NGN NCLEX-RN · 2026 TEST PLAN · PHARMACOLOGY

Opioid *Antagonists*

CLASS Mu-Opioid Receptor Antagonists | SYSTEM CNS · Emergency · SUD | RISK High-Alert Medication

KEY DRUGS **Naloxone (Narcan, Kloxxado)** • **Naltrexone (Vivitrol, ReVia)** • **Methylnaltrexone (Relistor)** • **Nalmefene (Opvee)**

DRUG OVERVIEW

Why we give it

- **Opioid overdose reversal** (naloxone — emergency)
- Reversal of **opioid-induced respiratory depression** (post-op, iatrogenic)
- Maintenance therapy for **opioid use disorder** (naltrexone)
- Maintenance therapy for **alcohol use disorder** (naltrexone)
- **Opioid-induced constipation** (methylnaltrexone — peripheral only)
- High-potency synthetic (fentanyl) overdose (nalmefene — longer-acting)

MECHANISM OF ACTION

How it flips the switch

Binds competitively to mu (μ), kappa (κ), delta (δ) opioid receptors → highest affinity for mu → displaces opioid molecules off the receptor → blocks opioid effects → restores respiratory drive & consciousness

RECEPTOR PEARL

- **Pure antagonist** — no intrinsic activity, no euphoria, no analgesia
- Methylnaltrexone = **peripheral only** (does NOT cross blood-brain barrier → preserves central analgesia)

THERAPEUTIC EFFECTS

Signs it's working

- → RR ≥ 12/min & spontaneous breathing
- → SpO_2 ≥ 95% on room air
- → Pupils return to **normal size** (reversal of pinpoint/miosis)
- → Improved **level of consciousness** (responds to stimuli, arouses)
- → Restored **BP & HR**
- → Return of **gag reflex** & protective airway

SIDE EFFECTS & ADVERSE REACTIONS

What to watch for

COMMON

- Nausea, vomiting
- Sweating, tremors
- Tachycardia, HTN
- Restlessness, agitation
- Headache, muscle aches

SERIOUS

- **Acute opioid withdrawal** (severe)
- **Flash pulmonary edema**
- **Ventricular arrhythmias**
- **Seizures**, cardiac arrest
- **Hypertensive crisis**
- Hepatotoxicity (naltrexone, high dose)

PRIORITY NURSING CONSIDERATIONS

Assess · Monitor · Hold · Notify

MONITOR

- → **RR, SpO_2, LOC** q2–3 min during reversal
- → Continuous ECG, BP, HR
- → Sedation scale
- → Signs of **renarcotization**
- → LFTs (naltrexone)

HOLD / AVOID

- → **Naltrexone** if opioids used within **7–10 days**
- → Naltrexone in acute hepatitis / liver failure
- → Methylnaltrexone in **GI obstruction**
- → Full-dose push if pt breathing spontaneously

NOTIFY PROVIDER

- → RR stays **<12** after dose
- → Signs of pulmonary edema (pink frothy sputum, crackles)
- → Chest pain, dysrhythmia
- → No response after repeat doses
- → Severe withdrawal symptoms

DRUG INTERACTION ALERT

Naloxone reverses ALL opioids — including therapeutic analgesia. Post-op patients will experience **severe pain**. Titrate to respirations, not full reversal.

LABS & DIAGNOSTICS

Numbers that matter

- **SpO_2** → critical **<90%**
- **RR** → critical **<12/min**
- **ABGs** → respiratory acidosis in overdose (↑ $PaCO_2$, ↓ pH)
- **Urine drug screen** → required before starting naltrexone
- **LFTs (AST/ALT)** → baseline & ongoing for naltrexone
- **Naloxone challenge test** → confirms opioid-free state before naltrexone

ADMINISTRATION & SAFETY

Routes, dosing, high-alert rules

NALOXONE (EMERGENCY)

- Routes: **IV** (preferred), IM, SQ, **intranasal**
- IV dose: 0.04–0.4 mg, titrate **q2–3 min**
- Narcan nasal spray: **4 mg**/spray, alternate nostrils
- Onset: IV 1–2 min · IN 2–3 min
- **Half-life 30–90 min** — SHORTER than most opioids

NALTREXONE (MAINTENANCE)

- PO 50 mg daily **OR** IM 380 mg monthly (Vivitrol)
- **7–10 days opioid-free** required before 1st dose
- IM: deep intragluteal, **Z-track**, alternate sides
- Never combine with opioid analgesics

HIGH-ALERT MEDICATION

Naloxone = continuous monitoring **≥ 2 hours** after last dose. Opioid may outlast the antagonist → **resedation & respiratory arrest**.

PATIENT EDUCATION

What they MUST know

NALOXONE (NARCAN)

- → Carry Narcan if at risk or family member uses opioids
- → **Call 911 EVEN AFTER giving Narcan** — it wears off
- → Place person in recovery position
- → Do NOT take opioids after reversal → **fatal overdose** when naloxone wears off

NALTREXONE

- → Wear **medical alert bracelet** — emergency providers must know
- → Taking high-dose opioids to "override the block" = **fatal overdose**
- → Report jaundice, dark urine, RUQ pain (hepatotoxicity)
- → Avoid alcohol; attend counseling/support programs

NCLEX TEST TRAPS ⚠

Where students lose points

- **SHORT half-life** — opioid outlasts naloxone → **resedation** is the #1 trap
- **TITRATE** naloxone to respirations — full dose causes severe withdrawal, pulmonary edema
- **Naltrexone is NOT for acute overdose** — long-acting, maintenance only
- **7–10 day rule**: opioid-free before naltrexone OR **precipitated withdrawal**
- **Methylnaltrexone** does NOT cross BBB → will NOT reverse sedation or respiratory depression
- **ABCs FIRST**, then naloxone — airway & rescue breaths precede the drug
- Post-op pt with naloxone = pain returns; plan for **non-opioid analgesia**
- Patient on naltrexone needs surgery → **cannot use opioid analgesia** effectively

MEMORY BOOSTERS

Mnemonics & recall patterns

NARCAN MNEMONIC

- **N**egates narcotics
- **A**wakens quickly
- **R**everses respiratory depression
- **C**areful — short-acting
- **A**gain — repeat doses needed
- **N**ow monitor ≥ 2 hours

OPIOID TOXIDROME TRIAD

- 🔹 **Pinpoint pupils** (miosis)
- 🔹 **Respiratory depression** (RR <12)
- 🔹 **Altered mental status** (coma/stupor)
- = GIVE NALOXONE

CLASS PATTERNS

- **Nal-** prefix = antagonist family
- **-one** ending across class
- Nalox**ONE** = NOW (emergency)
- Naltrex**ONE** = LATER (maintenance)
- **Methyl**naltrexone = peripheral (gut only)

★ AUTO-INCLUDE · DRUG CLASS COMPARISON

Most Tested Drugs in This Class

Naloxone
NARCAN · KLOXXADO

ROUTE
IV · IM · SQ · Intranasal

DURATION
30–90 min (SHORT)

USE
Emergency overdose reversal

KEY POINT
Resedation risk — monitor ≥ 2 hrs

Naltrexone
VIVITROL · REVIA

ROUTE
PO daily · IM monthly

DURATION
24 hr (PO) · 30 days (IM)

USE
Opioid & alcohol use disorder

KEY POINT
7–10 day opioid-free rule + LFTs

Methylnaltrexone
RELISTOR

ROUTE
SQ · PO

DURATION
~8 hrs

USE
Opioid-induced constipation

KEY POINT
Peripheral only — no CNS reversal

Nalmefene
OPVEE

ROUTE
Intranasal · IV

DURATION
Longer than naloxone

USE
Overdose (esp. fentanyl)

KEY POINT
Durable reversal for high-potency opioids

FINAL SECTION · MANDATORY

Clinical Judgment *Snapshot*

#1 PRIORITY RISK

RENARCOTIZATION — the opioid outlasts naloxone, respiratory depression returns, patient can arrest hours after "reversal."

WHAT HARMS THE PATIENT FIRST?

Respiratory depression returning → hypoxia → cardiac arrest. The patient looks fine, then crashes once naloxone wears off.

FIRST NURSING ACTION

1. **ABCs** — open airway, rescue breaths
2. Activate code / call 911
3. Administer naloxone (titrate to RR)
4. Continuous monitoring ≥ 2 hrs
5. Prepare for repeat dosing

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OPIOID ANTAGONISTS · REVIEW IN < 60 SEC