The Red Eye & the Ophthalmic Technician

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The Red Eye
Anterior Segment Disorders
Ocular Surface Disorders

Palpebral conjunctiva
Bulbar conjunctiva

CONJUNCTIVA
RED EYE: POSSIBLE CAUSES

- Infection
  - Viral
  - Bacterial

- Allergy
  - Seasonal
  - Contact

- Trauma
  - Subconjunctival Hemorrhage
  - Corneal Abrasion
  - Flash Burn

- Chemical
  - Conjunctivitis
  - Burn
RED EYE: POSSIBLE CAUSES

- Inflammation
  - Iritis
  - Episcleritis
  - Scleritis
- Acute Angle Closure
  Glaucoma
- Contact Lens Related
- Dry Eye
Famous Ophthalmic Saying:

“A Good History Helps Solve the Mystery”

Sir Brian Rothchild, M.D.
2011
GET A GOOD HISTORY!

You can usually make a diagnosis here and then confirm it with your exam.
# ONE EYE VS. BOTH

<table>
<thead>
<tr>
<th>ONE EYE</th>
<th>BOTH</th>
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<tbody>
<tr>
<td>Infection</td>
<td>Allergy</td>
</tr>
<tr>
<td>Abrasion</td>
<td>Flash Burn</td>
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<tr>
<td>Chemical</td>
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<tr>
<td>Inflammation</td>
<td>Dry Eye</td>
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<tr>
<td>Acute Glaucoma</td>
<td>Acute Glaucoma (Recent eye exam?)</td>
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<tr>
<td>Contact Lens</td>
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### PAINFUL VS. NONPAINFUL

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<tr>
<td>Chemical</td>
<td>Subconjunctival Hemorrhage</td>
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<tr>
<td>Scleritis/Iritis</td>
<td>Episcleritis</td>
</tr>
<tr>
<td>Contact Lens</td>
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<tr>
<td>Infection (Corneal)</td>
<td>Infection (Conjunctival)</td>
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</table>
QUALITY OF THE PAIN

Superficial/Sharp
Corneal Abrasion
Foreign Body
Flash Burn
Chemical
Contact Lens

Deep/Aching
Iritis
Scleritis
Acute Glaucoma

Irritation
Infection
HSV
Dry Eye (Burning)
DISCHARGE?

YES

Infection
- Viral-clear to mucous
- Bacterial-purulent

Allergy-watery/stringy

NO

Iritis
Episcleritis/Scleritis
Flash Burn
Acute Glaucoma
Dry Eye
HSV
ANY LOSS OF VISUAL ACUITY?

**YES**
- Infection
  - Corneal Ulcer
  - HSV
- Acute Glaucoma
- Iritis
- Corneal Trauma
- Dry Eye (Episodic)

**NO**
- Infection
  - Conjunctivitis
- Scleritis/Episcleritis
- Allergy
PHOTOPHOBIA

Corneal Abrasion
Iritis
Acute Glaucoma
THE EYE EXAMINATION

Vision
External exam
Pupils
Motility exam
Anterior segment
LID EDEMA/ERYTHEMA

YES
Infection
• Viral
• Bacterial
Allergy
Corneal Trauma
Chemical

NO
Subconjunctival Hemorrhage
Acute Glaucoma
Iritis
Scleritis/Episcleritis
Dry Eye
HSV
PALPEBRAL CONJUNCTIVAL INVOLVEMENT

**YES**
- Infection
  - Viral
  - Bacterial
- Allergy
- Chemical
- Contact Lens (GPC)

**NO**
- Subconjunctival Hemorrhage
- Acute Glaucoma
- Iritis
- Scleritis/Episcleritis
- Contact Lens
- HSV
**CORNEAL INVOLVEMENT**

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Examples
HISTORY

68 year old awoke with red eye – no pain, no loss of vision, and no other symptoms.
HISTORY

16 year old with 3 day history of unilateral redness, foreign body sensation, and watery discharge.
HISTORY

20 year old college student, contact lens wearer with redness and decreased vision for 4 days.
HISTORY

60 year old with 1 to 2 days history of worsening unilateral redness, eye ache, and decreasing vision.
27 year old with sudden onset of itchy, watery left eye for 1 day
HISTORY

27 year old with 1 week history of intense deep achy eye pain that is slowly getting worse.
TREATMENT

- **Viral Conjunctivitis** – Supportive, artificial tears, warm compresses, erythromycin ointment
- **Bacterial Conjunctivitis** – Fluoroquinolone, polymyxin B/trimethoprim
- **Allergic Conjunctivitis** – Topical antihistamines/mast cell stabilizers, cold compresses
- **Corneal Abrasion** – Use antibiotic drops TID, no need to patch
VISION-THREATENING RED EYE DISORDERS

- Scleritis
- Chemical injury
- Corneal infection
- Hyphema
- Iritis
- Acute glaucoma