



- interventions such as chest compressions and ventilations
5. High-potency opioids [See [Key Considerations](#)] may require higher and/or more frequently administered doses of naloxone to reverse respiratory depression and/or to maintain adequate respirations
  6. Regardless of the doses of naloxone administered, airway management with provision of adequate oxygenation and ventilation is the primary goal in patients with confirmed or suspected opioid overdose

### **Patient Safety Considerations**

1. Clinical duration of naloxone
  - a. The clinical opioid reversal effect of naloxone is limited and may end within an hour whereas opioids often have a duration of 4 hours or longer
  - b. Monitor the patient for recurrent respiratory depression and decreased mental status
2. Opioid withdrawal
  - a. Patients with altered mental status secondary to an opioid overdose may become agitated or violent following naloxone administration due to opioid withdrawal therefore the goal is to use the lowest dose as possible to avoid precipitating withdrawal
  - b. Be prepared for this potential scenario and take the appropriate measures in advance to ensure and maintain scene safety
3. EMS clinicians should be prepared to initiate airway management before, during, and after naloxone administration and to provide appropriate airway support until the patient has adequate respiratory effort

### **Notes/Educational Pearls**

#### **Key Considerations**

1. The essential feature of opioid overdose requiring EMS intervention is respiratory depression or apnea, managed by ventilation followed by naloxone
2. Some opioids have additional toxic effects (i.e., methadone can produce QT prolongation and tramadol can produce seizures)
3. Overuse and abuse of prescribed and illegal opioids has led to an increase in accidental and intentional opioid overdoses
4. Opioid combinations:
  - a. Some opioids are manufactured as a combination of analgesics with acetaminophen, acetylsalicylic acid (aspirin), or other substances
  - b. In the scenario of an overdose, there is a potential for multiple drug toxicities
  - c. Examples of opioid combination analgesics:
    - i. Vicodin® is a combination of acetaminophen and hydrocodone
    - ii. Percocet® is a combination of acetaminophen and oxycodone
    - iii. Percodan® is a combination of aspirin and oxycodone
    - iv. Suboxone® is a combination of buprenorphine and naloxone
5. High-potency opioids:
  - a. Fentanyl is 50–100 times more potent than morphine. It is legally manufactured in an injectable and oral liquid, tablet, and transdermal (worn as a patch) forms however much of the fentanyl adulterating the heroin supply are illegal fentanyl analogs such as acetyl fentanyl
  - b. Carfentanil is 10,000 times more potent than morphine
    - i. It is legally manufactured in a liquid form; however, a powder or tablet is the