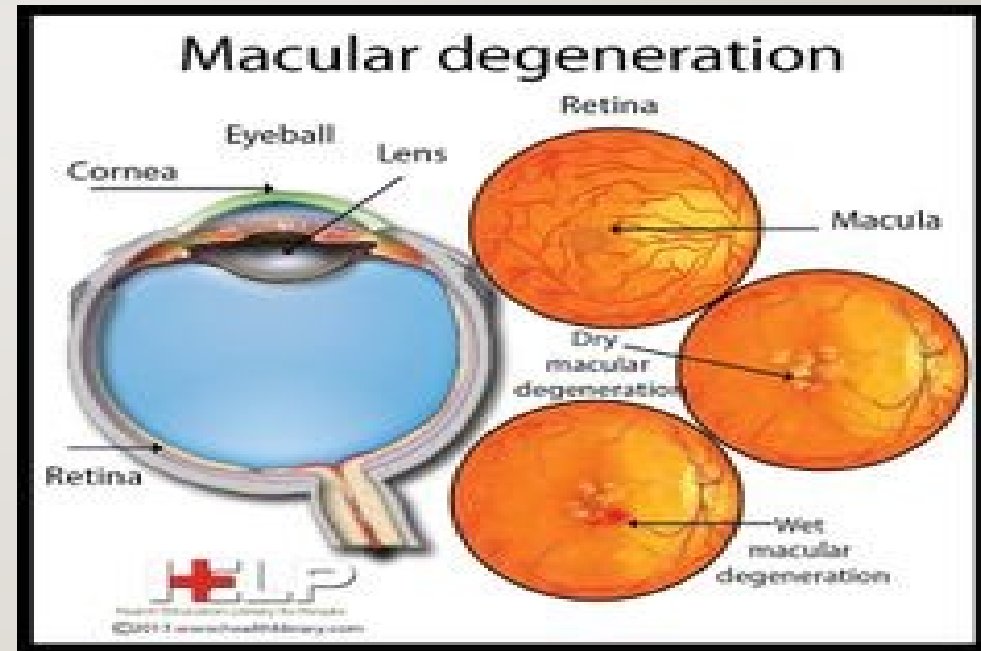
6. Scratchy or gritty feeling

7. Excessive tearing

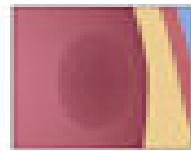
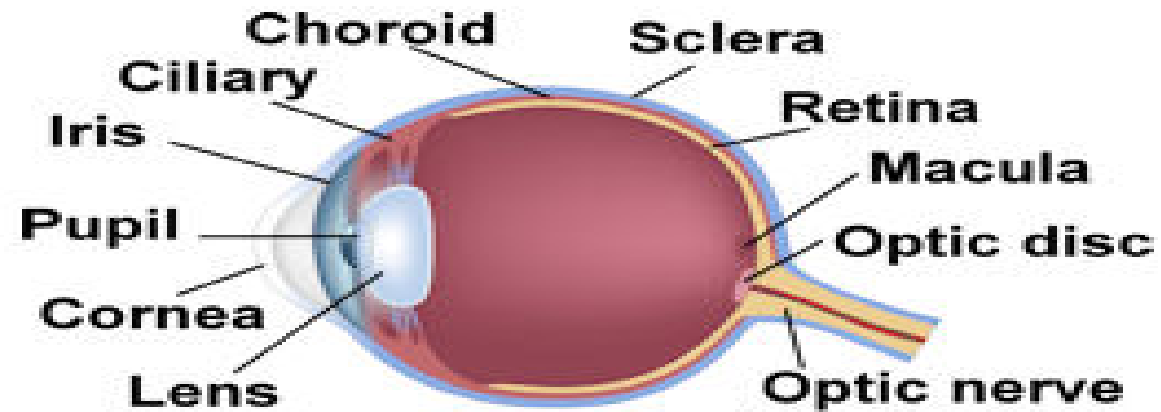
8. Red eyes

MACULAR DEGENERATION: WHAT IS THIS CONDITION? DEGENERATION OF THE MACULAR OF THE RETINA

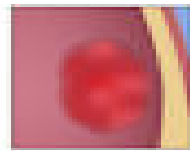
- The Macula Lutea deteriorates. The distortion of centralized vision is one of the first s/s of macular degeneration.
- ARMD: A disease/condition that destroys sharp/centralized vision. The macula is part of the eye that allows for sharp/fine vision.
- This condition happens with aging, or is mostly associated with age related eye disease.



Macular Degeneration



Normal



Wet Macular Degeneration

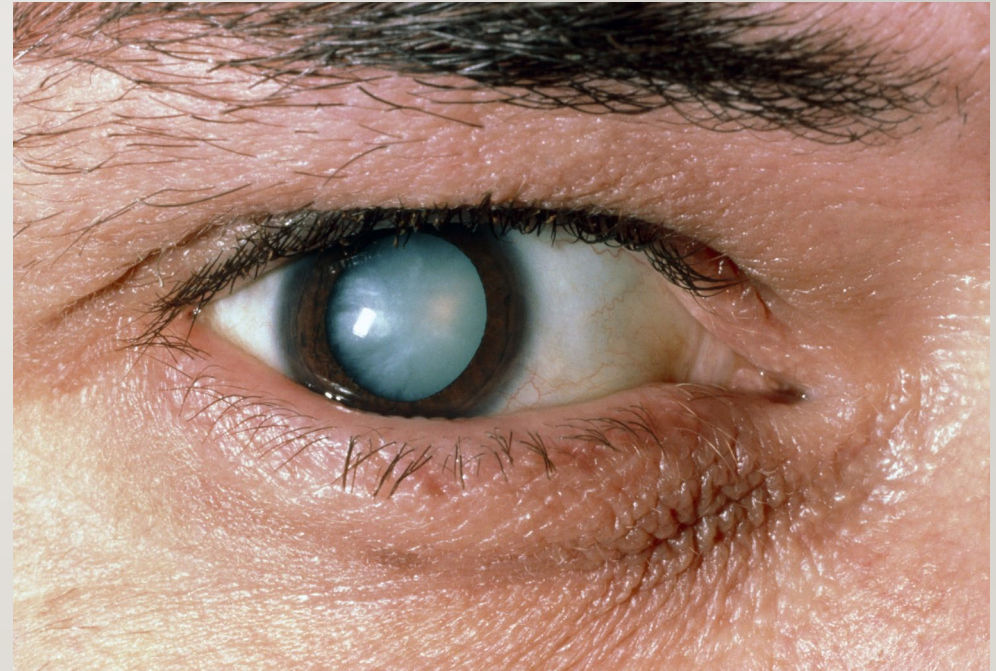


Dry Macular Degeneration

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CATARACTS: SMOKE GETS IN YOUR EYES!! EVERYTHING IS OPAQUE

- **Cataracts** are abnormal cloudy characteristics of the lens of the eye.
- Cataracts prevent an easy passing through of light to the back of the eye, or the retina, causing blurry vision.
- Cataracts are insidiously slow in progression. Some are small patches, but others are much larger and obscure normal vision. Once identified, the only correction is surgery and replacement with a prosthetic lens.

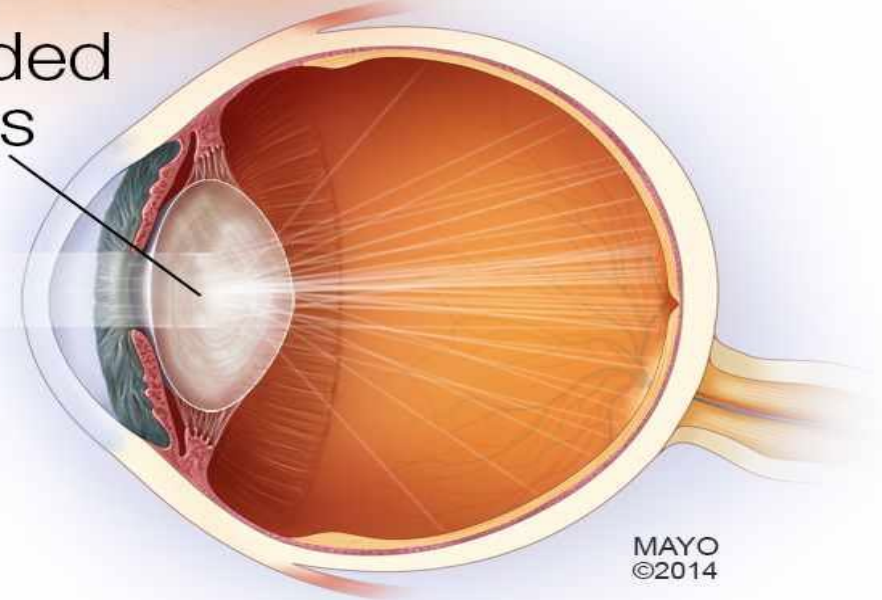
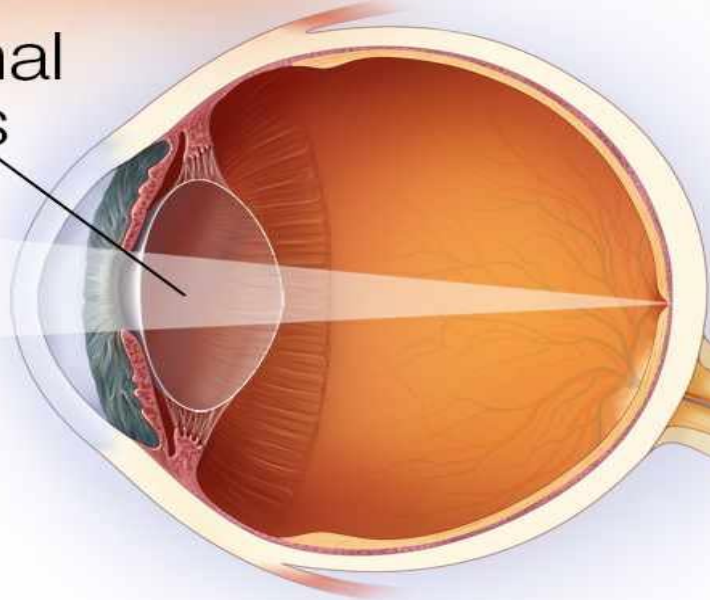


Normal

Eye with cataract

Normal
lens

Clouded
lens



WHAT CAN WE DO ABOUT THESE TYPICAL EYE AND VISION CHANGES?

- Probably the most important thing we can do is make annual appointments with your ophthalmologists. Use medications as prescribed and notify physician of any changes
- May require a change in lenses, glasses/pair for light adjustments/tinted, or contact lenses
- Know your limits regarding night vision and driving. Set a time limit
- Use your brights when there are no oncoming cars if you drive at night
- Take care of your Diabetes and quit smoking. Both affect the health of your eyes.
- Clean up the head lights on the car and clean your windshield of debris inside and out and don't forget a very important component(s) to healthy eyes: Healthy diet, especially Leafy green plant diets and diets rich in Omega 3's, and Exercise regularly.

ACCEPTING CHANGES IN EYESIGHT AS WE AGE

- Changes in eyesight are perfectly normal with age, and its all part of declining senses as we age.
- Some things we can prevent and others we must learn to adjust.
- Most of our “old eye” problems are treatable.
- As with the rest of the body, our eyes also succumb to the aging process.
- Follow the instructions and prescription from ophthalmologist and/optometrist and ask questions.

WHAT ARE YOUR THOUGHTS?
QUESTIONS? STORIES?

