

Opioid toxicity produces CNS and respiratory depression. Respiratory failure may lead to death. Good supportive care (+/- naloxone) ensures survival.

Toxicity / Risk Assessment

The duration of effect depends on:

- Tolerance, amount ingested, pharmacokinetics
- Short-acting opioids (usually last < 8hours)
- Long acting opioids (can last >12-24 hours)

↑ Toxicity in:

- Opioid naïve, CNS sedative co-ingestion, elderly
- Children: small amounts of opioid especially methadone can cause death

Clinical features:

- Respiratory depression is the most important clinical sign and may lead to inadequate ventilation (oxygen saturations on room air \leq 92%)
- CNS depression: ranging from drowsiness to coma
- Miosis is common, but not present in all cases

Other:-

- Prolonged QT (methadone, oxycodone, loperamide)
- Serotonin toxicity (tramadol, oxycodone, fentanyl, dextromethorphan, pethidine)
- Fentanyl: chest wall rigidity

Management: Attention to ABCs. Continuous SpO₂ monitoring on **room air** to detect early resp depression

Decontamination: Offer activated charcoal to alert patients within 2 hours of ingestion of short-acting opioids, and within 4 hours of ingestion of long-acting opioids

Naloxone: (see separate *Naloxone* guideline)

- Aim to restore respiration, without provoking withdrawal, and then observe for re-sedation.
- Avoid large naloxone boluses as can precipitate acute withdrawal (opioid dependence).

Dosing: place 400 mcg naloxone in 10 mL syringe and make up to 10 mL with N/saline (40 mcg per mL)

- Titrate IV every 60 seconds to response – 1 mL, 2 mL, 3 mL, 4 mL (40, 80, 120, 160 mcg)
- Further 200 mcg increments may be required up to a total dose of 2000 mcg (then consider other DDx)
- **Paediatric** naloxone dose – bolus 10 mcg/kg up to 400 mcg, repeat as required every 60 seconds

Therapeutic Endpoint:

- In **non-opioid dependence:** awake and maintaining SpO₂ > 92% on room air
- In **opioid dependence:** maintenance of airway, AND SpO₂ > 92% on room air - not full reversal NOTE: if hypoxia persists despite normalizing respiratory rate, then seek senior advice
- If re-sedates: administer total naloxone bolus dose required to initially restore respiration and commence naloxone infusion at 2/3 of this dose per hour (more likely with long-acting & MR/SR opioids)

Disposition: (DO NOT DISCHARGE AT NIGHT)

- Adult: observation for minimum of 4 hours (short-acting) / 8 hours (long-acting)
- Children: observation for minimum of 12 hours (short-acting) / 24 hours (long-acting)
- Observe \geq 2 hours post IV naloxone bolus (4 hours for IM) & at least 4-6 hours post naloxone infusion