

# Emergency department management of methadone overdose

Patient: \_\_\_\_\_ Physician: \_\_\_\_\_

Poison centre phone #: \_\_\_\_\_ Physician phone #: \_\_\_\_\_

Relevant details:

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**Clinical features:** Methadone acts for at least 24 hours, much longer than other opioids. Symptoms begin up to 10 hours after the overdose. Early symptoms include nodding off, drowsiness, slurred speech and emotional lability. Respiratory depression occurs later.

**Monitoring:** Check frequently for vital signs, respiratory rate and O<sub>2</sub> sat, and hold a brief conversation to assess alertness. ECG and cardiac monitoring are recommended to check for prolonged QT interval and ventricular arrhythmias (methadone can cause torsades de pointes).

Recommended time intervals for monitoring suspected overdose

- Observe for at least 10 hours post-overdose.
- Discharge if patient is completely asymptomatic during that time.
- If patient becomes symptomatic at any time during the 10 hours, observe for at least 24 hours post-overdose.
- If patient is intubated or on naloxone, continue for at least 24 hours post-overdose.
- Monitor for at least six hours after naloxone or intubation is discontinued.

**Treatment:** Naloxone is a safe treatment in patients who are not physically dependent on opioids (e.g., a patient not in methadone therapy who took methadone at a party). For methadone- or opioid-dependent patients, intubation avoids risks of naloxone-induced withdrawal. Intubation is necessary:

- if RR < 12, hypercapnea is present and desaturation persists despite supplemental oxygen, or
- if the patient fails to respond to naloxone within two minutes.

Recommendations for naloxone dosing:

- If the patient has severe respiratory depression, give 2.0 mg naloxone IV.
- If there is minimal respiratory depression, give 0.01 mg/kg weight to avoid precipitating withdrawal.
- If there is no response after the initial dose, repeat naloxone 2–4 mg every two to three minutes. If there is no response after 10–20 mg naloxone, search for other causes for the coma.
- If the patient responds to naloxone, infuse at two-thirds of the effective dose per hour.
- Give a bolus of one-half the effective dose 15 to 20 minutes after starting infusion.
- Titrate dose to avoid withdrawal, while maintaining adequate non-assisted respirations.

**Precautions:** Ventricular dysrhythmias and cardiac arrest can occur with naloxone-induced withdrawal, especially if patients are withdrawing from other substances. The patient may become agitated and leave against medical advice (AMA). Watch for naloxone-induced emesis. Intubation avoids these risks.

**Departure AMA:** If the physician feels the patient is not safe to leave, a Form 1 should be completed and the patient should be forced to stay. Make sure the patient is not in withdrawal.

**Discharge:** Tell the patient not to take any methadone, alcohol or sedating drugs until seen by a methadone physician the next day. Have a family member or support person observe overnight and call an ambulance if the patient appears more drowsy, is difficult to arouse or snores much more loudly than usual.