

# Diabetes & The Eye

- Diabetics are more likely to develop **Cataracts** at a younger age.
- Diabetics are twice as likely to develop **Glaucoma** when compared to non-diabetics.
- The primary vision problem caused by this disease is **Diabetic Retinopathy**, the leading cause of new cases of blindness and low vision in adults aged 20-65

# What is Diabetes?

- The Centers for Disease Control defines Diabetes as a condition in which the body does not properly process foods for use as energy. When you have Diabetes, your body either doesn't make enough insulin or can't use its own insulin as well as it should. This causes **sugars to build up in your blood**.
- Serious Health issues can occur, one of which is **Blindness**.

# Diabetic Retinopathy

- This disease occurs when there is **damage to small blood vessels** that nourish tissue and nerve cells **in the retina**.
- According to the National Eye Institute, there are Four Stages of Diabetic Retinopathy

# The Four Stages of Diabetic Retinopathy:

- **Mild Non-Proliferative Retinopathy-**  
Swelling occurs in the retina's small blood vessels
- **Moderate Non-Proliferative Retinopathy**
- **Severe Non-Proliferative Retinopathy-**  
Blood vessels become blocked
- **Proliferative Retinopathy-**Hemorrhages in the retina or vitreous, possible retinal detachment

# **Symptoms of Diabetic Retinopathy**

- **Blurred or Double Vision**
- **Flashing Lights**
- **A veil, cloud or streaks of red in the field of vision, or dark, floating spots**
- **Blind or blank spots**



# Ocular and Functional Effects of Diabetic Retinopathy

- Fluctuating vision in response to changing blood glucose levels
- Blurred central vision from macular edema can interfere with reading
- Decreased visual acuity can interfere with seeing markings on insulin syringe or display on blood glucose monitor
- Blind spots can make it difficult to judge the size of food portions
- Decrease in depth perception, in combination with decreased visual acuity can make it difficult to see curbs and steps.

# Recommended Follow-up

- If you are at high risk for Diabetes you should have **regular, dilated eye exams**.
- If you have been diagnosed with Diabetes you need to have **dilated eye exams every year**.

# Important to Note:

## Three of the Leading Causes of Blindness in U.S are associated with Diabetes

- Cataract
- Macular Degeneration
- Glaucoma
- Diabetic Retinopathy



# Cataracts

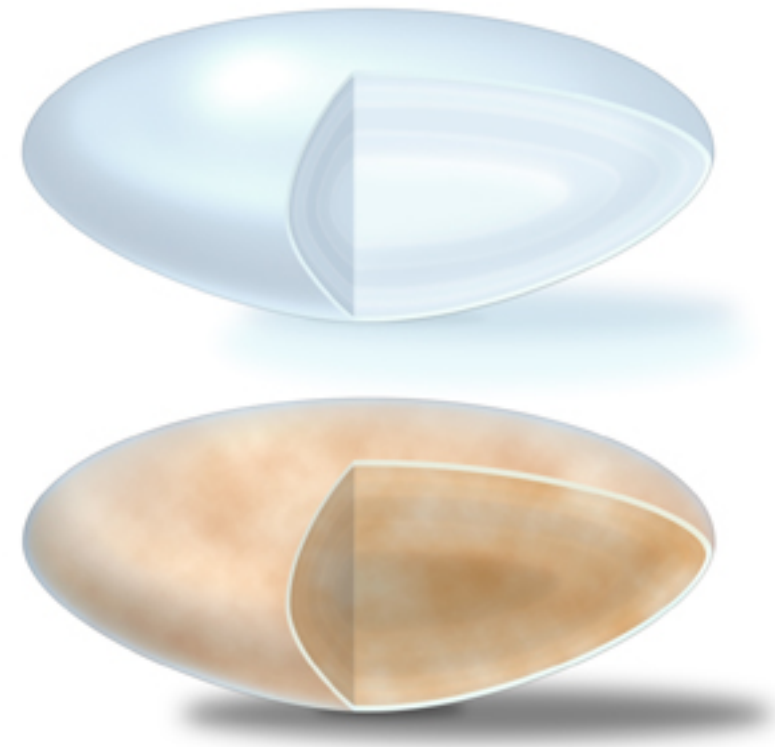
- Very Common After Age 60
- Leading Cause Of Blindness Worldwide
- 20.5 Million Americans Have Visually Significant Cataracts

# Cataract Symptoms

- Blurred Vision
- Glare
- Change In Color Vision
- Halos
- Double Vision

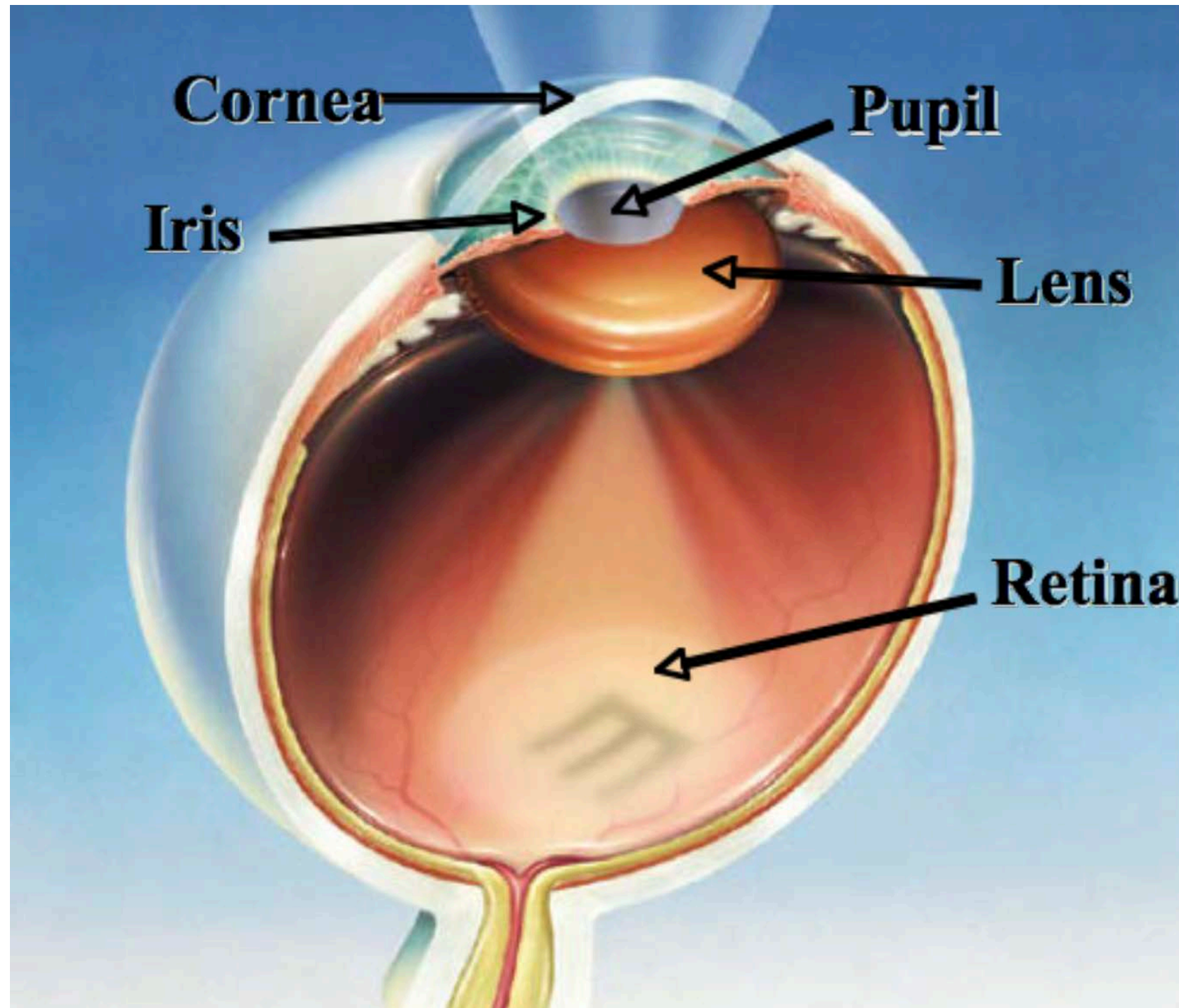
# What Is A Cataract?

- Clouding Of Natural Lens
- Number One Cause = Aging
- Other Causes - Medication, Trauma, **Diabetes**, Congenital





# The Human Eye



# View Through A Cataract



View Through  
Clear Lens



Clouded View  
Through Cataract



# Cataract Treatment Options

- Continued Observation
- Prescribe Stronger Glasses
- Cataract Removal With Intraocular Implant (IOL)

# **Glaucoma Risk Factors - Possible Risk Factors**

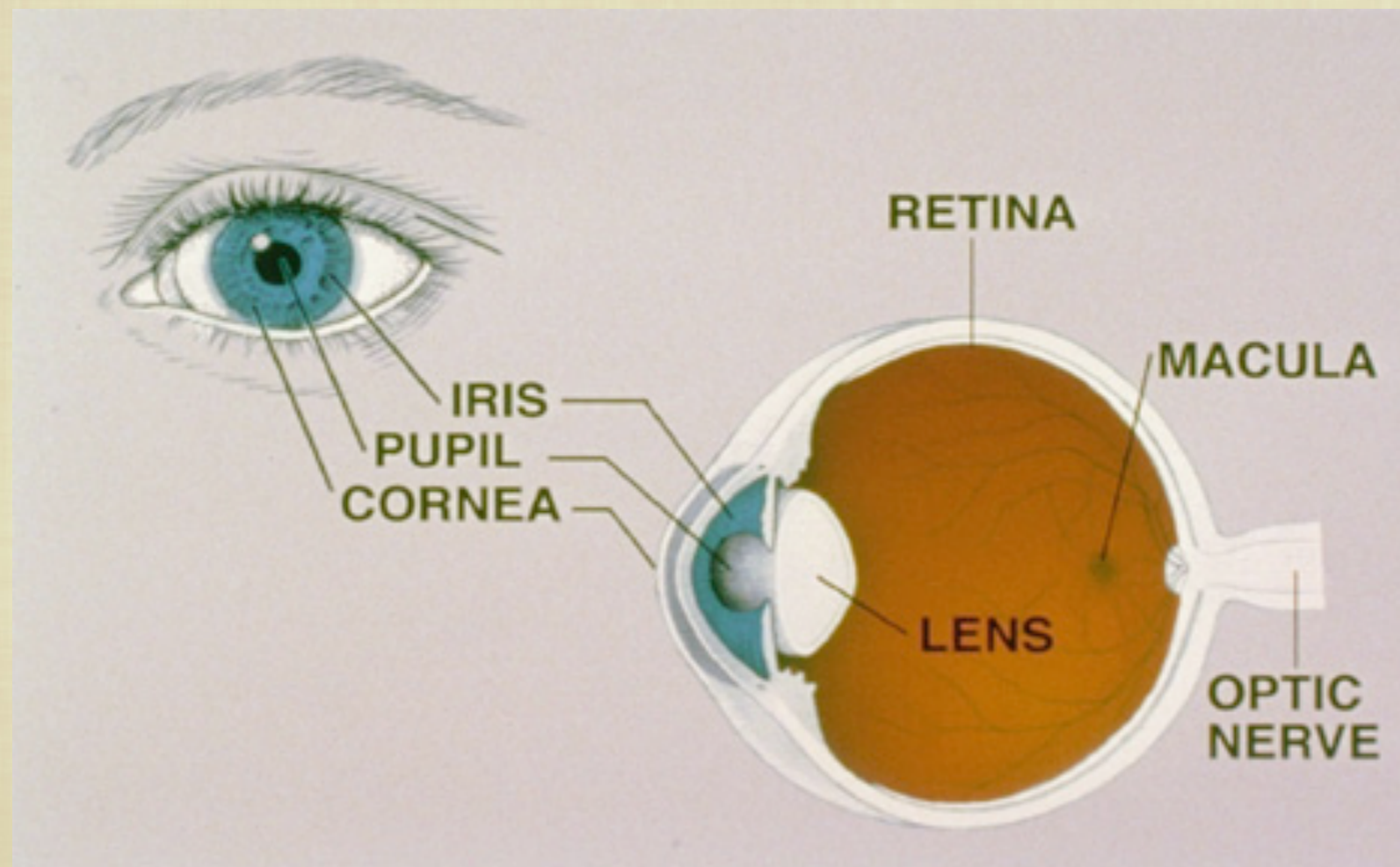
- High Myopia (near - Sightedness)
- Diabetes
- Hypertension (High Blood Pressure)
- History of Steroid Use, Migraine  
Headache, Sleep-Related Breathing  
Disorders



# **Glaucoma**

- Second Leading Cause of Irreversible Blindness in the U.S.
- 3 Defining Characteristics :
  - High Intraocular Pressure
  - Optic Nerve Atrophy
  - Visual Field Loss
- Every Individual after the age of 64 should be examined yearly to screen for glaucoma

# Glaucoma Damages the Optic Nerve





# Myths About Glaucoma

■ “Glaucoma is a disease of old age”

■ “I have 20/20 vision so I don't have Glaucoma”

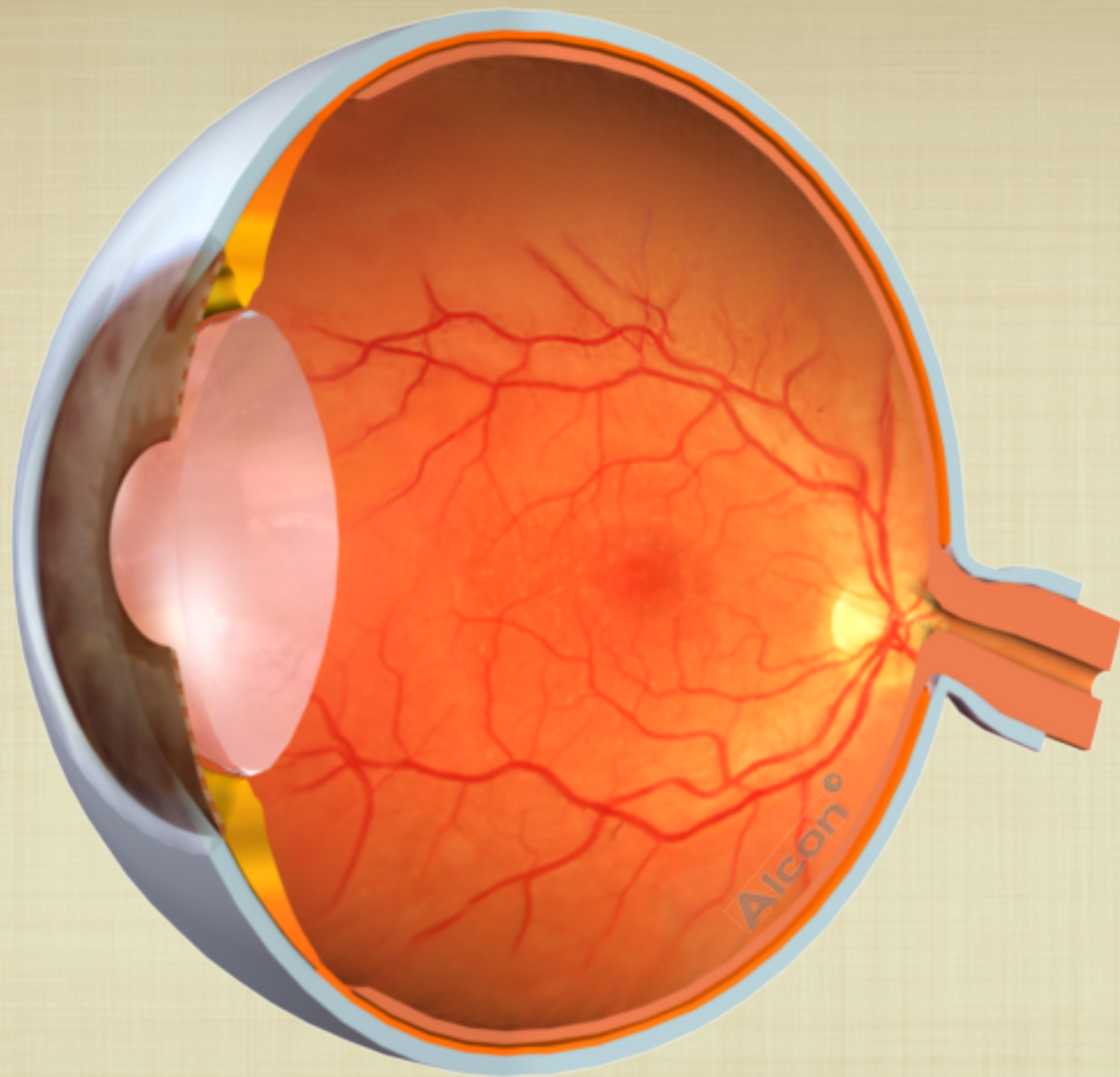
■ “My eyes would hurt or



# **Glaucoma**

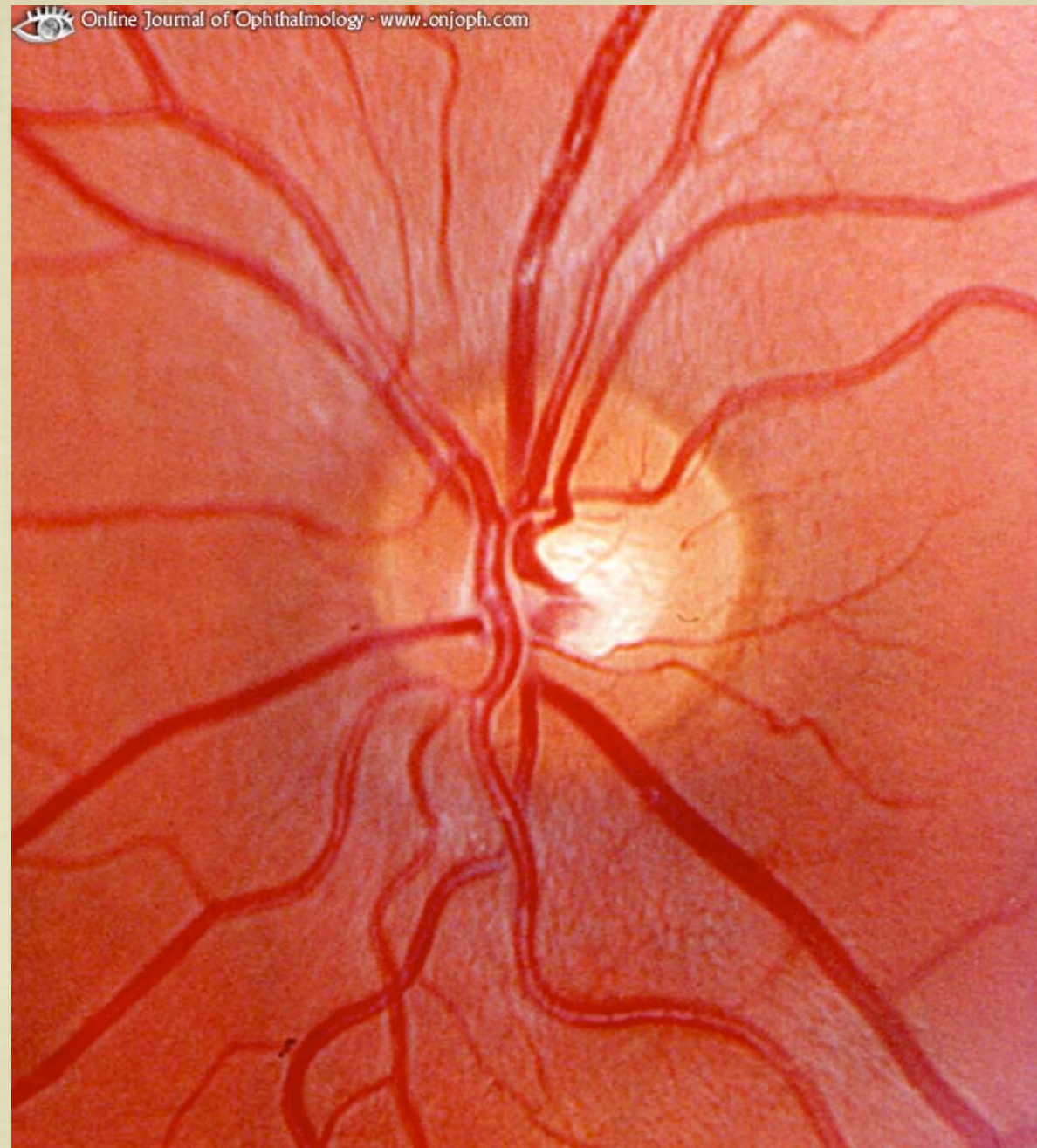
## **Strong Risk Factors**

- **High Intraocular Pressure**
- **Aging**
- **Positive Family History**
- **Suspicious Optic Nerve Appearance**
- **Thin Central Cornea**



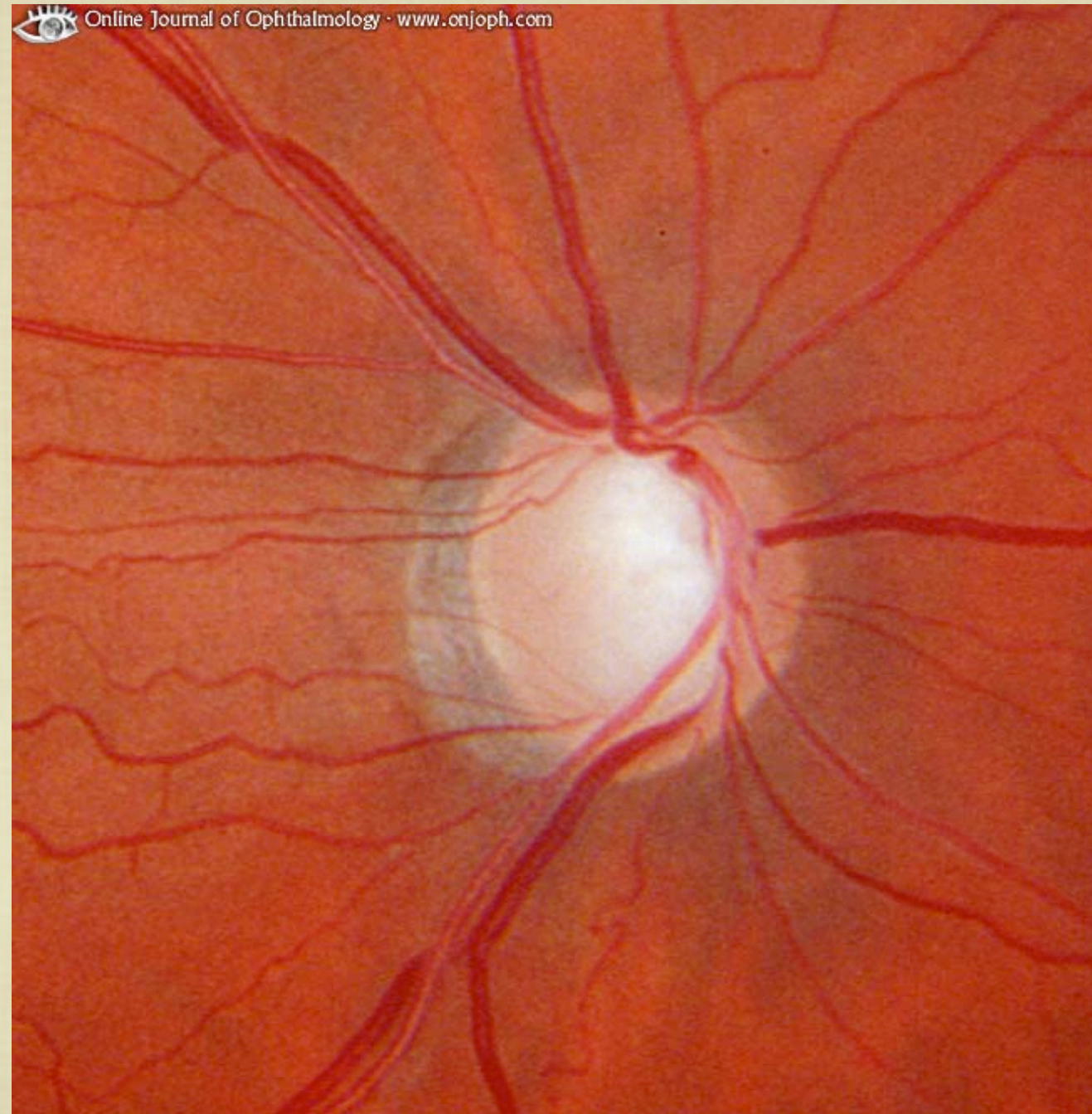


# Normal Optic Nerve

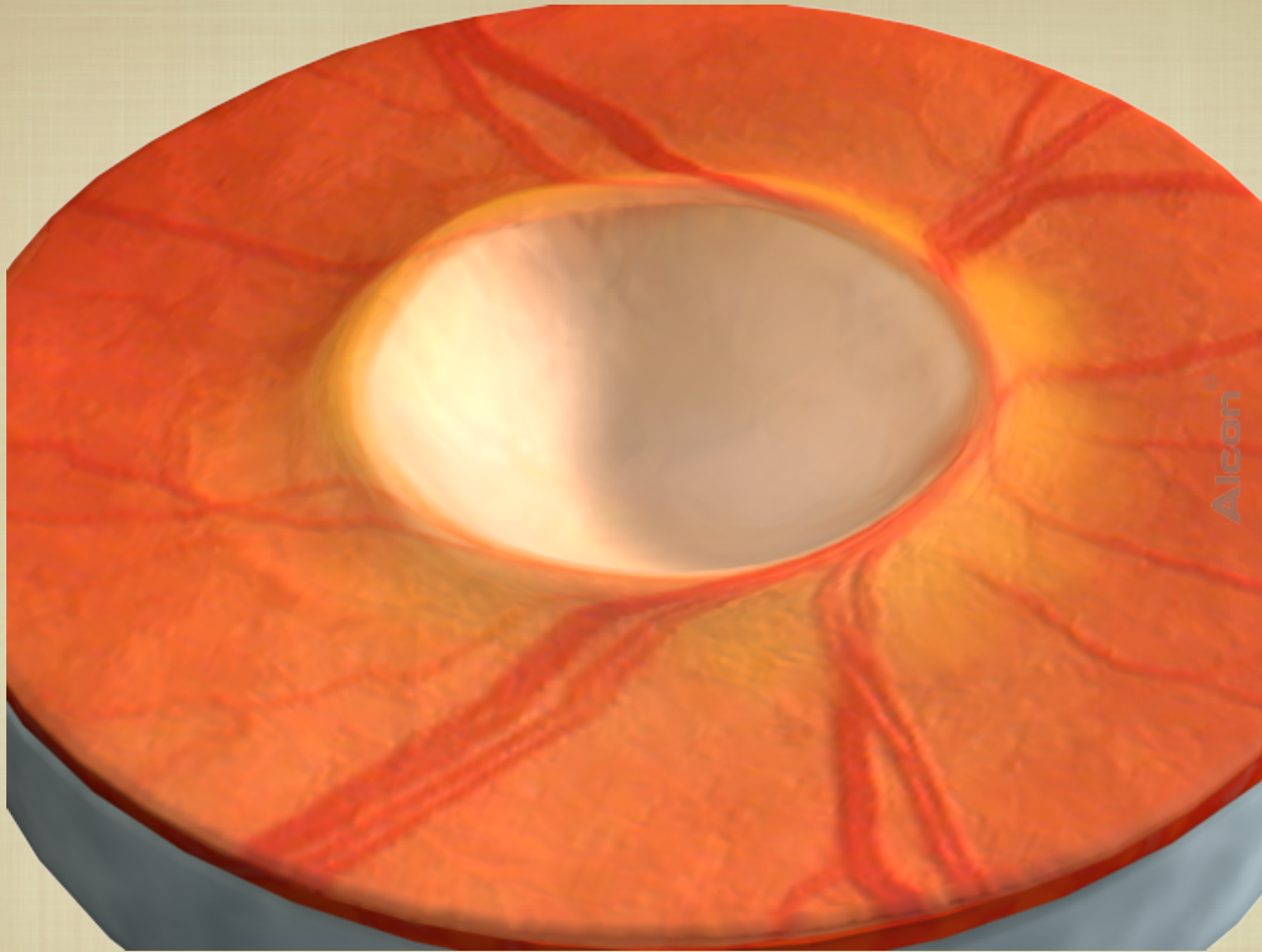




# Abnormal Nerve - Glaucoma



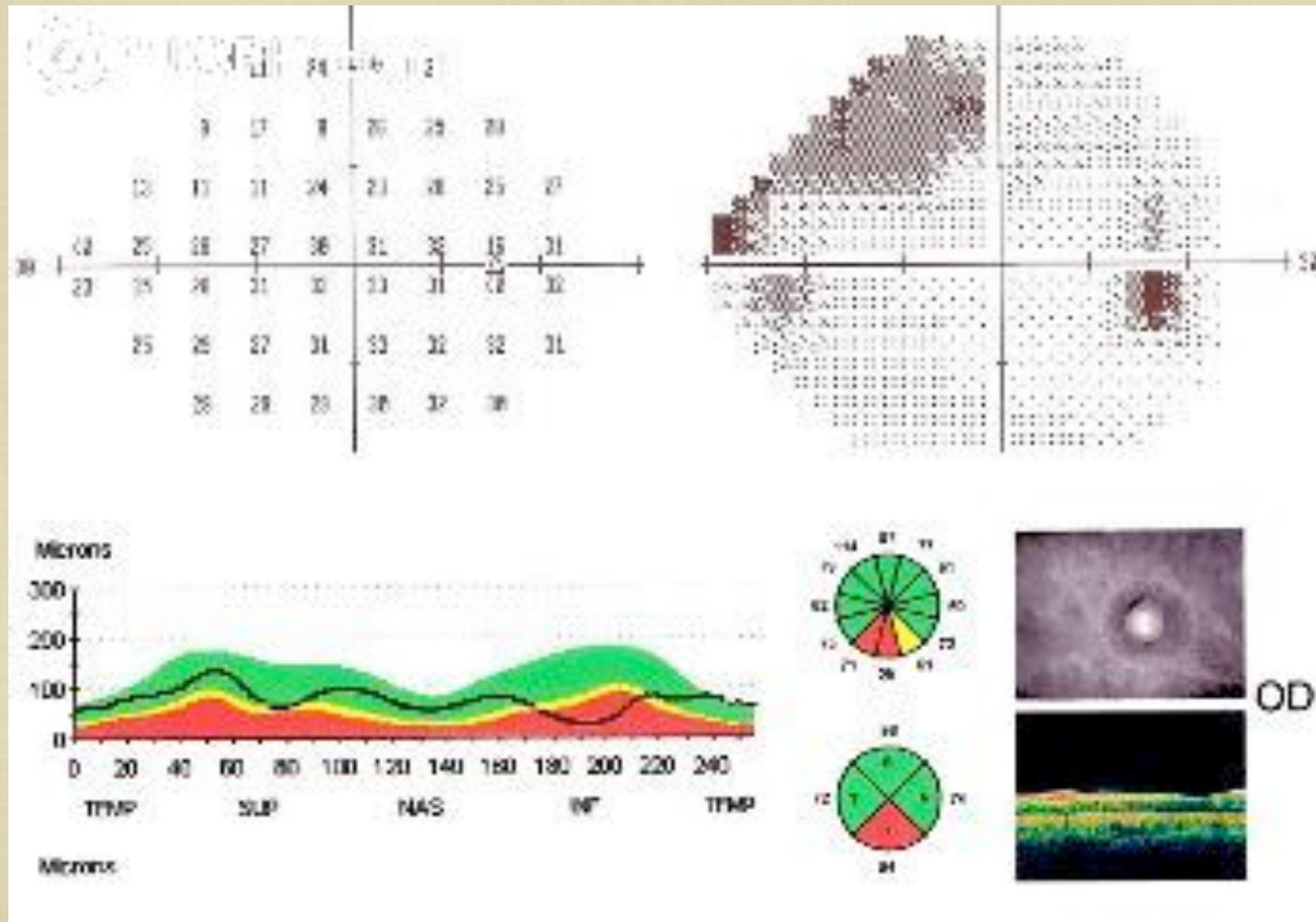




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# Glaucoma - Visual Field Loss

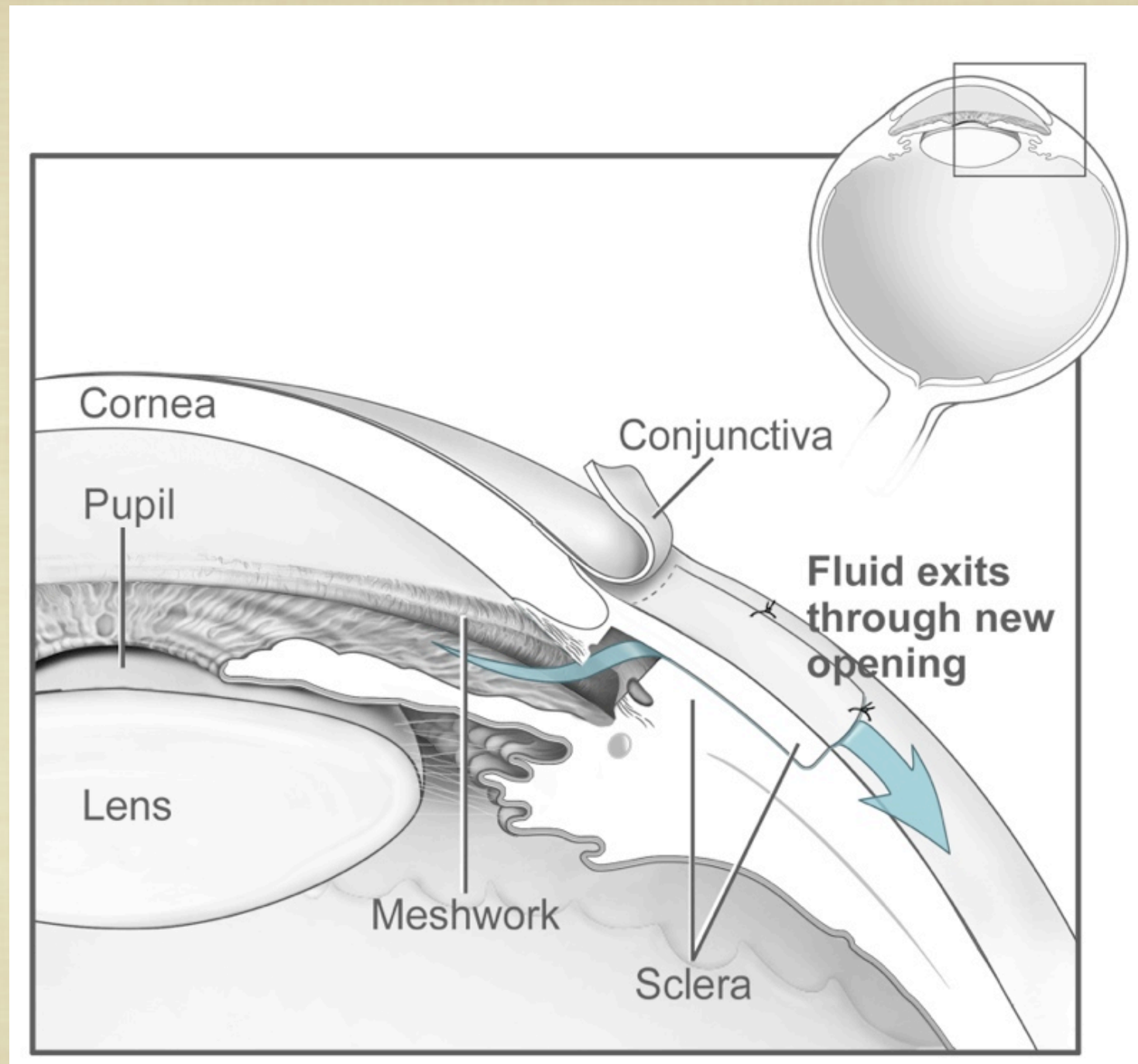


# **Glaucoma - Treatment**

- **Medications - Drops**
- **Laser**
- **Surgery**



# Narrow Angle Glaucoma



# Don't Let Diabetes Steal Your Sight

- Be Proactive
- Develop Healthy Eating Habits
- Monitor Your Glucose Levels
- Exercise
- Schedule Regular Eye Exams





Questions?



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