PHARMACOLOGY & MECHANISM OF ACTIONS:

- Narcotic/opioid Analgesic
- Morphine is a narcotic analgesic, which acts upon opioid receptor sites to reduce pain
- CNS depressant
- Depressed responsiveness of alpha-adrenergic receptors
- Due to cardiac effect of vasodilatation, you will see:
  - Decreased myocardial oxygen consumption
  - Decreased left ventricular end diastolic pressure
  - Decreased cardiac work
  - Possible decreased incidence of cardiac arrhythmias
  - With IV administration, maximum effects will be seen in 7 minutes

INDICATIONS:

- Cardiac chest pain
- Extremity fractures, crush or amputation injuries in the absence of head injury
- Chest and abdominal injuries
- Abdominal pain
- Severe burns
- Acute pulmonary edema
- Back and neck injuries when pain relief is necessary

CONTRAINDICATIONS:

- Hypotension
- Major blood loss
- Head Injury
- Alcohol, tricyclic antidepressant, tranquilizer, sedative, phenothiazine, or other CNS depressant ingestion
- Stop treatment if:
  - Desired effects are achieved
  - Systolic blood pressure drops below 100 mmHg
  - Respiratory rate drops below 12/minute

ADMINISTRATION:

<table>
<thead>
<tr>
<th>ADULT</th>
<th>PEDIATRIC</th>
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<tbody>
<tr>
<td><strong>UP TO 70 YEARS OF AGE</strong></td>
<td><strong>0.05 - 0.1 mg/kg IV/IM/SQ Max. dose of 10 mg</strong></td>
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<tr>
<td>Give 2 – 4 mg IV/IO or 3-5 mg IM every 10 minutes as needed titrated to pain and SBP ≥100 mmHg (max of 10mg)</td>
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<td>Contact OLMC for additional doses.</td>
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PRECAUTIONS & SIDE EFFECTS:

- Respiratory depression, vomiting.
- May cause hypotension or nausea, especially if given rapidly; always administer slowly with dilution.
MORPHINE SULFATE (CONTINUED)

SPECIAL NOTES:
- Narcan and respiratory support should always be at hand when administering Morphine.
- Central nervous system depressant, which can cause respiratory depression, peripheral vasodilatation, decreased cardiac output or pupillary constriction.
- Pregnancy Category C.
- Controlled Substance Schedule II.
- In the presence of major blood loss, the body’s compensatory mechanisms will be suppressed by the use of Morphine and the hypotensive effect will become very prominent. Do not use it in these circumstances.
- Hypotension may develop, especially in older patients, volume depleted patients, or patients who have required elevated systemic vascular resistance for the maintenance of the blood pressure. Hypotension is usually responsive to Narcan administration and the trendelenburg position.
- The analgesic effect of Morphine should not be gauged solely by the total elimination of pain. More importantly, Morphine reduces the perception of pain by the patient while he/she may still recognize the painful stimulus.
- Consider antiemetic if Morphine causes nausea/vomiting.