

DIANE'S NGN NCLEX 2026 VISUAL STUDY LIBRARY

Opioid Intoxication

Acute opioid toxicity · respiratory failure · naloxone reversal · harm reduction

PHARMACOLOGY

NEURO / RESPIRATORY

EMERGENCY / MENTAL HEALTH



Content Sourcing Note: Opioid intoxication was not covered in your uploaded reference notes for this library. Content here is drawn from standard NGN NCLEX 2026 resources (Saunders Comprehensive Review, ATI Pharmacology Made Easy, Lippincott NCLEX-RN, SAMHSA Opioid Overdose Toolkit, and CDC Opioid Prescribing Guidelines).



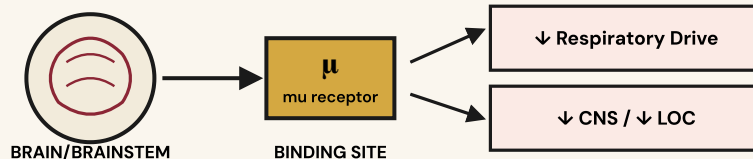
SECTION ONE

1 Definition & Overview

- ▶ **Opioid intoxication** is acute CNS and respiratory depression caused by excessive opioid use — prescribed, recreational, or accidental exposure.
- ▶ **Common agents:** heroin, fentanyl & analogs (carfentanil), oxycodone, hydrocodone, morphine, codeine, methadone, hydromorphone, tramadol.
- ▶ **Why it matters:** Opioid overdose is the leading cause of accidental death in U.S. adults. Fentanyl (50–100× stronger than morphine) drives most fatalities. Respiratory arrest is the killer — and it is fully reversible with naloxone.
- ▶ **NCLEX framing:** Recognize the triad → protect airway → give naloxone → anticipate re-sedation. This is a high-yield priority and clinical-judgment topic.

SECTION TWO

2 Pathophysiology (Simplified)



1

RECEPTOR BINDING

Opioid binds *mu* (μ), *kappa*, and *delta* receptors throughout brain, spinal cord, and GI tract.



2

NEUROTRANSMISSION SHIFT

Inhibits GABA → unopposed dopamine release → *euphoria*. Inhibits substance P → *analgesia*.



3

MEDULLARY DEPRESSION

Brainstem respiratory centers lose CO₂ responsiveness → *slow, shallow, irregular breathing*.



4

MULTI-SYSTEM EFFECTS

Edinger-Westphal nucleus stimulation → *miosis*. Histamine release → *hypotension, flushing, itching*. GI smooth muscle → *constipation*.



5

HYPOXIC CASCADE

Apnea → hypoxemia → bradycardia → cardiac arrest. *Noncardiogenic pulmonary edema* may develop.

3

SECTION THREE

Signs & Symptoms

★ CLASSIC TRIAD



Pinpoint Pupils

Bilateral miosis < 2 mm

RR < 12



Respiratory Depression

Slow, shallow, irregular



↓ Level of Consciousness

Sedation → stupor → coma

● Early / Mild

- Drowsiness, sedation, "nodding off"
- Slurred speech, slow responses
- Pupillary constriction (miosis)
- Nausea, vomiting
- Pruritus, flushing, warm skin
- Mild hypotension, bradycardia
- Hypoactive bowel sounds, constipation
- Urinary retention

● Late / Severe

- RR < 8/min or apnea **RED FLAG**
- Cyanosis (lips, fingertips) **RED FLAG**
- SpO₂ < 90% on room air **RED FLAG**
- Unresponsive / coma (GCS ≤ 8)
- Pinpoint pupils, non-reactive
- Noncardiogenic pulmonary edema (frothy sputum)
- Bradycardia → asystole
- Hypothermia, cold/clammy skin
- Seizures (esp. tramadol, meperidine)

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SECTION FOUR

Priority Nursing Interventions

A**Airway — Open & Protect**

Position supine with head-tilt/chin-lift or jaw-thrust if trauma suspected. **Suction** oropharynx of vomit/secretions. Insert oropharyngeal airway if no gag reflex. Place in **recovery position** after stabilization to prevent aspiration.

B**Breathing — Ventilate & Oxygenate**

Assess RR, depth, SpO₂, ABG. If RR < 8 or apneic → **bag-valve-mask ventilation** at 10–12 breaths/min with 100% O₂. Do NOT rely on O₂ alone — opioids cause hypoventilation, not hypoxemia primarily. Prepare for intubation if no response.

C**Circulation — Access & Monitor**

Establish IV access (large-bore). **Place** on cardiac monitor, pulse oximetry, continuous capnography. **Obtain** BP, HR, temp. IV fluids for hypotension. Check blood glucose — rule out other causes of altered LOC.

D**Drug — Administer Naloxone**

Give naloxone (Narcan) 0.4–2 mg IV/IM/IO/intranasal. Repeat every 2–3 min PRN up to 10 mg. Titrate to adequate respirations — NOT full alertness (avoid precipitating severe withdrawal). Consider naloxone infusion for long-acting opioids (methadone, ER formulations).

E**Evaluate — Anticipate Re-Sedation**

Monitor continuously for at least 4–6 hours (24+ hr for long-acting/extended-release opioids). Naloxone half-life (30–90 min) is SHORTER than most opioids — re-sedation is expected. Watch for withdrawal: agitation, tachycardia, HTN, diarrhea, vomiting, sweating, piloerection.

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SECTION FIVE

Pharmacology — Naloxone

Naloxone

(Narcan, Evzio, Kloxxado)

PURE OPIOID ANTAGONIST

MECHANISM

Competitive antagonist at mu, kappa & delta receptors. Displaces opioid from receptor → immediate reversal of CNS & respiratory depression.

DOSE / ROUTE

0.4–2 mg IV/IM/IO/SQ. Intranasal: 4 mg/0.1 mL one nostril. Repeat q2–3 min PRN. Max 10 mg before reconsidering diagnosis.

ONSET / DURATION

IV: 1–2 min. IM/IN: 2–5 min. **Half-life 30–90 min** — shorter than most opioids → re-sedation risk!

ADVERSE EFFECTS

Precipitated withdrawal: agitation, sweating, tachycardia, HTN, vomiting, diarrhea, piloerection, body aches, yawning, lacrimation.

NURSING CONSIDERATIONS

Titrate to respirations, not consciousness. Monitor 4–6 hr (24 hr for methadone/ER). Have suction ready (vomiting). Reassure patient — withdrawal feels awful but is not life-threatening.

CONTRAINDICATIONS / CAUTIONS

Use cautiously in opioid-dependent patients (severe withdrawal) and pregnancy (may induce labor). No absolute contraindication when respiratory failure is present.

⚠ **DO NOT CONFUSE:** Naloxone reverses opioids. Flumazenil (Romazicon) reverses benzodiazepines. Naltrexone is a long-acting oral form used for maintenance treatment of opioid/alcohol use disorder — NOT for acute overdose.

6

SECTION SIX

NCLEX Test Traps

✗ TRAP ANSWER

"Administer supplemental O₂ via nasal cannula and reassess in 15 minutes."

✓ PRIORITY ANSWER

Bag-valve-mask ventilation + naloxone. Oxygen alone does NOT correct hypoventilation. The patient cannot exhale CO₂.

✗ TRAP ANSWER

"Patient is breathing again — discharge home after observation."

✓ PRIORITY ANSWER

Monitor 4–6 hrs minimum; 24+ hrs for long-acting opioids (methadone, fentanyl patch, ER oxycodone). **Re-sedation is expected** — naloxone wears off first.

✗ TRAP ANSWER

"Give a large naloxone bolus (4 mg IV) to fully wake the patient."

✓ PRIORITY ANSWER

Start with 0.4 mg and titrate. Full reversal precipitates violent withdrawal (vomiting → aspiration, severe pain, agitation, HTN, possible cardiac event).

✗ TRAP ANSWER

"Dilated pupils + sedation = opioid intoxication."

✓ PRIORITY ANSWER

Opioids cause **pinpoint pupils (miosis)**. Dilated pupils + sedation suggest stimulants (cocaine, meth), anticholinergics, or hypoxia. Wrong pupils = wrong diagnosis.

✗ TRAP ANSWER

"Administer flumazenil for suspected opioid overdose."

✓ PRIORITY ANSWER

Flumazenil reverses **benzodiazepines**. Naloxone reverses **opioids**. Mixing these up is a classic distractor.

✗ TRAP ANSWER

"Withhold naloxone — patient is a known opioid user with chronic pain."

✓ PRIORITY ANSWER

If respirations are inadequate, **give naloxone regardless** of prescription status, addiction history, or DNR confusion. Reversing apnea is non-negotiable.

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SECTION SEVEN

Patient & Family Education

1 Recognize overdose: unresponsive, blue/gray lips, slow or absent breathing, pinpoint pupils, gurgling sounds.

2 Call 911 first — every state has Good Samaritan laws protecting bystanders who report overdose.

3 Administer naloxone nasal spray (Narcan 4 mg): one full spray in one nostril; repeat every 2–3 min in alternating nostrils if no response.

4 Give rescue breaths if trained — one breath every 5 seconds while waiting for naloxone to work.

5 Stay with the person in recovery position (on side) until EMS arrives. Re-sedation can occur.

6 Never use alone. Use Never Use Alone Hotline (1-800-484-3731) or have a trusted person present with naloxone.

7 Avoid mixing opioids with alcohol, benzodiazepines (alprazolam, lorazepam), or sedatives — synergistic respiratory depression.

8 Use fentanyl test strips if available — fentanyl contaminates most street drugs and is the leading cause of OD deaths.

9 Safe storage: lock prescription opioids; dispose of unused doses at DEA take-back sites; never share medications.

10 Treatment options: MAT (methadone, buprenorphine/Suboxone, naltrexone), counseling, peer support, SAMHSA Helpline 1-800-662-HELP.

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SECTION EIGHT

Memory Boosters & Mnemonics

CLASSIC TRIAD

PRC

- P** — Pinpoint pupils
- R** — Respiratory depression
- C** — Coma / ↓ LOC

OVERDOSE SIGNS

SLOW

- S** — Sedation
- L** — Low respirations
- O** — O₂ sat low / cyanosis
- W** — Withdrawn (unresponsive)

REVERSAL

NARCAN

- N** — Naloxone IV/IM/IN
- A** — Airway open, BVM ventilate
- R** — Repeat dose q2–3 min
- C** — Continuous monitoring 4–6 hr
- A** — Anticipate withdrawal
- N** — Never leave alone

WITHDRAWAL

SWEATY

- S** — Sweating, sniffles
- W** — Watery eyes, yawning
- E** — Elevated HR & BP
- A** — Aches, agitation
- T** — Tummy upset (N/V/D)
- Y** — Yearning (craving), goose-flesh

PATTERN RECOGNITION TIP:

Pinpoint pupils + slow breathing = Opioids. Big pupils + fast everything = stimulants. Big pupils + dry/red/hot = anticholinergics. Pupils mid-size + sedation only = benzodiazepines (use flumazenil, not naloxone).

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SECTION NINE — NGN FOCUS

NCJMM Clinical Judgment Scenario

CASE SCENARIO

A 24-year-old male is brought to the ED by EMS after being found unresponsive on a friend's couch. EMS reports the friend stated they "used something" together earlier. Vital signs on arrival: BP 88/52, HR 48, RR 6 and shallow, SpO₂ 82% on room air, Temp 96.4°F (35.8°C). Pupils are 1 mm and non-reactive. Skin is cool and cyanotic at the lips. GCS 6. A fentanyl patch is noted on the left upper chest.

1

RECOGNIZE
CUES

What findings are most concerning?

RR 6 & shallow, SpO₂ 82%, pinpoint non-reactive pupils, GCS 6, cyanosis, hypotension, bradycardia, hypothermia, presence of fentanyl patch. **Classic opioid overdose triad is present.**

2

ANALYZE
CUES

What is happening?

Opioid-induced respiratory depression from fentanyl (patch + possible additional use) → hypoventilation → hypoxemia & hypercapnia → CNS depression worsening → impending respiratory arrest. Hypothermia and bradycardia reflect deep CNS suppression.

3

PRIORITIZE
HYPOTHESES

Most likely & most urgent?

#1 Priority: Acute opioid intoxication with imminent respiratory arrest. Differentials to rule out: stroke, hypoglycemia, benzodiazepine OD, head injury — but classic triad + visible fentanyl patch make opioid OD the working diagnosis.

4

GENERATE
SOLUTIONS

Planned actions?

Open airway → bag-valve-mask ventilation with 100% O₂ → **remove fentanyl patch immediately** → administer naloxone 0.4 mg IV (titrate) → IV access, NS bolus → cardiac monitor → check blood glucose → prepare for repeat naloxone dosing + possible infusion (long-acting opioid source).

5

TAKE
ACTION

Implementation order:

① Jaw-thrust, suction; ② BVM at 10–12/min with 100% O₂; ③ Peel off fentanyl patch & cleanse skin; ④ Naloxone 0.4 mg IV push; ⑤ Establish 18-gauge IV, NS at 100 mL/hr; ⑥ Continuous SpO₂, ETCO₂, cardiac monitoring; ⑦ Repeat naloxone q2–3 min PRN; ⑧ Consider naloxone infusion (2/3 of effective bolus dose per hour).

6

EVALUATE
OUTCOMES

Did interventions work?

Expected: RR ≥ 12, SpO₂ ≥ 95%, improving LOC, pupils gradually mid-size. **Reassess** every 5 min initially, then q15 min for 4–6 hrs minimum (24 hr for fentanyl patch — drug continues releasing from skin/subcutaneous depot). **If re-sedation:** redose naloxone, escalate to infusion. **Plan:** social work consult, MAT referral, harm-reduction education before discharge.

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