

# Treatment of Pain: Opioid Choices and Issues for Patient and Practitioner

## 1-Hour Course Outline

Course Category: Pharmacology

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Course Description: This course describes opioid medications, emphasizing pain management in optometry and general pain management. Opioid mechanisms (efficacy/toxicity) will be discussed, including an evaluation of potential addiction, and how to protect both patient and practitioner.

Learning Objectives: After lecture presentation and discussion, participants will be able to:

1. Describe the commonly prescribed pain medication classes in terms of mechanisms, side effects, drug interactions, and applicability for pain management:
  - a. Opioids
    - i. Codeine-based
    - ii. Morphine-based
    - iii. Novel agents
  - b. Combination therapy
2. When given a patient case, choose an appropriate pain treatment plan for the management of ocular pain, in terms of drug(s), dosing issues, duration of treatment, and a monitoring plan for efficacy and toxicity.
3. List systems available to evaluate a patient for potential opioid/substance abuse.

## 1. Pain Definitions

- a. Neuropathic
  - b. Nociceptive
    - i. Acute pain management
    - ii. Chronic pain management
  - c. Pain Scales
  - d. Pictures versus words versus numbers
    - i. Subjective versus objective
2. Systemic pain meds – brief descriptions
    - a. Opioids
      - i. Controlled substance category review

1. Schedule I
  - a. Research
  - b. Heroin
  - c. Medical marijuana
2. Schedule II
  - a. True “narcotics”
  - b. Codeine based
  - c. Morphine based
  - d. Amphetamines
3. Schedule III
  - a. Codeine
    - i. Types
4. Schedule IV
  - a. Tramadol
  - b. Benzodiazepines
5. Schedule V
  - a. No real value

ii. State-by-state restrictions

3. Specific Medications

1. Mechanism of action
  - a. Mu, kappa, delta receptors
  - b. physiology
  - c. Codeine-based
    - i. Codeine
    - ii. Hydrocodone
    - iii. Oxycodone
    - iv. Indications of codeine-based oral analgesics in the ophthalmic setting
  - d. Morphine-based
    - i. Morphine sulfate
    - ii. Hydromorphone
    - iii. Oxymorphone
  - e. Novel agents
    - i. Tramadol
      1. Appropriate use scenarios
2. Adverse effects

- a. Sedation
  - b. Miosis
  - c. Constipation
    - i. Stool softener
    - ii. Stool softener + stimulant
  - d. Euphoria/Dysphoria
  - e. Pruritis
  - f. Addiction potential
  - g. Withdrawal
- 3. Allergy potential and cross-reactions
    - a. Histamine release
    - b. Type-I hypersensitivity reaction
  - 4. Pain control comparisons
    - a. Mild Pain
    - b. Moderate Pain
    - c. Severe Pain
- 4. Agents for reversal of opioid overdose and for Opioid Use Disorder (OUD)
    - i. Specific agents
      - 1. Buprenorphine
      - 2. Naloxone
      - 3. Naltrexone
      - 4. Methadone
    - ii. Appropriate uses
    - iii. Adverse effects and risks
- 2. Drug interactions
    - a. CNS depressant combinations
    - b. Non-opioid choices
      - i. Benefits of using opioid + non-opioid medications together
        - 1. Concept of “synergy”
      - ii. Acetaminophen
        - 1. Adverse effects
        - 2. Pain control
      - iii. NSAIDs
        - 1. Adverse effects
        - 2. Pain control
      - iv. COX-2 agents
        - 1. Mechanism of action – brief description
        - 2. Adverse effects

- a. Comparison to traditional NSAIDs
- 3. Pain control

## 5. Signs of opioid addiction

- a. Identifying behavior of abuse/addiction
  - i. “fast talkers”
  - ii. new patients
  - iii. unequal diagnosis and pain response
  - iv. vitals
  - v. specific requests for agents
  - vi. strange “allergies”
  - vii. excuses
- b. How to respond
  - i. Ways to check
  - ii. PDMP
    - 1. State data-bases
  - iii. Legal issues
  - iv. Ethical issues
- c. Other ways to manage painful ophthalmic conditions