

# Aging Eyes: A Clinical Overview

**Rahul Tonk, MD, MBA**

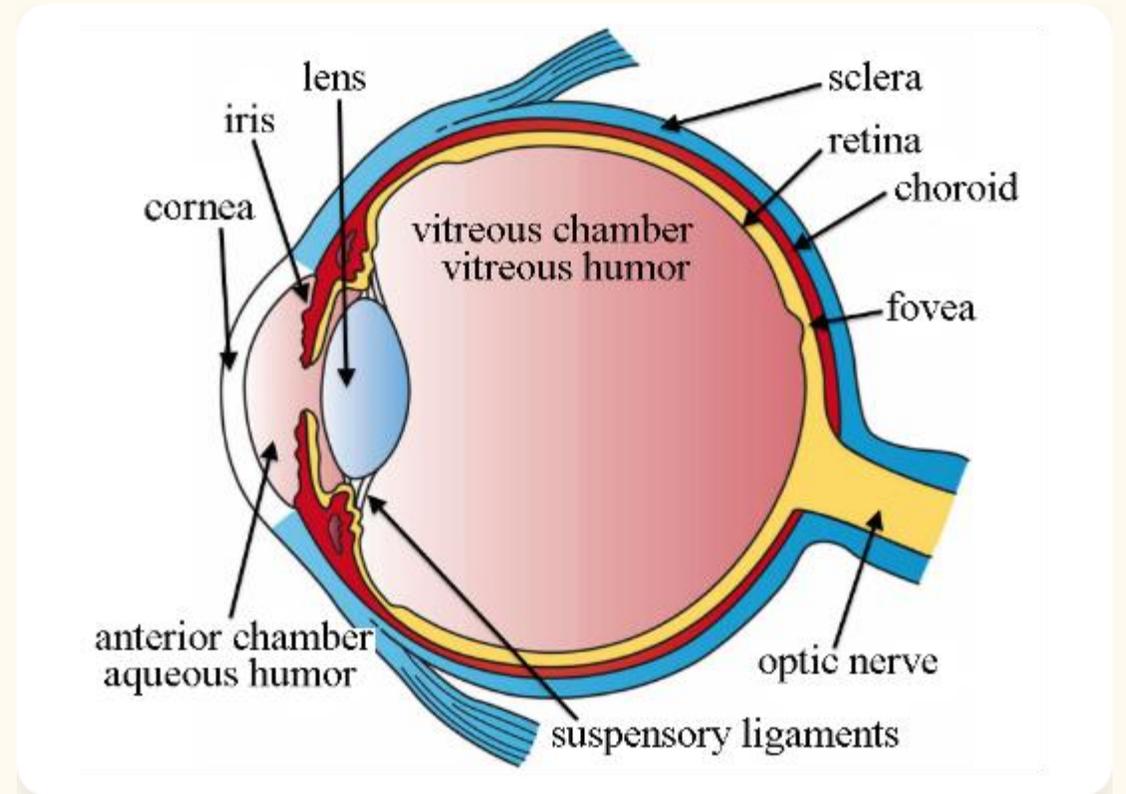
Cornea, Cataract, and Refractive Surgeon

Princeton Eye Group | Wills Eye Hospital

Office: (609) 921-9437

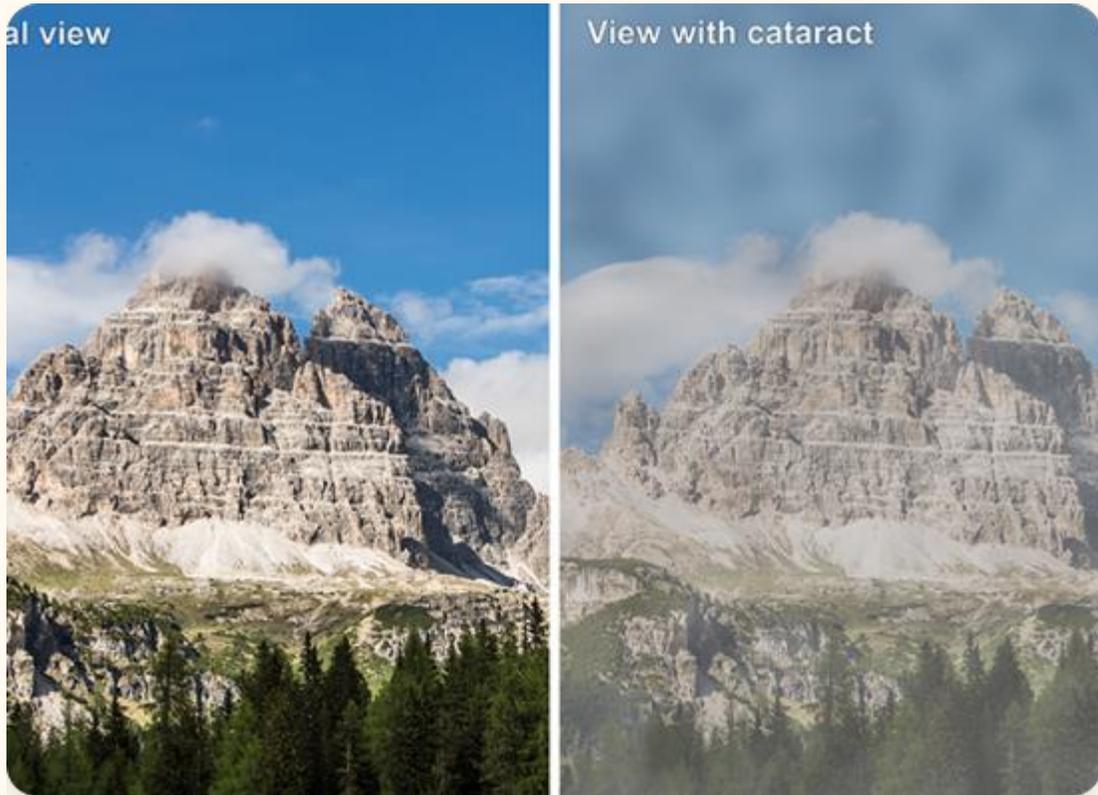
# Anatomy of the Eye: The Camera Analogy

- ✓ **Lens (Focus):** Like the camera lens, it focuses light onto the back of the eye.
- ✓ **Retina (Film):** The light-sensitive layer that captures the image, much like film or a digital sensor.
- ✓ **Optic Nerve (Cable):** The data cable that transmits the visual signal from the eye to the brain.



# The Crystalline Lens & Cataracts

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## The "Dirty Windshield" Effect

Imagine driving with a foggy windshield that cannot be cleaned. That is the reality of cataracts.

- ✓ **Oxidative Stress:** Causes the natural proteins in the lens to break down and clump together.
- ✓ **Universal Aging:** It is not a disease, but a natural aging event, much like grey hair.
- ✓ **Symptoms:** Glare from lights and colors appearing faded or yellowed.

# Modern Cataract Surgery

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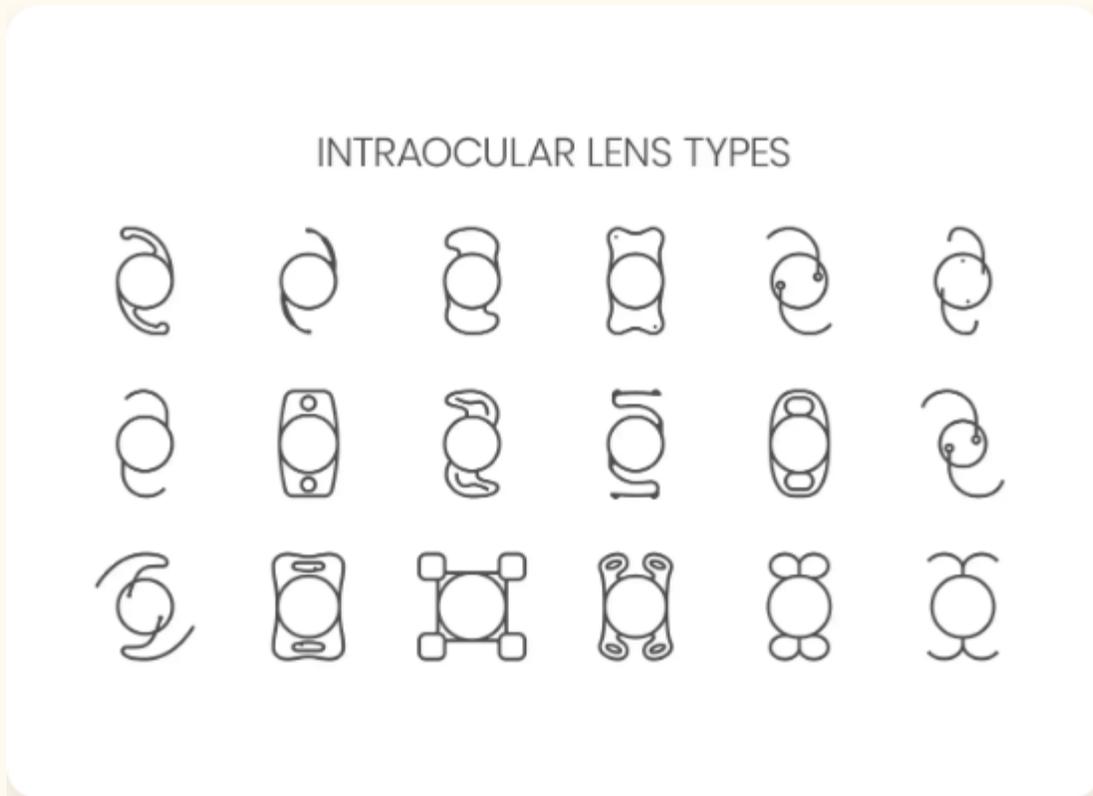
- ✓ **Outpatient Procedure:** No hospital stays, no stitches, and no needles. Patients go home the same day.
- ✓ **Ultrasonic Technology:** We use microscopic ultrasound energy to gently remove the cloudy lens.
- ✓ **Restoration:** The procedure restores the refractive power of the eye, often improving vision beyond its previous baseline.



# Customizing Your Vision: Lens Implant Options

## Not All Lenses Are Created Equal

We tailor the technology to your lifestyle needs.

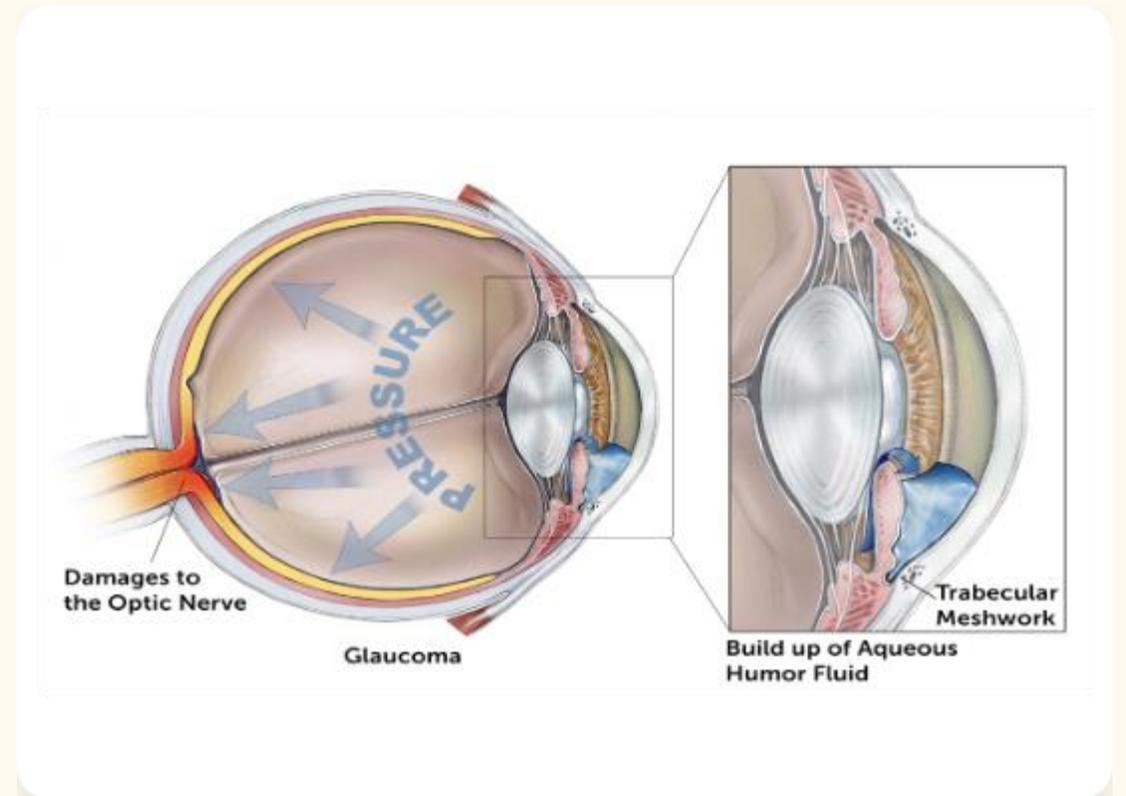


- ✓ **Monofocal (Standard):** Excellent distance clarity, but you will likely need reading glasses.
- ✓ **Toric IOLs:** Essential for correcting astigmatism (football-shaped eyes) for sharper vision.
- ✓ **Multifocal / EDOF:** Advanced optics designed to reduce dependence on glasses for both near and far.
- ✓ **Light Adjustable Lens (LAL):** The "Tailored Suit"—vision is customized with UV light *after* surgery.

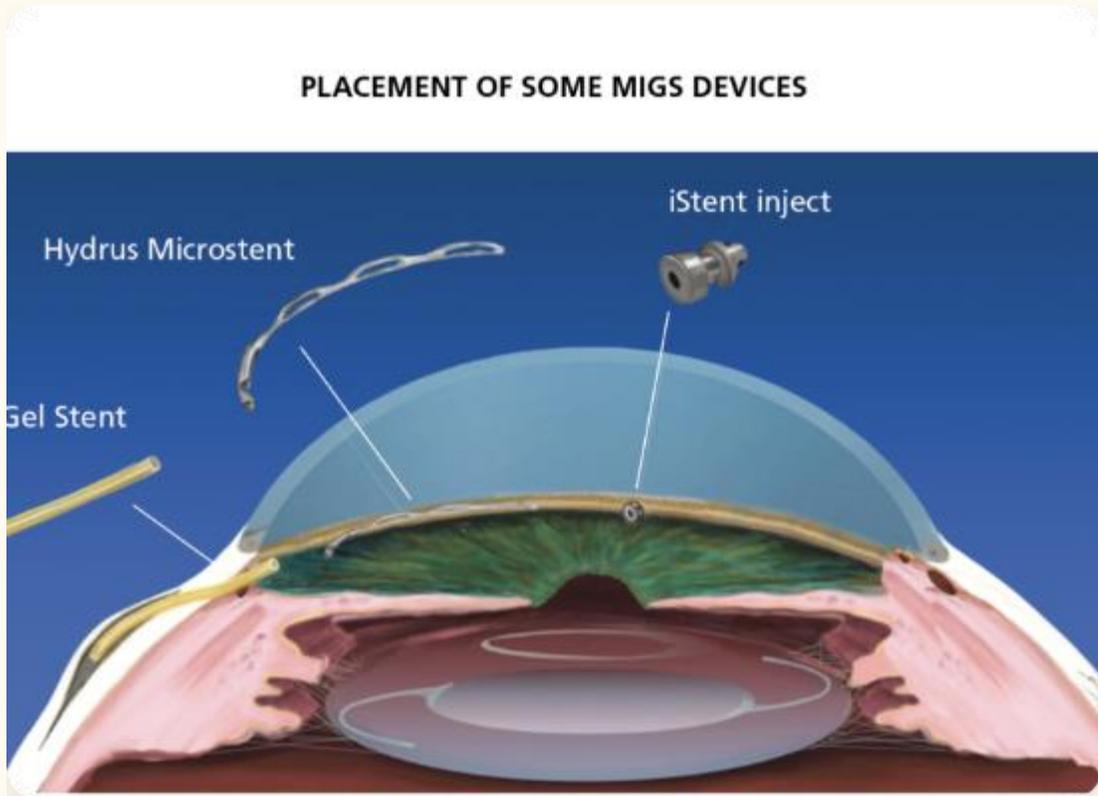
# Glaucoma: The Silent Thief

## The "Clogged Sink" Analogy

- ✓ **Fluid Build-up:** Like a sink with a clogged drain and a running faucet, pressure builds inside the eye.
- ✓ **Optic Nerve Damage:** This pressure pushes against the delicate optic nerve, causing irreversible damage.
- ✓ **Peripheral Loss:** It steals side vision first, so you can have 20/20 central vision while going blind.



# Glaucoma Treatment: A Spectrum of Care



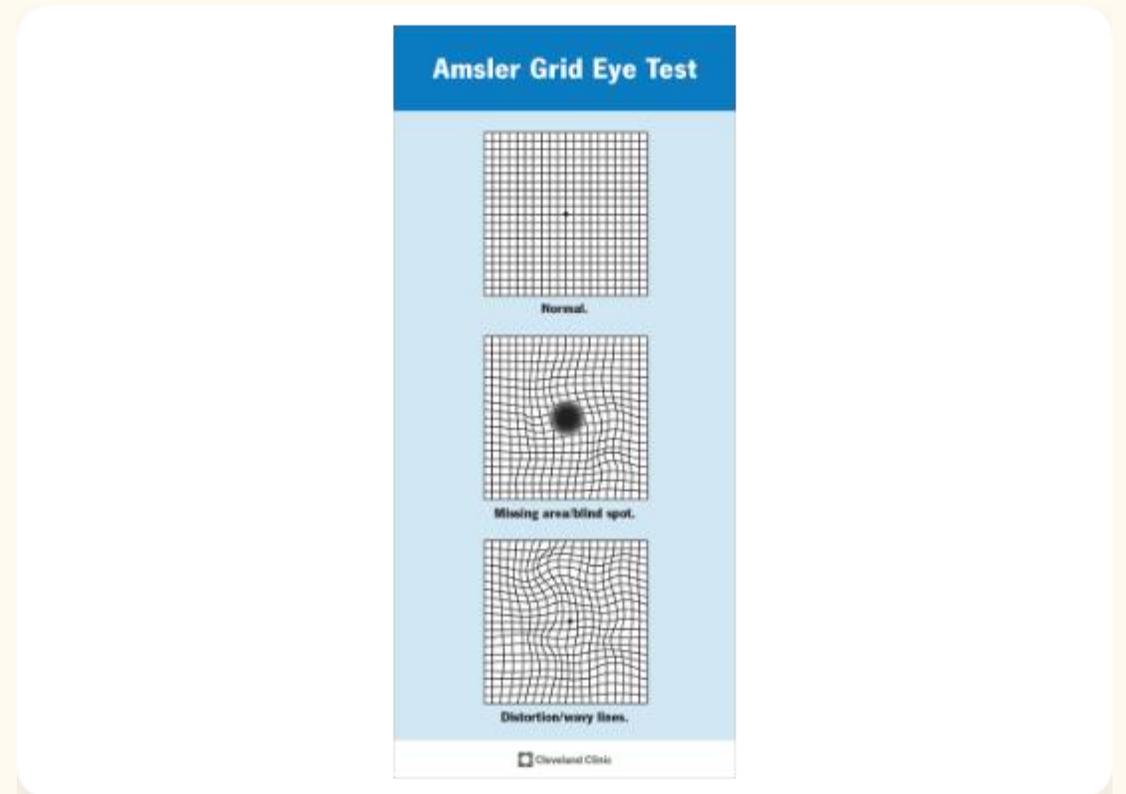
- ✓ **Eye Drops:** The traditional first line of defense to lower pressure. Effective, but requires strict compliance.
- ✓ **SLT (Laser):** Selective Laser Trabeculoplasty. A gentle "light therapy" that stimulates the natural drain.
- ✓ **MIGS (Stents):** Micro-Invasive surgery. Tiny stents are placed during cataract surgery to bypass blockages safely.
- ✓ **Incisional Surgery:** "Major plumbing" (Trabeculectomy/Tubes) for advanced cases to create a completely new filtration reservoir.

# Macular Degeneration (AMD)

## Loss of Central Vision

AMD affects the macula, the high-definition center of the retina used for reading and driving.

- ✓ **Dry AMD:** Like a sidewalk developing cracks over decades (wear and tear).
- ✓ **Wet AMD:** Like tree roots growing under the sidewalk, pushing it up (leaky vessels).
- ✓ **Amsler Grid:** If straight lines ever look wavy like this grid, call us immediately.



# Prevention & Nutrition

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Can we prevent progression?

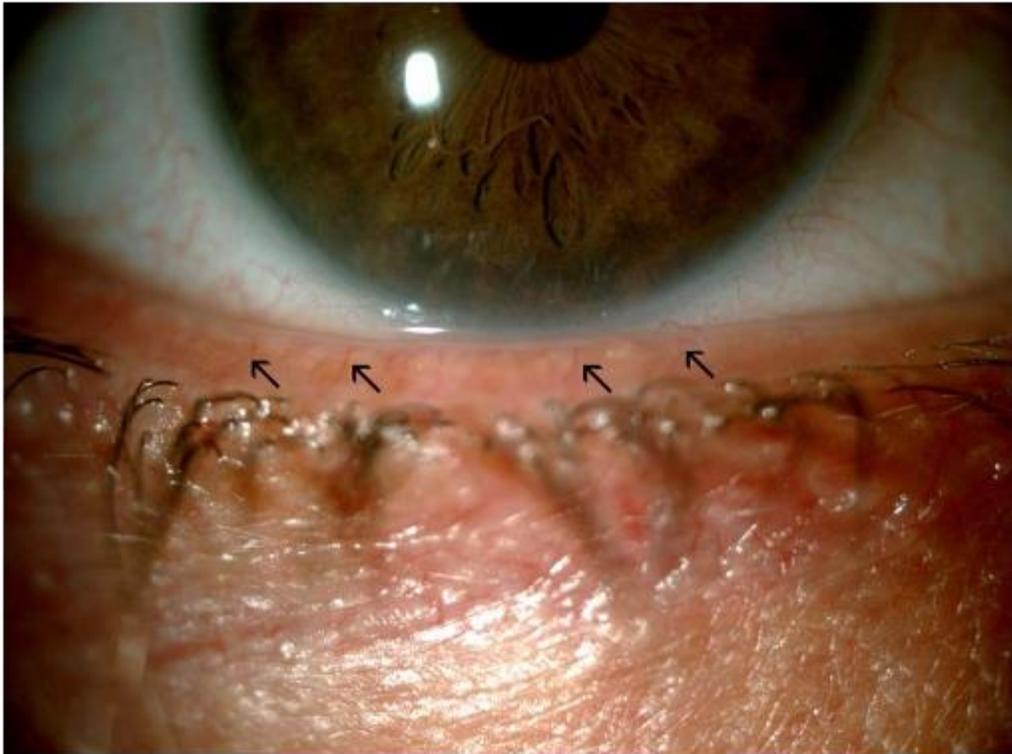
Yes, partially.

- **AREDS2 Study:** Specific high-dose antioxidants can reduce the risk of progression in intermediate AMD by ~25%.
- **Dietary "Sunglasses":** Lutein found in dark leafy greens acts as internal protection for your macula.
- **Prescription:** Eat your greens—Kale, Spinach, and Collard Greens are essential.



# Dry Eye Disease: The "Layer Cake"

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## It's Not Just About Water

- ✔ **Complex Recipe:** Tears are made of Mucus (bottom), Water (middle), and Oil (top).
- ✔ **The Oil Seal:** The oil layer prevents the water from evaporating.
- ✔ **The Root Cause:** In most seniors, oil glands clog (Meibomian Gland Dysfunction), causing tears to evaporate too quickly.



Princeton Eye Group

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**Questions?**

APPOINTMENTS

**(609) 921-9437**

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