

Naloxone Administration in Adults¹

1. Patients who require naloxone (Narcan) usually meet all of the following criteria:
 - Minimal or no response to physical stimulation
 - Shallow respirations or respiratory rate < 8 breaths/minute
 - Pinpoint pupils
2. Stop the administration of the opioid and any other sedative drugs. If given IV, maintain IV access.
3. Summon help. Call Rapid Response Team and ask a coworker to prepare naloxone (see No. 4) and bring it to you. Remain with the patient, continue to attempt to vigorously arouse him or her, and support respirations as indicated by patient status.
4. Ask coworker to mix 0.4 mg (1 ampule) of naloxone and 10 mL of normal saline in a syringe for IV administration.^{2,3}
5. Administer the dilute naloxone solution IV very slowly (0.5 mL over 2 minutes)³⁻⁵ while you observe the patient's response (titrate to effect).
6. The patient should open his or her eyes and talk to you within 1 to 2 minutes. If not, continue IV naloxone at the same rate up to a total of 0.8 mg or 20 mL of dilute naloxone. If no response, begin looking for other causes of sedation and respiratory depression.
7. Discontinue the naloxone administration as soon as the patient is responsive to physical stimulation and able to take deep breaths when told to do so. Keep the syringe nearby. Another dose of naloxone may be needed as early as 30 minutes after the first dose because the duration of naloxone is shorter than the duration of most opioids.
8. Assign a staff member to monitor sedation and respiratory status and to remind the patient to deep breathe every 1 to 2 minutes until the patient becomes more alert.
9. Notify the primary physician and pain service. Document your actions.
10. Provide a nonopioid for pain relief.
11. Resume opioid administration at one half the original dose when the patient is easily aroused and respiratory rate is > 9 breaths/min.
12. Monitor sedation and respiratory status in accordance with the pharmacokinetics of the opioid administered.⁵

IV, intravenous.

- ¹ Orders for opioids should include the administration of naloxone according to the American Pain Society (APS) recommendations, or a protocol incorporating the APS recommendations can be adopted for use by any nurse who suspects a patient is experiencing clinically significant opioid-induced respiratory depression.

- ² If naloxone is available only in a prefilled syringe, 10 mL of saline can be drawn into a 12 mL syringe, leaving enough room to accept the transfer of naloxone from the prefilled syringe. This procedure would ensure correct dilution.

- ³ If IV route is inaccessible, administer undiluted naloxone, 0.4 mg, subcutaneously or intramuscularly. The patient should respond within 5 minutes. If not, repeat dose up to a total of 2 mg. Intranasal naloxone (2 mg) has been shown to be as safe and effective as intramuscular and IV naloxone in the treatment of opioid overdose with a favorable response within 10 minutes; however, an additional dose of naloxone was more likely when given intranasally (see text for discussion and references). More well-controlled research is needed to recommend this route of administration for naloxone.

- ⁴ This is the recommended amount and rate for administering naloxone to reverse opioid-induced respiratory depression. Administering a larger amount in a shorter period of time than this risks reversing more than opioid-induced respiratory depression (e.g., analgesia).

- ⁵ If sedation and respiratory depression occur during administration of transdermal fentanyl, remove the patch; if naloxone is necessary, treatment will be needed for a prolonged period after initial resuscitation, and the typical approach involves a naloxone infusion (see text). Patient must be closely monitored for at least 24 hours after discontinuation of the transdermal fentanyl.

This box provides the recommended titrate-to-effect procedure for administering naloxone (Narcan) to reverse clinically significant respiratory depression. Giving too much naloxone or giving it too fast can precipitate severe pain, which is extremely difficult to control, and increase sympathetic activity leading to hypertension, tachycardia, ventricular dysrhythmias, pulmonary edema, and cardiac arrest. In physically dependent patients, withdrawal syndrome can be precipitated; patients who have been receiving opioids for more than one week may be exquisitely sensitive to antagonists.

References

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