NCLEX 2026 ▸ MATERNAL / NEWBORN ▸ HIGH YIELD

Neonatal Abstinence Syndrome

A constellation of withdrawal signs in newborns prenatally exposed to addictive substances — most commonly opioids. The nurse's role centers on early identification (Finnegan scoring), neuroprotective care, and family-centered support.

SYSTEM: MATERNAL/NEWBORN | CLUSTER: PEDIATRIC PHARMACOLOGY | NCJMM ALIGNED | 2026 TEST PLAN

SOURCE DISCLOSURE: This topic was not included in the uploaded personal notes. Content compiled from standard NCLEX references: *Saunders Comprehensive Review for the NCLEX-RN (2026)*, *ATI Maternal Newborn Nursing*, *Lippincott Illustrated Reviews: Pharmacology*, the *AAP Clinical Report on Neonatal Drug Withdrawal*, and *CDC Treating for Two* guidance.

01 Definition & Overview

WHAT IT IS · WHY IT MATTERS

- **Neonatal Abstinence Syndrome (NAS)** is a drug withdrawal syndrome occurring in newborns following prenatal exposure to addictive substances that cross the placenta during pregnancy.
- **Most common cause:** maternal opioid use (heroin, methadone, buprenorphine, oxycodone, fentanyl). Also caused by SSRIs, benzodiazepines, alcohol, barbiturates, and nicotine.
- **The term Neonatal Opioid Withdrawal Syndrome (NOWS)** is used specifically when opioids are the known exposure.
- **Why it matters:** Untreated NAS can cause seizures, severe dehydration, failure to thrive, and long-term neurodevelopmental delays. Early scoring and intervention prevent escalation.

Onset: Short-Acting

- Heroin, oxycodone
- Symptoms within **24–72 hrs**
- Peak: 48–72 hrs

Onset: Long-Acting

- Methadone, buprenorphine
- Symptoms **5–7 days** after birth
- May discharge before onset

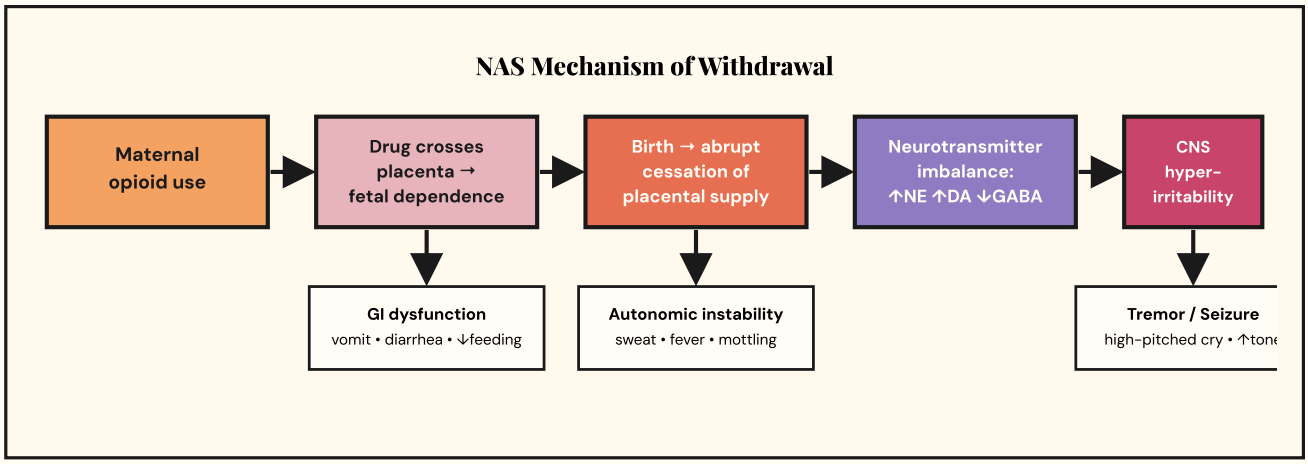
Onset: SSRI / Non-Opioid

- SSRI exposure: 24–48 hrs
- Alcohol: within 12 hrs
- Benzos: variable, delayed

02 Pathophysiology

MECHANISM · STEP BY STEP

- Maternal opioid use → drug crosses the placenta → fetus develops **physiologic dependence**.
- At birth → abrupt cessation of placental supply → CNS neurotransmitter imbalance (excess norepinephrine, dopamine, glutamate; ↓ serotonin, GABA).
- Result → **CNS hyperirritability**, autonomic instability, GI dysfunction, and respiratory dysregulation.



03 Signs & Symptoms

CNS · GI · AUTONOMIC · RESPIRATORY

🧠 CNS

- **High-pitched cry** (hallmark)
- Hyperirritability
- Tremors (disturbed & undisturbed)
- ↑ Muscle tone, hyperreflexia
- Exaggerated Moro reflex
- Poor sleep (<1–3 hrs after feed)
- Yawning, sneezing
- **Seizures** 🚨 (severe)

🍼 GI

- Poor / uncoordinated feeding
- Frantic, excessive sucking
- Vomiting, regurgitation
- Watery / loose stools
- Weight loss
- Dehydration risk

💧 Autonomic

- Diaphoresis (sweating)
- Fever (low-grade)
- Mottling of skin
- Nasal stuffiness
- Frequent sneezing
- Lacrimation

🫁 Resp / Skin

- Tachypnea (>60/min)
- Nasal flaring
- Excoriation (knees, elbows, chin)
- Facial scratches

🚨 **RED FLAGS — ESCALATE IMMEDIATELY**

Seizure activity • Apnea / SpO_2 < 90% • Refusal to feed × 2 consecutive feeds • Weight loss > 10% birth weight • Severe dehydration • Finnegan score ≥ 8 on three consecutive scorings or ≥ 12 on two consecutive scorings.

📋 **FINNEGAN NEONATAL ABSTINENCE SCORING TOOL (FNAST)**

Score every **3-4 HOURS** (or with each feed) for the first 4–7 days. Includes 21 items across CNS, metabolic/vasomotor, and GI categories. A score ≥ 8 typically triggers pharmacologic treatment. Newer alternative: the **ESC (EAT, SLEEP, CONSOLE)** approach — assesses function rather than symptoms; reduces unnecessary medication.

04 Priority Nursing Interventions

ABC · SAFETY · NEUROPROTECTION

A — Airway / Breathing

- Monitor RR & SpO_2 continuously; report RR > 60
- Suction nares gently for stuffiness (bulb syringe)
- Position head of bed slightly elevated; side or supine for sleep (NEVER prone unattended — SIDS risk)
- Have suction & resuscitation equipment at bedside

C — Circulation / Hydration

- Daily weights (same scale, same time)
- Strict I&O including stool count & quality
- Monitor for dehydration: ↓ urine output, sunken fontanel, tachycardia
- IV fluids if oral intake inadequate

Neuroprotective Environment

- **Swaddle snugly** with hands midline (contains tremors)
- **Low stimulation:** dim lights, quiet voices, minimize handling
- Cluster care to allow long sleep periods
- Slow, gentle, rhythmic rocking — vertical motion
- Pacifier for non-nutritive sucking
- Skin-to-skin (kangaroo) care with stable parent

Feeding & Skin

- Small, frequent feeds (every 2–3 hrs)
- High-calorie formula (24 kcal/oz) if poor weight gain
- Breastfeeding ENCOURAGED if mom on MAT (methadone/buprenorphine) & HIV-negative & no illicit drug use
- Burp frequently; upright after feeds
- Protect skin: long sleeves, mittens, barrier cream to chin/knees

Assessment & Documentation

- Finnegan or ESC scoring every 3–4 hrs
- VS with each scoring
- Maternal urine toxicology (with consent per facility)
- Newborn urine, meconium, or umbilical cord toxicology — meconium reflects 2nd/3rd trimester exposure

Family-Centered Care

- Use nonjudgmental, trauma-informed language
- Refer mother to addiction treatment / MAT program
- Social work consult; coordinate with CPS per state law
- Teach safe sleep (ABCs of safe sleep)
- Encourage rooming-in — reduces severity & length of stay

05 Pharmacology

PHARMACOLOGIC MANAGEMENT OF NAS

DRUG / CLASS	USE / MECHANISM	KEY SIDE EFFECTS	NURSING CONSIDERATIONS
Morphine sulfate OPIOID	First-line for opioid withdrawal. Replaces deficient opioid; tapered slowly.	Respiratory depression, hypotension, sedation, constipation	Continuous RR & SpO_2 monitoring. Have **naloxone** available. Wean per Finnegan scores.
Methadone LONG-ACTING OPIOID	Alternative first-line. Long half-life = stable serum levels.	Respiratory depression, QT prolongation	Monitor ECG. Slow taper over 1–2 weeks.
Buprenorphine PARTIAL AGONIST	Emerging first-line; shorter length of treatment than morphine.	Respiratory depression (ceiling effect), sedation	Sublingual route in neonates. Monitor for over-sedation.
Clonidine ALPHA-2 AGONIST	Adjunct therapy. Reduces sympathetic outflow → calms autonomic symptoms.	Hypotension, bradycardia, sedation	Monitor BP & HR. Do NOT stop abruptly — rebound hypertension.
Phenobarbital BARBITURATE	For non-opioid withdrawal (sedative/alcohol) or seizure control.	Sedation, respiratory depression, paradoxical hyperactivity	Monitor serum levels. Long half-life — risk of accumulation.
Naloxone (Narcan) ⚠ AVOID	**CONTRAINDICATED** in infants of opioid-dependent mothers.	Precipitates acute, severe withdrawal & seizures	NEVER give to neonate of known opioid-using mother — even if respiratory depression at birth. Use ventilatory support instead.

⚠ NALOXONE WARNING

Administering naloxone to an opioid-exposed neonate will precipitate ABRUPT, SEVERE WITHDRAWAL AND SEIZURES. If respiratory depression is present at delivery, support ventilation with bag-mask — do not reverse with naloxone.

06 NCLEX Test Traps

WHAT STUDENTS CONFUSE · PRIORITY PITFALLS

⚠ TRAP	✓ CORRECT
"The baby is crying and irritable — let's hold and rock the infant in a brightly lit nursery to soothe."	NAS infants are **overstimulated**. Provide swaddling, dim lighting, low noise, and minimal handling. Cluster care.
⚠ TRAP "Mother is opioid-dependent — breastfeeding is contraindicated."	✓ CORRECT Breastfeeding is **encouraged** if mother is on stable MAT (methadone/buprenorphine), is HIV-negative, and is not using illicit drugs. It reduces NAS severity.
⚠ TRAP "Newborn has respiratory depression and mother used heroin — give naloxone immediately."	✓ CORRECT **NEVER give naloxone** to an opioid-exposed neonate — it precipitates acute withdrawal and seizures. Support ventilation instead.
⚠ TRAP "Methadone-exposed baby is fine after 48 hours — discharge home."	✓ CORRECT Methadone withdrawal is **delayed** (onset 5–7 days). These infants need extended monitoring (often 4–7 days minimum) before discharge.
⚠ TRAP "Frantic sucking on the fist means the baby is hungry — feed immediately, large volumes."	✓ CORRECT Frantic sucking is a **withdrawal sign**, not necessarily hunger. Offer pacifier first; feed small, frequent volumes; high-calorie formula if poor gain.
⚠ TRAP "Score is climbing — taper the morphine to wean faster."	✓ CORRECT Pharmacologic treatment is titrated **up** if Finnegan scores rise (≥ 8 on 3 consecutive, or ≥ 12 on 2 consecutive). Wean only when scores are consistently low.

07 Patient & Family Education

DISCHARGE TEACHING · LONG-TERM CARE

🍼 Caregiving at Home

- Continue swaddling, low-stim environment, vertical rocking
- Small, frequent feeds; burp often
- Monitor weight gain weekly with pediatrician
- Recognize escalating symptoms: tremors, vomiting, fever, poor feeding → call provider

😴 Safe Sleep (ABCs)

- **A**lone — no co-sleeping
- **B**ack — supine position to sleep
- **C**rib — firm mattress, no bumpers, blankets, or toys
- Avoid overheating; room-share for first 6–12 months

💊 Medication Wean

- If discharged on a weaning protocol: give exact doses on schedule
- Never skip or double doses
- Follow up with neonatology / pediatrics as scheduled
- Store medications safely; lock box at home

🤝 Maternal Support

- Continue MAT program (methadone/buprenorphine clinic)
- Mental health follow-up — screen for PPD
- Connect with peer recovery support & case management
- Use nonjudgmental language; emphasize maternal–infant bonding

📅 Long-Term Follow-Up

- Early intervention referral (developmental screening)
- Hearing & vision screening
- Monitor for ADHD, learning issues, behavioral problems in childhood
- Routine immunizations on schedule

🛑 When to Call 911 / Provider

- Seizure activity
- Stops breathing or turns blue
- Cannot be consoled, refuses 2+ feeds
- High fever, severe vomiting/diarrhea, no wet diapers in 8 hrs

08 Memory Boosters & Mnemonics

PATTERN RECOGNITION · QUICK RECALL

📖 "WITHDRAWAL" — Classic NAS Signs

- **W** **Wakefulness** (poor sleep, < 1–3 hrs)
- **I** **Irritability**, high-pitched cry
- **T** **Tremors**, temperature instability
- **H** **Hyperactivity**, hypertonia, hyperreflexia
- **D** **Diarrhea**, diaphoresis, disorganized suck
- **R** **Rub marks** (excoriation), respiratory distress, rhinorrhea
- **A** **Apnea**, autonomic dysfunction
- **W** **Weight loss** (failure to thrive)
- **A** **Alkalosis** (respiratory, from tachypnea)
- **L** **Lacrimation**, low-grade fever

📖 "SWEATER"

Short version for vital cues

- **S** Sneezing, Seizures
- **W** Wakefulness
- **E** Excessive sucking
- **A** Autonomic instability
- **T** Tremors, Tachypnea
- **E** Excoriation
- **R** Reflexes (hyper), Rhinorrhea

📖 "5 S's of Soothing"

Therapeutic environment

- **S** **Swaddle** snugly, hands midline
- **S** **Side** or stomach (only while awake/held)
- **S** **Shush** — quiet environment, white noise
- **S** **Swing** — slow, rhythmic vertical motion
- **S** **Suck** — pacifier for non-nutritive sucking

🧠 Pattern Recognition

- **High-pitched cry** + tremors + poor feeding = NAS until proven otherwise
- Onset < 72 hrs → short-acting opioids; onset 5–7 days → methadone
- Score climbing → escalate meds; score stable low → begin wean
- Naloxone for NAS infant = WRONG ANSWER. Always.

🔑 Confusion Killers

- **NAS vs Sepsis**: NAS has hyperreflexia + sweating + high-pitched cry; sepsis has lethargy, hypotonia. *When in doubt, rule out sepsis first.*
- **Finnegan vs ESC**: Finnegan = symptom-based, every 3–4 hrs; ESC = function-based (Eats, Sleeps, Consoles)
- **FAS vs NAS**: FAS = facial features + growth restriction (alcohol). NAS = withdrawal symptoms (opioids)

09 NCJMM Clinical Judgment Scenario

SIX-STEP MODEL · NGN STYLE

CASE

A 36-hour-old term male newborn is in the well-baby nursery. Mother has a history of opioid use disorder, currently on methadone 80 mg daily. Birth weight 3.2 kg; current weight 2.95 kg. The newborn has a high-pitched cry, tremors when disturbed, loose stools × 3, and was unable to complete the last two feeds. Finnegan score this hour: **10**. T 99.4°F, HR 168, RR 68, SpO_2 96%.

STEP 1 — RECOGNIZE CUES

RECOGNIZE

Identify abnormal findings: HIGH-PITCHED CRY, TREMORS, LOOSE STOOLS, POOR FEEDING × 2, FINNEGAN 10, HR 168 (tachycardia), RR 68 (tachypnea), WEIGHT LOSS 7.8%, low-grade fever. Maternal history of methadone use is a key contextual cue. Note: methadone has delayed onset (5–7 days) — symptoms appearing at 36 hours may indicate additional unknown exposure or breakthrough withdrawal.

STEP 2 — ANALYZE CUES

ANALYZE

Cluster cues into NAS pattern: CNS (cry, tremors), autonomic (tachycardia, tachypnea, fever), GI (loose stools, poor feeding, weight loss). Finnegan score of 10 indicates moderate–severe withdrawal. Cues suggest ACTIVE OPIOID WITHDRAWAL. Rule out sepsis (similar autonomic findings) — review labs, blood culture status. Differentiate from hypoglycemia (jitteriness).

STEP 3 — PRIORITIZE HYPOTHESES

PRIORITIZE

#1 MOST LIKELY: Neonatal Abstinence Syndrome requiring pharmacologic treatment (Finnegan ≥ 8). #2 MUST RULE OUT: Neonatal sepsis. #3 CONCURRENT RISKS: Dehydration / failure to thrive, hyperthermia, ineffective parent–infant bonding.

STEP 4 — GENERATE SOLUTIONS

GENERATE

- Initiate or escalate pharmacologic therapy (morphine sulfate per protocol)
- Continue Finnegan scoring every 3–4 hrs
- Swaddle, dim lights, cluster care, reduce stimulation
- Small frequent feeds with high-calorie formula; consider IV fluids
- Daily weights, strict I&O
- Obtain sepsis workup if not already done
- Notify HCP of escalating score & vital signs
- Social work / lactation consult; review breastfeeding eligibility (methadone OK if no illicit use)

STEP 5 — TAKE ACTION

ACT

ABC PRIORITY FIRST: assess airway / RR 68 — monitor for distress, position safely. Notify provider of Finnegan 10. Administer morphine per order; document time, dose, response. Swaddle, transfer to low-stim room. Offer pacifier, attempt small feed (15–20 mL) of 24 kcal/oz formula. Document weight, I&O. Initiate sepsis precautions per facility protocol. DO NOT administer naloxone.

STEP 6 — EVALUATE OUTCOMES

EVALUATE

Reassess Finnegan in 3–4 hrs after intervention — expect score to trend downward. Goal: score < 8 on three consecutive scorings. Confirm feeding tolerance, weight stabilization, normothermia. If score remains ≥ 8 → escalate morphine dose. Educate & involve mother. Continue scoring until 24–48 hrs after final wean dose. Discharge planning: pediatric follow-up within 48–72 hrs.

NGN NCLEX 2026 VISUAL STUDY LIBRARY · NEONATAL ABSTINENCE SYNDROME · MATERNAL-NEWBORN CLUSTER
SOURCES: SAUNDERS 2026 · ATI MATERNAL NEWBORN · LIPPINCOTT PHARMACOLOGY · AAP · CDC TREATING FOR TWO