

Say "YES" to Drugs!

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Financial Interests

- Optovue – speakers alliance
- Reichert – speakers alliance
- Haag Streit - speakers alliance
- Ocuflow - consultant

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Agenda

first.... some philosophy
then treatment of.....

- Infection
- Allergy
- Pain
- Iritis
- Procedures
- Glaucoma

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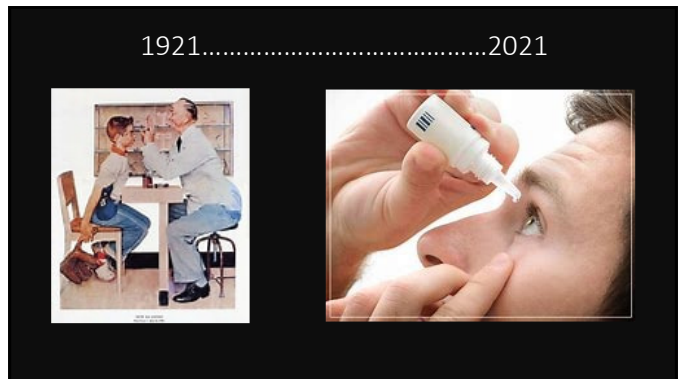
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Optometry Rx Statistics 2013

- 75% of OD prescriptions written are for over-the-counter products!
- 26% prescribed 0-1 medications per day

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In a typical day, on average, how many times do you write a prescription for an ophthalmic medication?

Answer options	Response percentage	Response count
0-1	26.2%	28
2-3	36.4%	39
4-6	18.7%	20
7-8	14.0%	15
Over 8	4.7%	5
Answered question		107
Skipped question		0

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How likely are you to write a prescription for these medications today?

Answer options	Very likely	Somewhat likely	Somewhat unlikely	Very unlikely	Very or somewhat likely (%)	Response count
Dry eye product	64	32	7	4	0.90	107
Antihistamine	50	36	18	3	0.80	107
Ophthalmic over-the-counter	50	28	11	15	0.75	104
Combination (anti-infective + steroid)	45	45	15	2	0.84	107
Anti-infective	45	46	13	2	0.86	106
Steroid	43	43	19	1	0.81	106
Intraocular pressure-lowering	24	33	28	20	0.54	105
Anti-inflammatory (nonsteroid)	10	28	46	23	0.36	107
Antiviral	3	10	47	45	0.12	105
Antifungal	1	1	17	86	0.02	105

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OD's need to diagnose and treat more glaucoma

- 40,000 OD's
- 8,000 Rx 4 -6 Rx's per year
- 4,000 average 12 - 24 Rx's per year
- Only 2,500 - 3,000 treat with more than one medicine and Rx more than 3 x / month

Paul Karpecki, OD, FAAO



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POWER
of the
PAD



Paula Newsome, OD

The image shows a close-up of a white prescription pad with a yellow pen resting on it. The pad has fields for 'For:', 'Address:', and 'Date:'. A red 'Rx' symbol is visible. To the right is a small portrait of Paula Newsome, OD, a woman with dark hair wearing a white lab coat.

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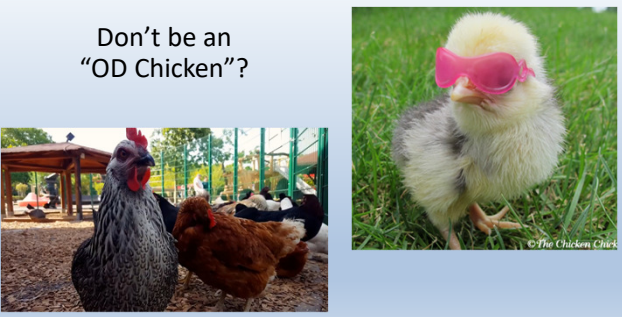
Massachusetts at last!



The image contains two photographs. On the left is the 'Spirit of the American Indian' statue in Boston, depicting a Native American on a horse. On the right is a panoramic view of the Boston skyline, featuring several skyscrapers under a blue sky with light clouds.

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Don't be an
"OD Chicken"?



The image shows two photographs. On the left, a group of chickens of various breeds are gathered in an outdoor enclosure. On the right, a small, fluffy white chick is wearing bright pink sunglasses.

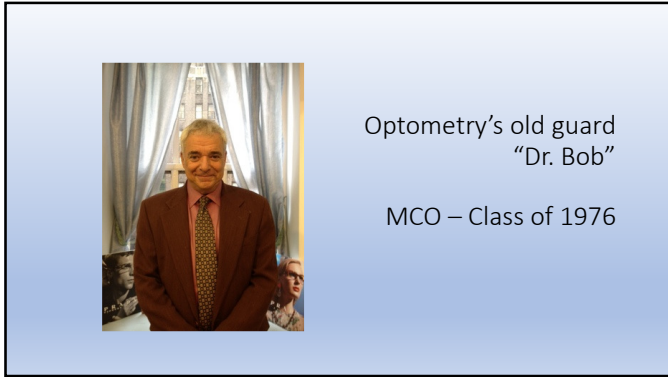
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Optometry School Lessons
Doctor, my eyes are on fire!

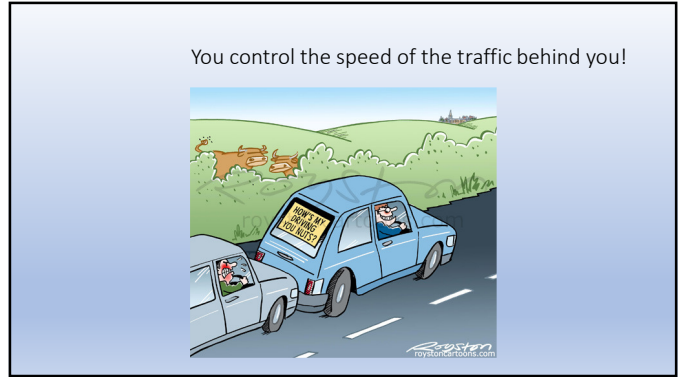


The image contains two illustrations. On the left, a cartoon character is lying down with flames coming out of their eyes. On the right is a 3D-rendered cartoon doctor character with brown hair, glasses, and a white lab coat over blue scrubs.

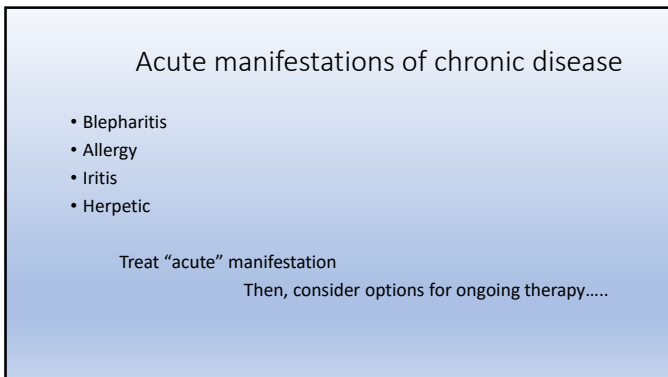
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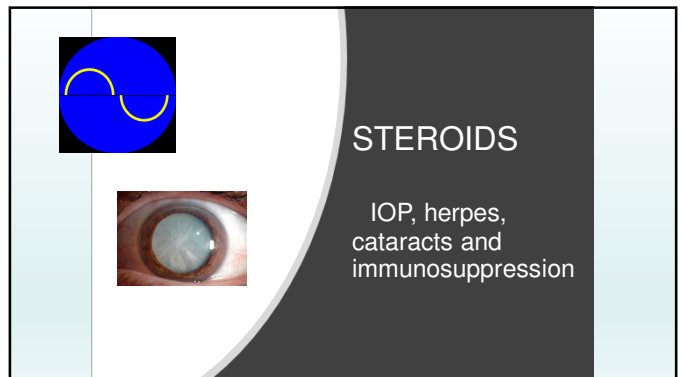
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What 's the difference?

- Fluorometholone .1% (FML) – less IOP effect
- Loteprednol (Lotemax + generic) - less IOP effect
- Prednisolone Acetate 1% (Pred Forte) – more IOP effect
- Difluprednate (Durezol) - most IOP effect

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Be on the alert!

- "SOFT" steroids
- Nasal and Inhaled steroids
- Injected steroids
- Chronic systemic steroids



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Infection





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Infection

- Bacterial conjunctivitis / keratitis is rare
- Most are viral / inflammatory
- Why do "quick clinic" remedies fail?

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“Dr. Evil” and the story of “Blephamide”

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Viral – Follicular Conjunctivitis





- Most common red eye presentation
- Usually, bilateral
- Antibiotic / Steroid treatment

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Hordeolum / Chalazion

- Infection vs. inflammation
- Hot soaks
- Antibiotic / steroid –topical
- Consider oral – (Z-Pak)
- Surgery ?





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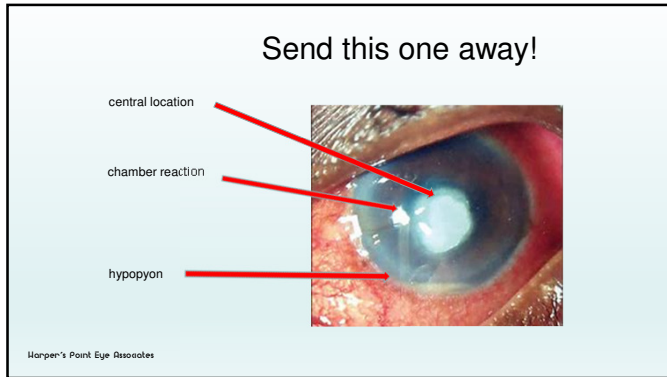
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Watch out for Methicillin-resistant Staphylococcus aureus (MRSA)

- Can present as an acute hordeolum or canaliculitis
- copious purulent discharge
- Send ASAP to emergency room for culture and treatment
- Oral ciprofloxacin and topical vancomycin therapy have been associated with clinical resolution



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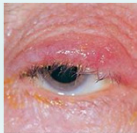
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Blepharitis acute

- Wipes / compress
- Tobramycin Dexamethasone drops / ointment
- Neo-poly-dex drops / ointment
- Azithromycin – oral (Z-Pak)
- Cliradex - wipes



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Blepharitis chronic

- Erythromycin ointment
- Bacitracin ointment
- Polysporin ointment
- Cliradex – wipes
- Wipes / compress
- Doxycycline

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Think about it.....

If a person is uncomfortable enough to schedule a doctor's appointment, they must be very uncomfortable.

They are seeking immediate relief.



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Ocular Allergy

- They've tried "Visene"
- They've tried "tears"
- They've tried Zyrtec, Benadryl.....




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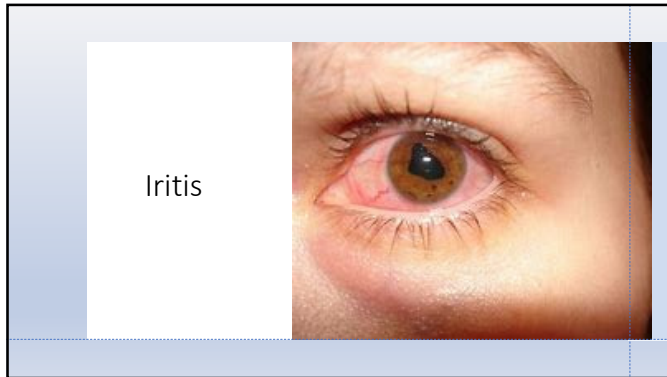
Allergy Treatment

- Topical mast cell inhibitors & decongestants
- Oral mast cell inhibitors & decongestants
- Topical steroids to jump start
- Consider topical cortisone for periocular treatment
- Systemic steroids when severe



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Iritis

- Most common mistake is undertreatment
- Best managed by OD's
- Prioritize Durezol (Difluprednate) as therapy of choice
- Pred Forte 1% (prednisolone acetate 1%) second choice
- Pred Forte 1% - generic – less reliable
- Consider oral NSAID's for pain (400-600 mg ibuprofen QID)
- Be patient with taper
- Monitor and consider IOP meds – consider Combigan
- Consider switch to loteprednol at end of taper
- Always consider herpetic etiology – watch initial

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Iritis and Herpes


- Always consider herpetic etiology
- Watch for high initial IOP
- Consider valacyclovir prophylaxis



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Iritis and dilation

- NOT necessary with trace to 1+ cells
- Dilation reduces pain and risk of synechia
- Consider cyclo 2% or homatropine 1%
- Cyclo + 2.5% phenylephrine in office to break synechia
- Stop dilation when down to trace cells



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Iritis and blood workup

- Not necessary on monocular mild initial presentation or known diagnosis of related disease
- Necessary with bilateral, or monocular severe



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Humira approved for treatment of iritis

It's time to refer to a RHEUMATOLOGIST



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Injury and procedures



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Injury - treatment goals

- Promote healing
- Minimize scarring
- Prevent infection
- Minimize pain



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Injury - treatment

- healing / pain - STEROIDS
- infection – antibiotic prophylaxis
- pain – topical and oral NSAID's / tears



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Conjunctival Injury



alamy stock photo

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- healing / pain - STEROIDS
- infection – antibiotic prophylaxis
- pain – topical and oral NSAID's / tears

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Corneal Injury

- healing / pain - STEROIDS
- infection – antibiotic prophylaxis
- pain – topical and oral NSAID's / tears
- Bandage contact lens



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Lid and Adnexa Injury

- healing / pain - STEROIDS
- infection – antibiotic prophylaxis
- pain – topical and oral NSAID's




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Peri operative
(same as injury)


- Promote healing - STEROIDS
- Prevent infection - antibiotics
- Minimize pain - STEROIDS / tears / NSAIDS



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Glaucoma



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glaucoma

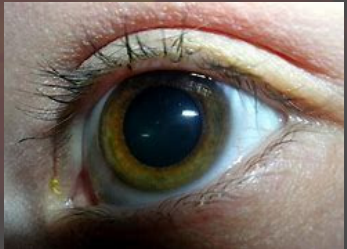
- ✓ Prostaglandins
- ✓ CAI's
- ✓ Alpha Agonists
- ✓ Beta Blockers
- ✓ Cholinergics (pilo)
- ✓ Rho Kinase Inhibitors
- ✓ CAI orals



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Don't be afraid to ...

Add medicine.....



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The Goldmann Equation

$$P_o = F/C + P_v$$

- **F** is the formation of aqueous in microliters per minute (2-3 microliters a minute in normal patients)
- **C** is the facility of outflow in microliters per minute per millimeter of mercury (0.28uL/min in normal patients)
- **P_v** is the episcleral venous pressure in millimeters of mercury (8-9 mm Hg in normal patients)

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Don't be afraid to ...

Make the eye **RED**.....



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Glaucoma first line

- Prostaglandins
- Consider Prostaglandins – PF

Is timolol a reasonable first choice?

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Glaucoma adding more meds

- Alpha agonists
- CAI's
- Beta blockers
- Rho Kinase
- Combinations



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Rho Kinase Inhibitors

- First truly new molecule for IOP reduction in 20 years
- A game changer that can often mitigate a patient's need for fistulating eye surgery.
- Enhances the response of other medications
- Available as stand alone – Rhopressa
- Available in combination with prostaglandin - Rocklatan

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Its time to learn about MIGS! Micro-Invasive Glaucoma Surgery

ISTENT (2012)



BYPASS

ISTENT INJECT (2018)



BYPASS + ADDED
COVERAGE


HYDRUS MICROSTENT (2018)



BYPASS + 90° SPAN
+ SCAFFOLD

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Hydrus Microstent Overview: (KOL) Key Opinion Leader Training




TONY DO
MD, FRCPC, FRCSC, FRCOphth

IVANTIS


Hydrus® Microstent

A: ANTERIOR CHAMBER FACING



- Flexible, biocompatible 8 mm length microstent
- Made out of nitinol (highly biocompatible material used in cardiovascular stents)
- Contoured to match canal curvature
- Three open windows face anterior chamber

B: CANAL FACING



- The canal-facing surface is completely open for unobstructed collector channel access

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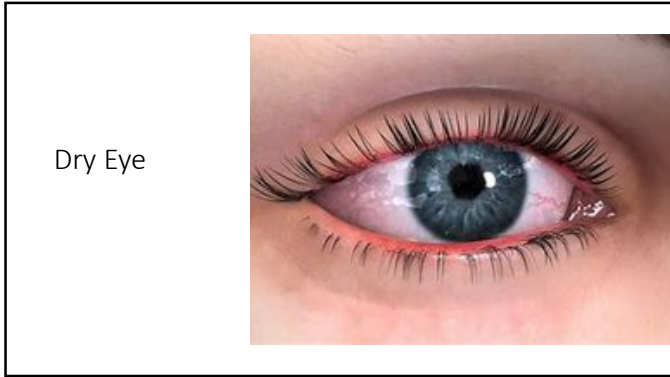
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Translation....
Yea ...more surgeries!!!



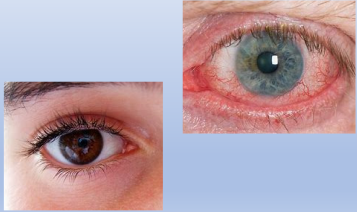
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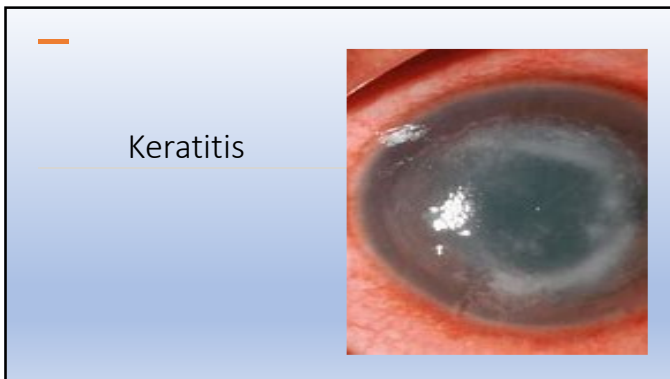
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Dry Eye Medications
Is the dry eye RED or WHITE?

- Tears
- Omega 3's
- Steroids
- Antibiotics / ointments
- Cyclosporin / Lifitegrast
- Autologous serum tears

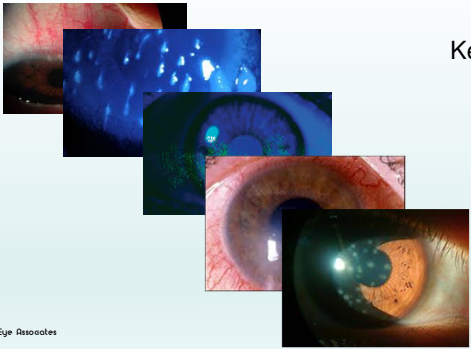


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Keratitis




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Marginal "ulcer"

- antibiotic – steroid
- q3h first day
- follow with q4h x 6 days
- Consider lid therapy
- Counsel – extended wear
- Discard – case and lens
- Suggest – daily lens



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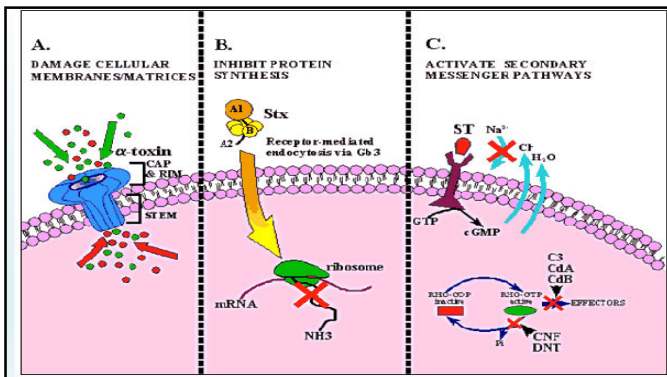
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staph exotoxin

- An exotoxin is a toxin secreted by bacteria.
- An exotoxin can cause damage to the host by destroying cells or disrupting normal cellular metabolism. They are highly potent and can cause major damage to the host.

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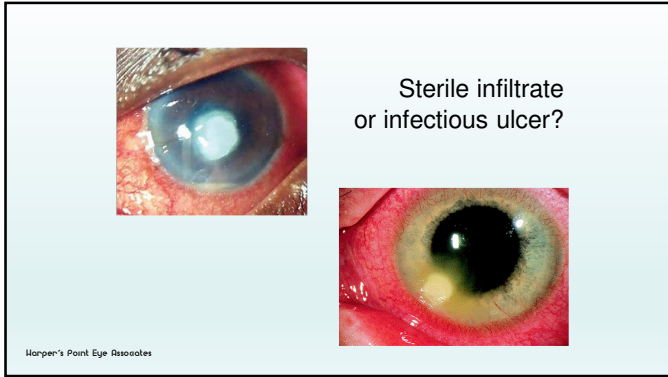
Keratitis

- Cover with antibiotic
- Sooth with tears
- Treat with steroids
- Always consider dry eye / blepharitis etiologies

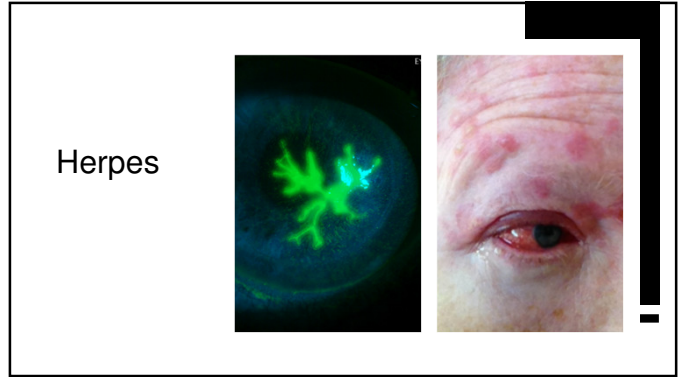


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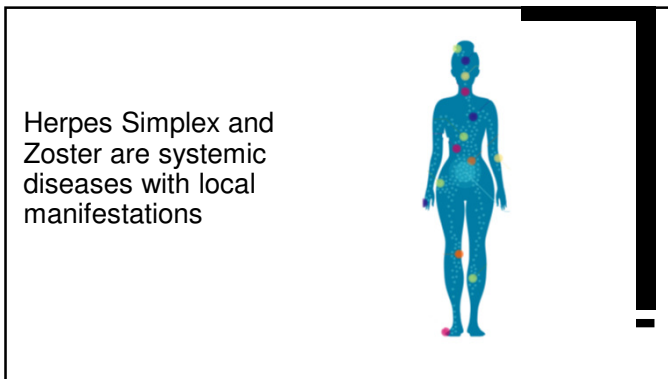
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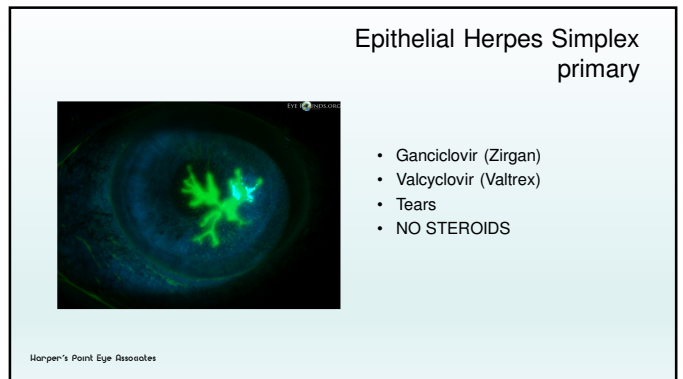
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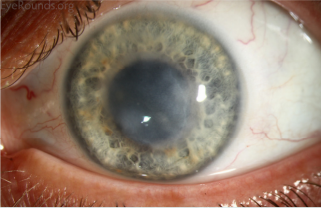


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Stromal Herpes Simplex Uveitis




- Ganciclovir (Zirgan)
- Valcyclovir (Valtrex)
- Tears
- Mydriatics with severe iritis
- STEROIDS (topical)

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Herpes Zoster



- Valcyclovir (Valtrex)
- Tears
- Tobramycin – dexamethasone drops
- Med Pak – systemic steroid

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Herpes Zoster
Herpes Simplex

chronic care

Consider long term treatment plans!

Antivirals
Steroids
Glaucoma Medications

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Mail Order Pharmacies Making Drugs Affordable!

- Eagle pharmacy
- Friends pharmacy
- Rxcrossroads

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Thank YOU !

Elliot M. Kirstein, OD, FAAO
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The Glaucoma and Diabetes Eye Institute
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