

OcuLetter

Race Against the Darkness

Retinal detachment (RD) is a vision-threatening condition in which the neurosensory retina separates from the **retinal pigment epithelium**, disrupting metabolic support to photoreceptors. It is classified into **three types: rhegmatogenous**, caused by a retinal break allowing vitreous fluid to enter the subretinal space; **tractional**, due to fibrovascular membranes pulling the retina, commonly in diabetic retinopathy; **and exudative**, resulting from subretinal fluid without a tear. Patients often report **flashes, floaters, and a peripheral visual field defect** described as a **curtain**. Prompt surgical management is essential, as prognosis depends on macular involvement and repair timing.

Myth

Wearing eye glasses makes eyes **Weaker** over time.

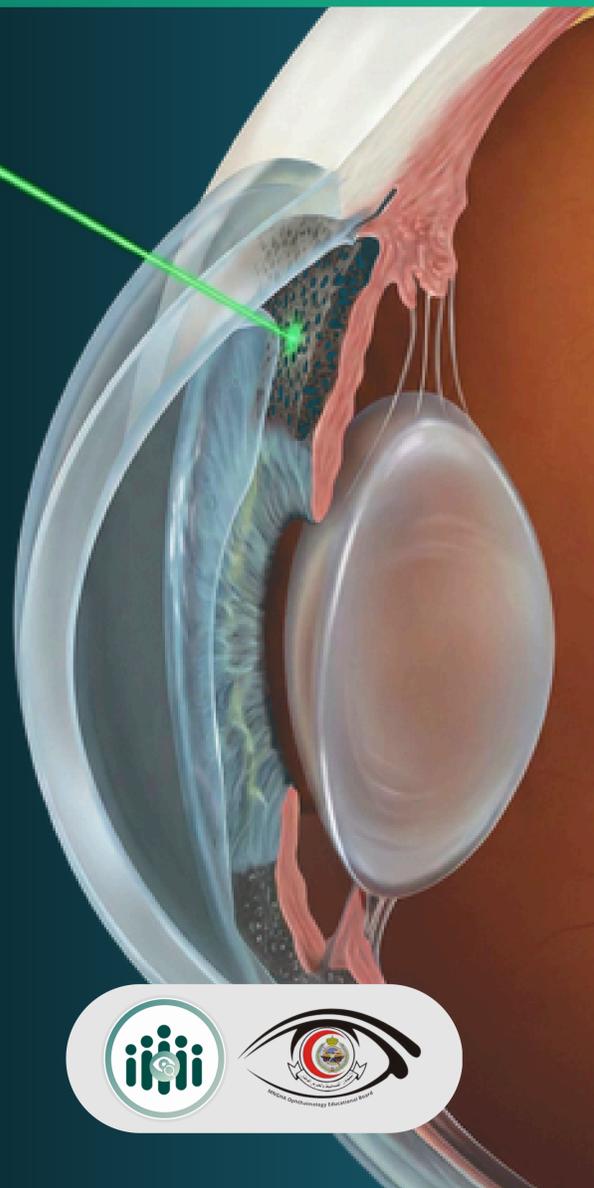
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Fact

Eye glasses correct refractive errors. **They do not worsen eyesight.**

Spotlight on technology

Direct Selective Laser Trabeculoplasty (DSLST) is a non-contact laser system for glaucoma that lowers intraocular pressure by stimulating the trabecular meshwork to improve aqueous outflow. Unlike conventional SLT, it does not require a gonioscopy lens, making the procedure faster, simpler, and more comfortable. Clinical studies demonstrate effective IOP reduction, and the device has been approved since 2023–2024, providing a safe option for routine glaucoma management.



DID YOU KNOW?

Blue eyes result when a specific **HERC2** gene variant 'turns off' the pigment-producing **OCA2** gene. If **brown-eyed parents** both carry this recessive trait, their **child has a 25% chance of being born with blue eyes.**

CASE

of the month

A "bump" on the right lower lid

4-year-old female referred to the pediatric ophthalmology clinic with a "bump" on the right lower eyelid present for approximately two weeks.

History: The parents reported no prior trauma or insect bites. The patient had previously been treated with **oral Bactrim** (trimethoprim/sulfamethoxazole) for four days **without improvement**. She was asymptomatic and otherwise healthy.

Diagnosis

- **Chalazion:** A lipogranulomatous inflammatory lesion caused by **obstruction** of the meibomian or Zeis sebaceous glands.

Clinical Manifestations

- Patients present with a **persistent** (>2 weeks), **initially painless** nodule on the eyelid.
- As the lesion grows, it can distort the eyelid, cause discomfort, and even induce reversible vision changes by compressing the cornea.

Management of the case

- **Initial Treatment:** The patient was started on conservative management, including warm compresses and topical erythromycin ointment.
- **Progression:** At a 10-day follow-up, the lesion had enlarged despite therapy.
- **Surgical Intervention:** The patient underwent incision and drainage (I&D).
- **Outcome:** The lesion showed significant improvement and resolved completely.
- **Recurrence:** Nine months later, the patient developed a new chalazion on the left upper lid, which successfully resolved with conservative treatment alone.



Examination Findings

- Visual Acuity: 20/30 OD and 20/25 OS
- Right Eye Exam: A 1.0 mm x 0.7 mm **firm nodule** on the lateral aspect of the right lower lid with **superficial skin breakdown and erythema (redness)**.

A landmark Study

Age-Related Eye Disease Study (AREDS & AREDS2)

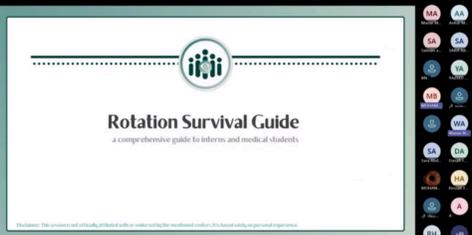
AREDS (1992–2001) and AREDS2 (2006–2012) were landmark clinical trials to determine whether nutritional supplements could slow the progression of **Age-Related Macular Degeneration (AMD)**. They addressed key questions:

- (1) Can **high-dose supplements** reduce the risk of progression?
- (3) Could **modifications** further improve efficacy? (AREDS2)

Key Findings: (a) Specific high-dose supplements **reduced the risk** of progression to advanced AMD **by ~25%** in patients with intermediate AMD or advanced AMD in one eye. (b) **Beta-carotene** in the original AREDS formulation significantly increased **lung cancer risk** in current and former **smokers**. (c) **Replacing beta-carotene with lutein and zeaxanthin** (AREDS2 formula) maintained protective efficacy while eliminating the cancer risk.

Impact: AREDS established nutritional therapy as a validated intervention for intermediate-to-advanced dry AMD. AREDS2 ensured that this approach could be safely applied to all patients.

Our latest events



Rotation Survival Guide

An online session designed to help students & interns prepare for rotations in ophthalmology, featuring “What I Wish I Knew” talks by interns, practical tips to excel before starting, must-know topics and guidelines.



Participating in
KKESH Conference
2025

Quiz

A patient presents with painful red eye, photophobia, and dendritic epithelial lesion. Which is **least likely** to be seen?



A Reduced corneal sensation

C Branching ulcer with terminal bulbs

B Positive fluorescein staining

D Stromal infiltrates in early disease