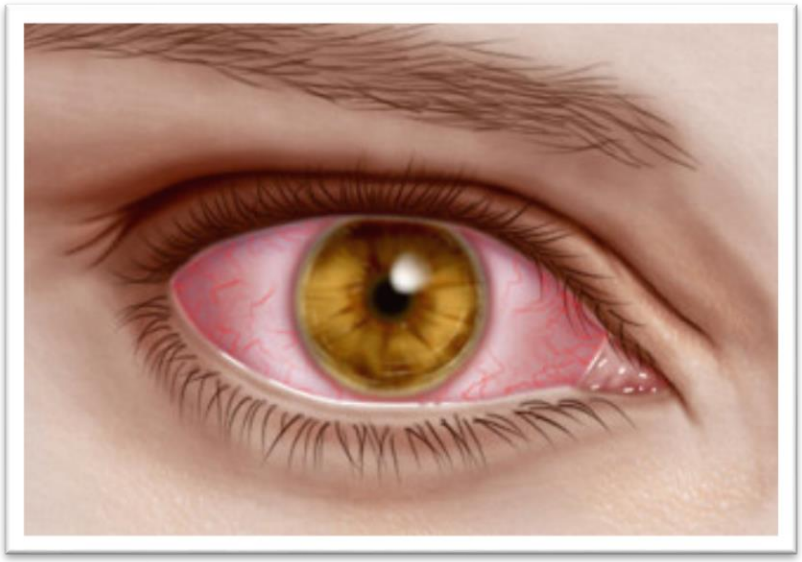


The Red Eye

WHEN TO TREAT, WHEN TO REFER

Dr. Raji Mulukutla, M.D.

WHAT IS RED EYE?

- Red eye is a non-specific manifestation of a variety of ocular, orbital, and occasionally systemic diseases that commonly presents to PCP's and Urgent Care Centers.

- The history and initial presentation can be key to a diagnosis. The complete differential diagnosis is VERY long.

- Always keep in mind that while it is unlikely, it CAN be a sign of a sight threatening, and even a life threatening, condition.

OBJECTIVES:

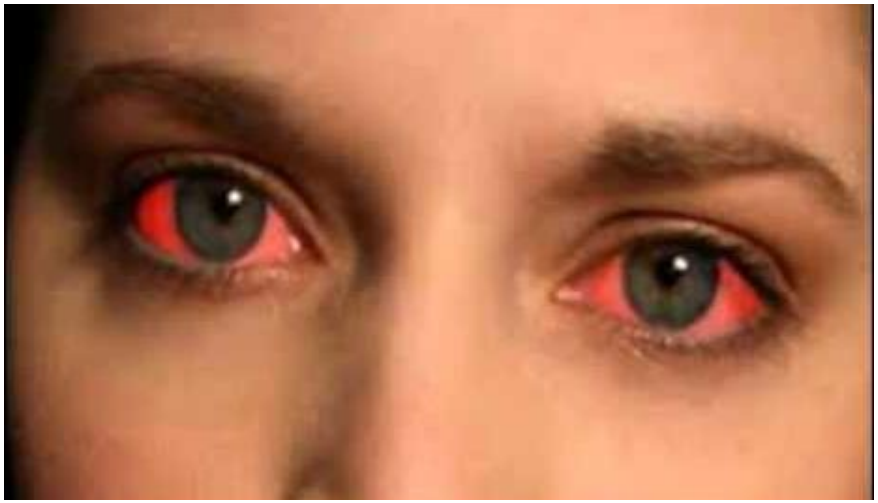
DIFFERENTIATE BETWEEN BENIGN AND VISION THREATENING CAUSES

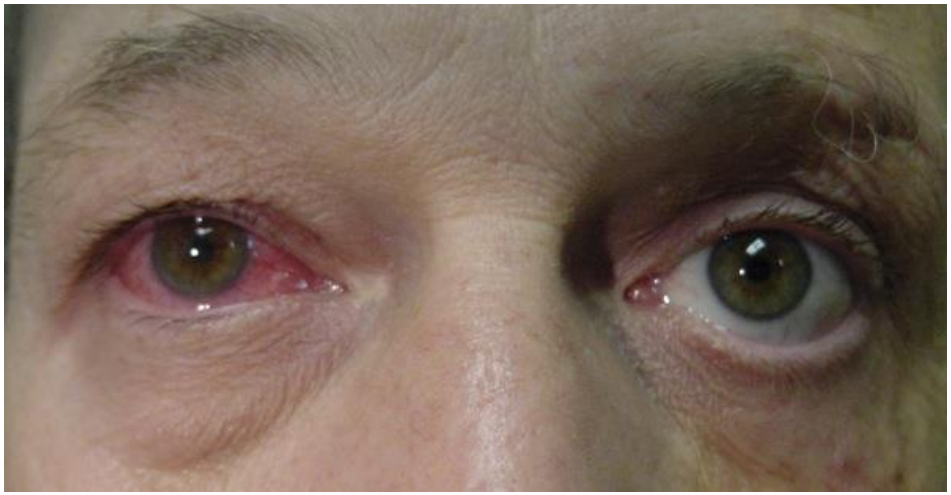
MANAGEMENT (Benign)
WHEN TO REFER (Vision Threatening)

THE SIMPLEST RULE OF THUMB

TREAT!

- Present less than 3 days
- Bilateral
- No associated severe pain and/or vision loss

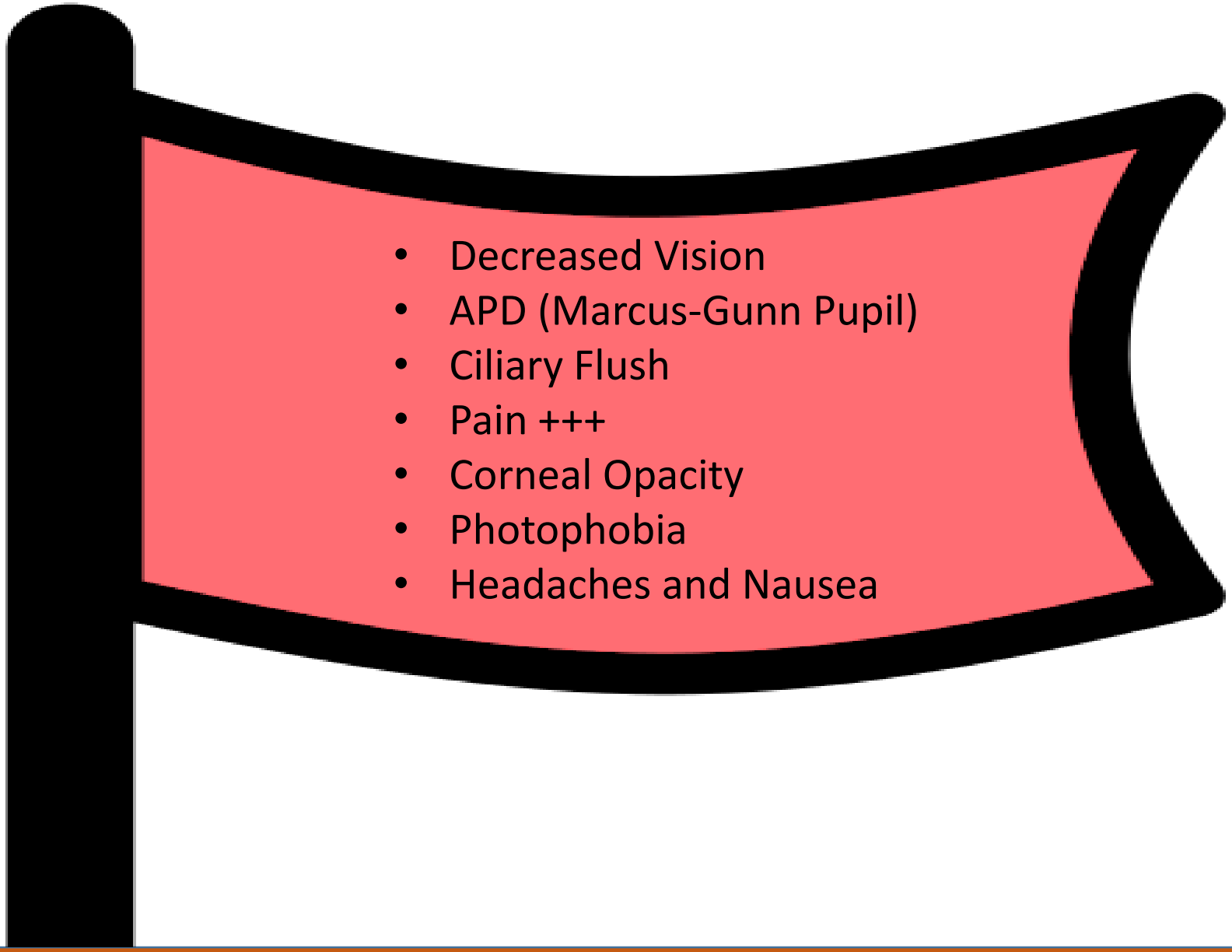


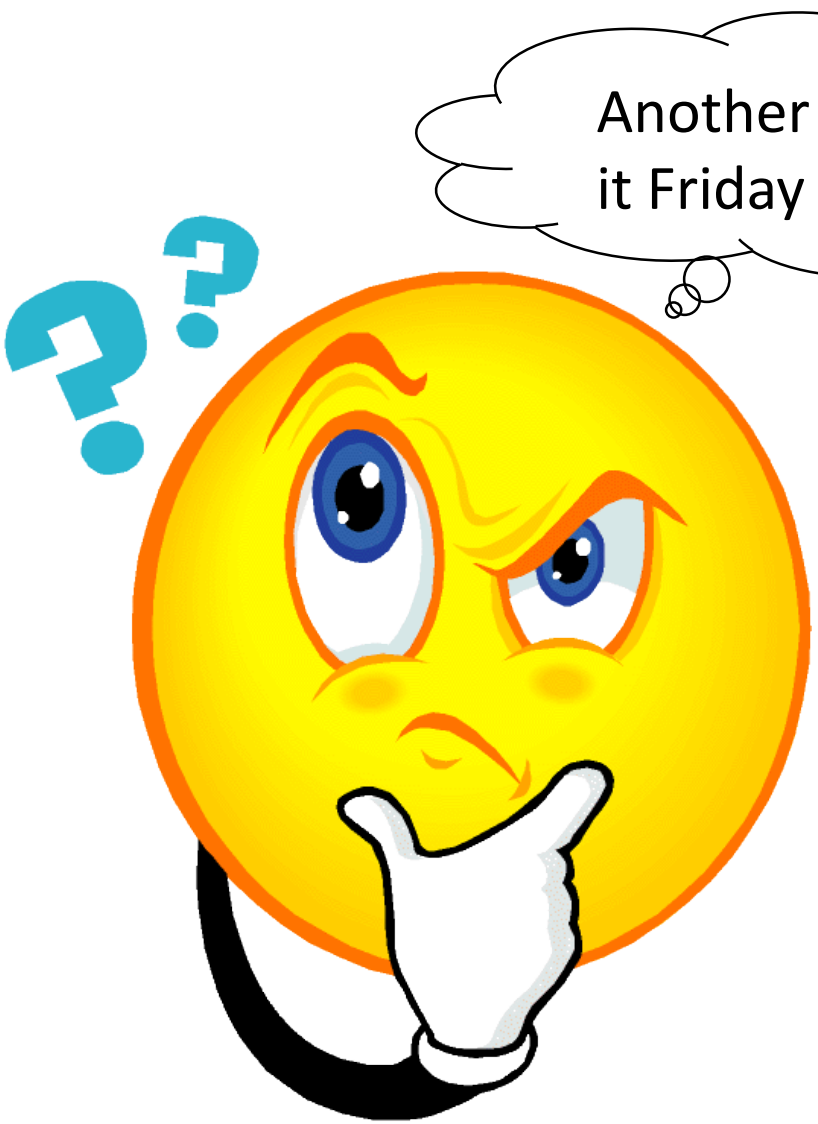


REFER!

- Present more than 3 days
- Unilateral
- Associated pain and/or vision loss
- Contact lens
- History of trauma

RED FLAGS OF RED EYE





THINK ABOUT

Anatomy: Where is it, front to back in the eye?

- Conjunctiva
- Cornea
- Iris
- Episclera
- Sclera
- Angle closure glaucoma

Is it **ACUTE** or **CHRONIC**?

Is it visually threatening?

DIFFERENTIAL DIAGNOSIS OF RED EYE:

Superficial:

- Subconjunctival Hemorrhage
- Conjunctivitis: Allergic, Viral, Bacterial
- Dry Eye

Cornea:

- Foreign Body
- Abrasion
- Ulcer

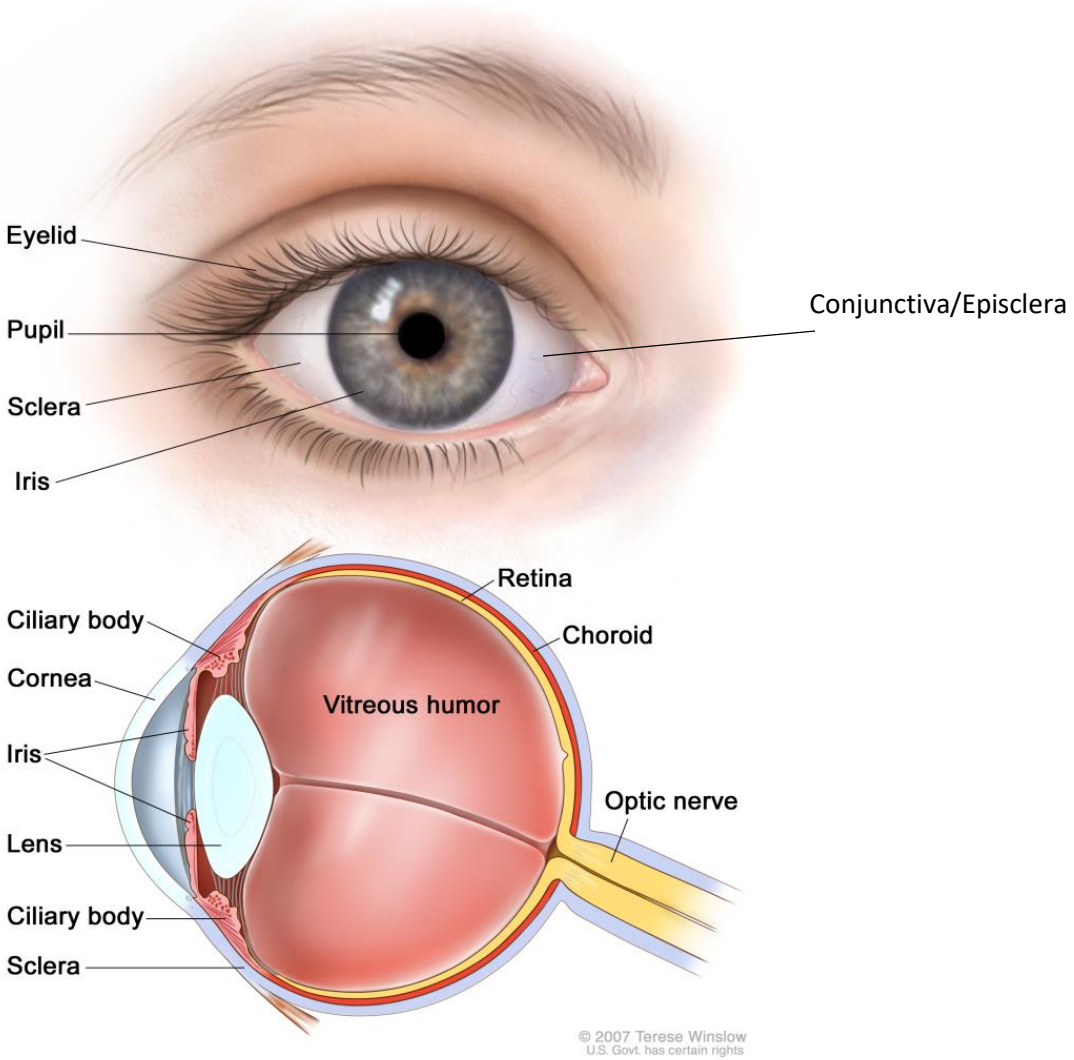
Deeper:

- Episcleritis
- Iritis
- Acute Angle Closure Glaucoma
- Scleritis

What is the patients history?

Onset: Sudden, Progressive, or Constant
Family/Friends with red eye
Trauma
Contact lens wearer
Recent URI
Decreased vision
Pain
Discharge
Itching
Photophobia
Eye rubbing
History of similar episodes
Systemic medical problems: Autoimmune disease

Normal Anatomy



How Do We Approach Red Eye?

- Acute symptoms need quick attention to rule out vision threatening complications
- If vision is affected, it can be serious and needs to be managed soon
- If pain is significant, the patient needs to be treated as quickly as possible
- Minimal or no pain and no vision loss is NOT an acute emergency

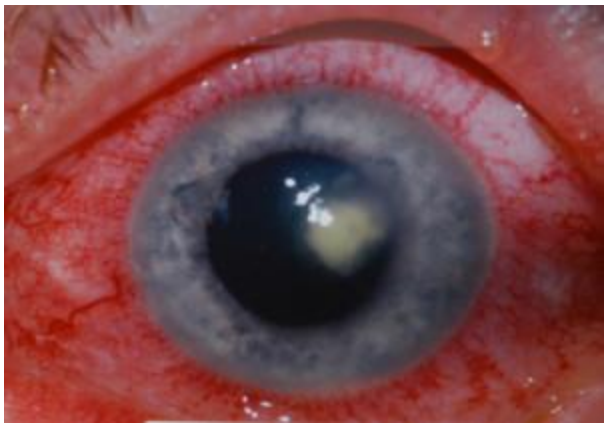
SYMPTOMS

- Decreased VA: inflamed cornea, iritis, acute glaucoma
- Pain: keratitis, ulcer, iritis, acute glaucoma
- Photophobia: iritis
- Colored Halos: acute glaucoma
- Discharge: conj and/or lid inflammation, corneal ulcer

  purulent/mucopurulent = bacterial

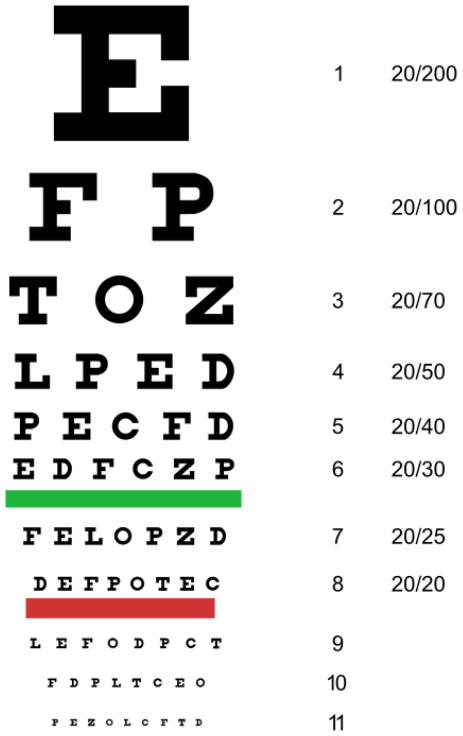
  watery = viral

  scant/white/stringy = allergy or dry eye
- Itching: allergy



PHYSICAL EXAM

- Vision: This is the single most important thing! If the vision is poor, **REFER**!!
- Pupils: Symmetric? Brisk? APD?
- Pattern of redness: Heme? Diffusely injected? Ciliary flush?
- Amount and type of discharge?
- Fluorescein staining?
- Corneal opacities or irregularities?



Interpreting the findings

	Benign Causes	Worrisome Causes
Visual Acuity	Normal (>20/30)	Significantly reduced
EOM	Full	Limited
Pupils	Normal, brisk/equal	Abnormal
External Exam	Normal or isolated lid swelling	Proptosis
Anterior Segment	Mild, diffuse redness	Severe redness corneal opacity hypopyon/hyphema
Fluorescein	None or punctate stain	Frank epithelial defect Dendrite
IOP	Normal	High

MANAGEMENT FOR PRIMARY CARE PHYSICIANS:

- Blepharitis/Stye:
  - Warm compresses, lid care, topical antibiotic ointment/gtts
  - Consider oral ATBs for rosacea

- Sub-Conj Hemorrhage:
  - Artificial tears for comfort

- Viral Conjunctivitis:
  - Cool compresses, tears, NO contact lenses
  - If very uncomfortable and you think they need steroids, REFER!

CONSIDER REFERRAL FOR ANYTHING BEYOND THESE DIAGNOSES!
THEY SHOULD HAVE SLIT LAMP EXAM, IOP CHECK

IMPORTANT SIDE EFFECTS:

Topical Anesthetics

Only use them to aid in exam and diagnosis- NEVER dispense!

Patients love them and will ask for them!

Inhibit epithelial growth and healing, decrease the blink reflex

Can lead to dehydration, injury, infection

Topical Corticosteroids

Dispense with extreme caution

Can make certain conditions worse - HSV

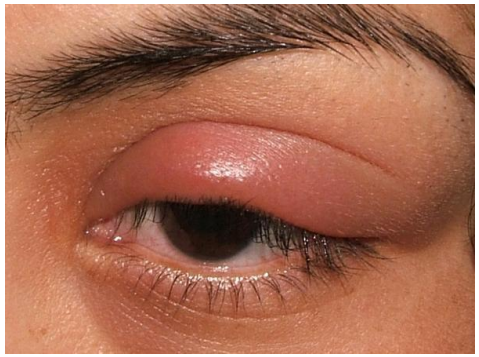
Can mask symptoms - Scleritis

Over the long haul, can lead to cataract formation and/or elevated IOP

REMEMBER:

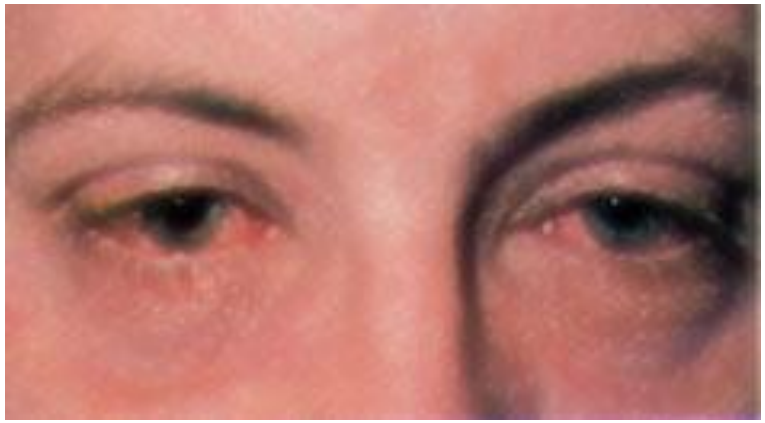
Any condition that fails to improve over 5-7 days, or that GETS WORSE warrants a referral

If it doesn't behave as you would expect, or if the clinical picture changes for the worse (abnormal findings that were not initially present) then REFER!



Case Study

- 21 year old college student with 2 day history of redness both eyes, runny discharge and eyes crusted shut in the morning.
- Started with one eye, but now both eyes are crusty

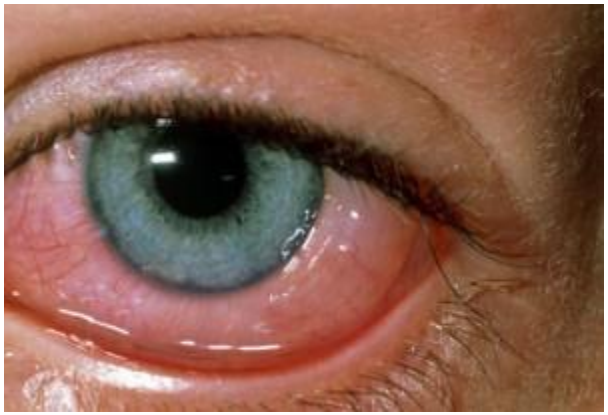


What do we want to know???

- Cold?
- Pink eye contacts?
- Contact lens wearer?

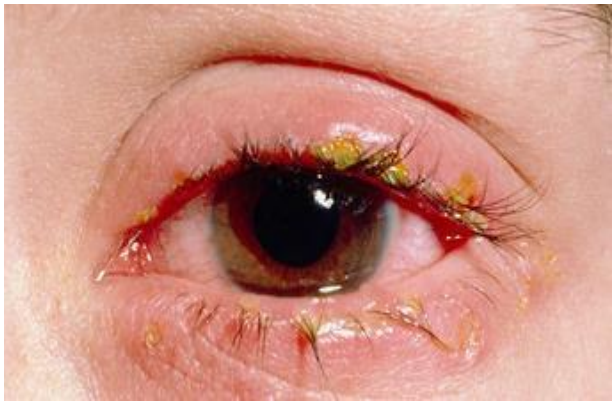
Conjunctivitis: what kind?

- All types generally start in one eye and then involve the other
- Generally uncomfortable, but no significant pain
- Vision is normal
- Tell them apart by the type of discharge



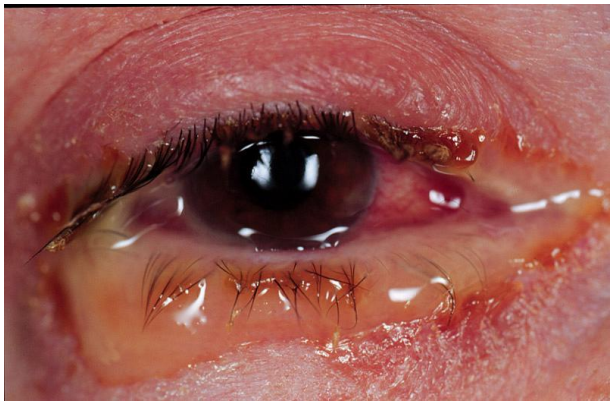
Allergic

- Pollen
- Contact Lens Solution
- Seasonal



Viral

- Adenovirus
- Herpes Virus



Bacterial

- Staph aureus
- H.Flu
- Strep pneumo
- Pseudomonas

Case Study

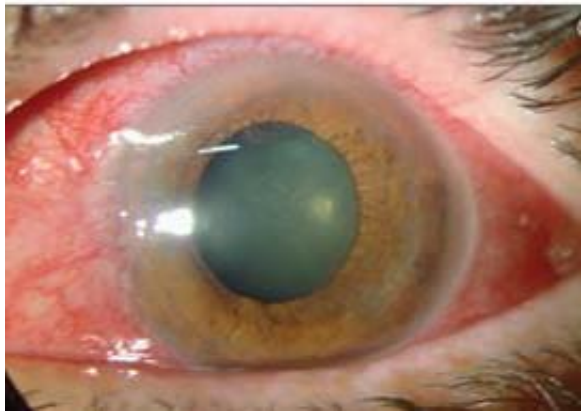
- 38 yo female with 4 day history of increasing redness, photophobia left eye

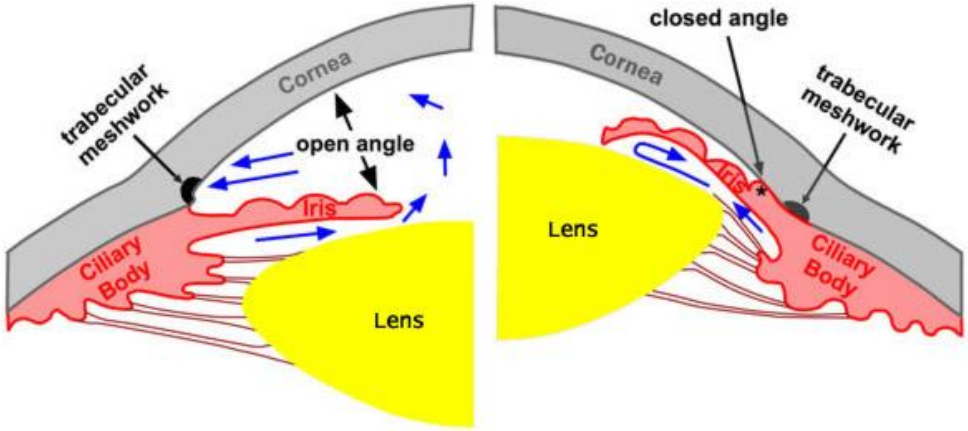
What do we want to know???

- History of trauma?
- Contact lens wearer?
- Previous similar episodes?
- Systemic autoimmune disease?

Case Study

- 72 yo male, presents in acute distress
- c/o worsening pain right eye over past 12 hours with blurred vision, halos around lights
- Also c/o nausea and headache
- On exam: Vision is 20/400, cornea appears hazy, and the pupil dilated and sluggish





What should we do???

Take Home Message

R/O sight-threatening disorders in a patient with red eye

Refer if you have any concern about the severity of the disease

Pain and decreased vision is more concerning than isolated red eye

Always look for ocular signs before making a diagnosis, as symptoms are not always enough

Thank You!


HOTEL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