

# Fentanyl

McHenry Western Lake County  
EMS



# Objectives

- During this session we will discuss:
- Class
- Actions
- Indications
- Contraindications
- Dosing/Routes
- How supplied
- Precautions
- Side effects



# Class

- Functional Class: Narcotic analgesic
- Chemical Class: Opiate, synthetic opioid



# Action

- Inhibits ascending pain pathways in CNS, increases pain threshold, alters pain perception by binding to opiate receptors.



# Action

- Short acting narcotic
  - Onset within minutes
  - Peaks within minutes
  - Duration will be 30-60 minutes
- Fast acting, short duration.
- More potent than Morphine.



# Action

- Less histamine release than Morphine which resulted in vasodilation and tachycardia.
- Better for STEMI patients
- Can be reversed with Narcan if necessary.



# Indications

- Treatment of acute pain
- Increasing in use for all types of pain control even non-specific abdominal pain due to its short duration (patient will unmask shortly after administration).
- Goal is to decrease pain by at least 2 points



# Contraindications

- Not opioid tolerant
- Intermittent pain
- Significant respiratory depression
- Hypotension
- Patients with acute or severe asthma
- Hypersensitivity to opiates
- Myasthenia Gravis
- Pregnancy (precaution)





# Dosing and Route

- **FENTANYL** : 1 mcg/kg. (max 100 mcg)  
May repeat 0.5 mcg/kg in 5 min (max 50 mcg) IVP/IN/IM/IO.
- Elderly (>65) or debilitated: 0.5 mcg/kg (max 50 mcg) IVP/IN/IM/IO.
- Additional doses require OLMC. May repeat 0.5 mcg/kg q. 5 min up to a total dose of 300 mcg.



# How supplied

- Supplied in ampoules 100 mcg / 2ml



# Precautions

- Over sedation
  - Use with caution in patients with COPD due to respiratory depression.
  - Alcohol and drugs of abuse – addictive CNS depressant effects.
  - Cardiac Hx- may produce bradycardia; should be used with caution in patients with bradyarrhythmias
  - Hepatic or renal Dx. Caution due to hepatic metabolism and renal excretion of Fentanyl.



# Side effects

- Common:
  - Rash
  - Nausea/vomiting
  - Drowsiness
  - Dry mouth
  - Dizziness
  - Difficulty urinating
  - Constipation (prolonged use)
  - Constricted pupils



# Side effects

- Uncommon:
  - Rigid chest wall
  - Respiratory depression
  - Confusion
  - Hives
  - Itching
  - Slowing or elevated HR
  - Abdominal Pain
  - Flushing



# Protocol

- Pain management:
  - **FENTANYL 1 mcg/kg.** (max 100 mcg) May repeat 0.5 mcg/kg in 5 min (**max 50 mcg**) IVP/IN/IM/IO.
  - Elderly (>65) or debilitated: 0.5 mcg/kg (max 50 mcg) IVP/IN/IM/IO.
  - **Additional doses require OLMC.** May repeat 0.5 mcg/kg q. 5 min up to a total dose of 300 mcg.
  - Goal: Pain is tolerable upon ED arrival or all pain relieving options have been exhausted, pain medications are contraindicated (BP < 90, multiple trauma, AMS, patient is pregnant) or patient refuses the medication.

# Remember!

- Assess and document response to interventions/medications including reassessment of VS after each intervention.



# Case Study

- You are transporting an ACS patient to the ED. You have administered Nitro for pain X3. Your partner would like to administer Fentanyl. What must you consider before the administration?





# Answer

- Pain persists after 3-5 minutes after the third nitro and the patients B/P is greater than 90.



# Case study

- What would be the initial dose for the administration of Fentanyl be?



# Answer

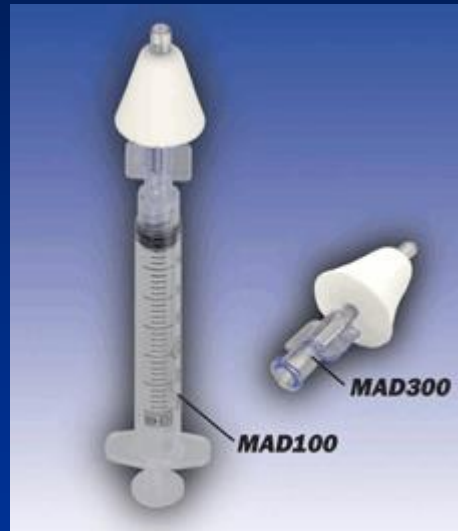
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# Case Study

- You are treating a 13 y/o male with a FX to his arm after a skateboarding accident. What is the preferred route to administer your Fentanyl.



# Answer



- By using the MAD Device and giving the medication Intra-Nasal