

# Oral Pharmaceuticals in Eye Care

## 1 hour

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### Description:

Oral pharmaceuticals are an essential component of ocular disease management, with applications ranging from infectious disease to inflammatory and neuropathic conditions. This course will provide an in-depth review of prescribing principles, drug classes, and patient-specific considerations relevant to optometric practice. Emphasis will be placed on safety, efficacy, and evidence-based decision-making to optimize patient outcomes.

### Objectives:

1. Identify safe prescribing practices and patient-specific factors influencing oral pharmaceutical selection in optometric care.
2. Compare and contrast the mechanisms, indications, and adverse effects of major classes of oral antibacterials, antivirals, and analgesics.
3. Apply evidence-based prescribing principles to case scenarios, with attention to compliance, resistance, and patient education.

### Introduction to Oral Prescribing in Eye Care

- Role of oral medications in optometric practice
- Common ocular indications for systemic therapy
- Overview of classes covered: antibacterials, antivirals, opioids/analgesics

### Concepts in Safe Prescribing

- The ABCD Safety Check
  - Allergies
  - Birth control interactions
  - Coumadin/antiplatelet therapy interactions
  - Diarrhea and GI considerations
- Systemic health review
  - Liver
  - Kidney
  - Lung
  - cardiac status
- Special populations
  - Pregnant
  - Breastfeeding
  - Pediatric
  - Elderly
  - history of substance abuse
- Patient education strategies
  - Dosing schedules and adherence challenges
  - Expected results and follow-up timelines
  - Common side effects
    - GI upset

- headache
- fatigue

## Oral Antibacterials

- **General principles**
  - Bactericidal vs. bacteriostatic
  - Spectrum of activity considerations
  - Risks of overuse and resistance
- **Probiotics and gut health**
  - Antibiotic-associated diarrhea (AAD)
  - Recommendations for timing, dosage, and diet (prebiotics/fermented foods)
- **Classes of antibacterials**
  - **Penicillins:**
    - indications (e.g., dacryocystitis, preseptal cellulitis)
    - dosing
    - side effects
  - **Cephalosporins:**
    - generation-specific coverage
    - ocular uses
    - hypersensitivity risks
  - **Vancomycin:**
    - indications for severe/life-threatening infections
    - nephro/ototoxicity
    - Red-Man syndrome
  - **Tetracyclines (e.g., doxycycline):**
    - anti-collagenolytic activity
    - ocular surface disease
    - contraindications in pregnancy/children
  - **Macrolides (e.g., azithromycin):**
    - dosing regimens
    - indications (e.g., chlamydial conjunctivitis)
    - absorption considerations
  - **Sulfonamides and Trimethoprim-Sulfamethoxazole (Bactrim):**
    - Mechanisms
    - MRSA/toxoplasmosis coverage
  - **Fluoroquinolones:**
    - DNA synthesis inhibition
    - broad ocular use
    - resistance concerns

## IV. Oral Antivirals

- Indications in ocular disease
  - Herpes simplex (blepharitis, keratoconjunctivitis, keratitis, uveitis)
  - Varicella zoster (HZO, keratitis, episcleritis, uveitis)
- Common agents:
  - Acyclovir
  - Valacyclovir

- famciclovir
- Side effects and dosing adjustments (renal clearance, pediatrics, elderly)
- Clinical pearls:
  - category B safety
  - lactose intolerance considerations

## **V. Oral Analgesics/Opioids in Optometry**

- Indications for use in ocular pain management
- Risks of misuse and dependency
- Alternatives and multimodal pain management strategies
- Prescribing regulations and patient counseling

## **VI. Q&A / Discussion**