This document is for reference only. Please refer to SWO's for specific indications, dosages, and applications

RX

Drug Name: **Morphine Sulfate**
Trade Name: **Duramorph, Morphine, MS, MSO4**
REVISED: **November 1, 2017**

DRUG: MORPHINE SULFATE

Class:

- Narcotic Analgesic
- Opiate
- Schedule II Controlled Substance

Mechanism of Action:

Interacts with opiate receptors decreasing pain impulse transmission at the spinal cord level and higher in the CNS. Morphine is a potent μ-opiate receptor agonist. Also causes peripheral vasodilation increasing venous capacitance and decreases venous return (chemical phlebotomy) by depressing the responsiveness of alpha-adrenergic receptors. Since it decreases both preload and afterload it may decrease myocardial oxygen demand.

Indications:

- Moderate to Severe Pain
- Pulmonary Edema
- Acute Coronary Syndromes

Contraindications:

- Hypovolemia
- Hypotension
- Patients who have taken MAOI within 14 days
- Hypersentivity
- Head injury

Precautions:

- Respiratory depression
- Severe heart disease
- Geriatrics
- Hepatic/Renal disease
- Pregnancy (C) *(increases to D if used for prolonged periods or high doses close to term)*
- May worsen bradycardia or heart block in inferior MI *(vagotonic effect)*
- Use with caution in patients with unstable angina.

Dosage:

Adults:

- IV/IM/IO: 0.1 mg/kg initial dose (Max initial dose 10 mg)
  - Give slowly over 2 minutes
  - May repeat every 10 min as needed at 0.05 mg/kg
  - Max total dose 20 mg

Pediatrics:

- IV/IO/IM: 0.1 mg/kg initial dose (Max initial dose 5 mg)
  - Give slowly over 2 minutes
  - May repeat every 10 min as needed at 0.05 mg/kg
  - Max total dose 15 mg

Onset:

- IV--3-5 minutes
- IM, SubQ--15-60 minutes

Duration:

- 3-7 hours

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Side Effects:

- Dizziness
- Altered L. O. C.
- Hallucinations
- Euphoria
- Mental impairment
- Hypotension
- Lightheadedness
- Bradycardia, Tachycardia
- N/V
- CNS Depression
- Respiratory Depression

Interactions:

- CNS depressants may enchance effects (antihistamines, antiemetics, sedatives, hypnotics, barbiturates, and alcohol
- MAOIs may cause paradoxical excitation

PEARLS

- Morphine in RSI/MAI: Morphine has both a longer duration of action and a longer onset time than fentanyl. It takes as much as 3-5 minutes for morphine to adequately sedate a patient. In addition, morphine may not blunt the rise in ICP, tachycardia or hypertension as well as fentanyl
- Give the medication time to work, reduce the dose for elderly. Repeated doses without giving the initial dose a chance to work may result in profound CNS depression, hypotension, etc.
- Be judicious in your use of narcotic analgesics, the relief of pain and suffering is one of medicines primary goal, however don't "snow" people
- Opiate analgesics can cause spasm of the sphincter of Oddi. The sphincter of Oddi is the muscular valve surrounding the exit of the bile duct and pancreatic duct into the duodenum, at the papilla of Vater. In addition similar effects are believed to be true in renal tract. This is not a contraindication for the administration of Morphine in these situations, simply a consideration
- Narcotic analgesia used to be considered contraindicated in the prehospital setting for abdominal pain of unknown etiology. It was thought that analgesia would hinder the ER physician or surgeon's evaluation of abdominal pain. It is now becoming widely recognized that severe pain actually confounds physical assessment of the abdomen and that narcotic analgesia rarely diminishes all of the pain related to the abdominal pathology. It would seem to be both prudent & humane to "take the edge off of the pain" in this situation, with the goal of reducing, not necessarily eliminating the discomfort. Additionally, in the practice of modern medicine the exact diagnosis of the etiology of abdominal pain is rarely made on physical examination alone, but also includes laboratory tests, x-ray, ultrasound, and CT scan, essential in the diagnosis of abdominal pain. **Therefore medication of abdominal pain is both humane and appropriate medical care**