

NAS · Neonatal Abstinence Syndrome

A plain-English guide for you and your family

WHAT IS HAPPENING

When a mother takes opioids during pregnancy—whether prescribed painkillers or street drugs like heroin—those drugs cross the placenta and reach the baby. Over time, the baby's body becomes used to having opioids around and depends on them to feel calm and balanced. After birth, the umbilical cord is cut and the drug supply stops suddenly. The baby's nervous system, which had adapted to the opioid, now has to readjust without it. This withdrawal process is called neonatal abstinence syndrome, or NAS. The baby may tremble or shake, cry loudly and be hard to soothe, have trouble feeding, vomit, have watery stools, sweat, sneeze repeatedly, struggle to sleep, become stiff, or in severe cases have seizures. These are not random symptoms—they are all signs that the baby's brain and body are trying to cope without the drug they became used to. Doctors watch the baby closely using a scoring tool called the Finnegan scale. If withdrawal symptoms are mild, the baby may need only comfort care—swaddling, a quiet room, and small frequent feedings. If symptoms are severe, the team may give a small, controlled dose of morphine or methadone to ease the withdrawal slowly and safely. With time and support, most babies recover fully.

What you might feel

- High-pitched, hard-to-stop crying
- Tremors or shaking
- Poor feeding or trouble latching
- Trouble sleeping—wakes often, sleeps very little
- Fast breathing (more than 60 breaths per minute) or stuffed-up nose
- Sweating, sneezing, or yawning
- Loose, watery stools or vomiting
- Skin breakdown on knees, toes, or nose from rubbing
- Seizures
- Fever without infection

Call the doctor right away if...

- Seizures—rhythmic jerking, blank staring, or whole-body stiffness that won't stop
- Weight loss more than 10% of birth weight or baby refusing to eat at all
- Very fast breathing (over 80 breaths per minute) or grunting with each breath
- Severe dehydration—dry mouth, no tears, no wet diaper for 8 hours or longer
- Fever above 100.4°F (38°C) with no clear infection

What the care team will do

- Score withdrawal symptoms using Finnegan or ESC scale every 3-4 hours and document trends
- Keep baby in room with mother (rooming-in) and encourage skin-to-skin contact at least 2 hours daily
- Swaddle tightly, dim lights, reduce noise, and cluster care to minimize handling
- Support breastfeeding every 2-3 hours if mother is on stable medication-assisted treatment or opioid-free
- Monitor weight daily and track feeding volume to detect poor intake or excessive weight loss
- Give morphine or methadone exactly as ordered and never skip or delay doses once treatment starts
- Watch for seizures, respiratory rate below 40 or above 60, temperature instability, or vomiting and diarrhea causing dehydration
- Coordinate with social work for discharge planning, pediatrician follow-up, and safe home environment assessment

Medicines you may be given — and why

Morphine (oral solution)

Morphine is a medicine that gently fills the same brain lock that the mother's opioid used to fill, so the baby's body doesn't scream for it all at once. It quiets the withdrawal storm by keeping the mu-opioid receptors (the brain's opioid docking sites) busy enough to calm cravings and shaking, then the dose is slowly lowered day by day so the baby can learn to live without it.

Methadone (oral solution)

Methadone works just like morphine — it fills the brain's opioid locks — but it stays in the body much longer (12 to 24 hours instead of 4), so the baby gets a steadier, smoother ride with less up-and-down. This makes tapering gentler and can mean fewer doses each day.

Buprenorphine (sublingual solution, off-label)

Buprenorphine is a partial opioid agonist, which means it fills the brain's opioid locks only partway — enough to quiet withdrawal but with a built-in ceiling so it's harder to over-sedate the baby. It holds on tight to the receptor and stays there a long time, giving steady relief with less risk of dangerous breathing slowdown.

Clonidine (oral)

Clonidine is NOT an opioid. It calms the sympathetic nervous system (the body's fight-or-flight alarm) by turning on alpha-2 receptors in the brainstem, which quiets the storm of tremors, sweating, fast heart rate, and high blood pressure that withdrawal triggers. It's usually added to an opioid medicine when withdrawal is severe and the opioid alone isn't enough.

Phenobarbital (oral or IV, second-line or adjunct)

Phenobarbital is an older sedative that boosts GABA (the brain's main calming signal) and is sometimes added when opioid medicines alone don't control severe tremors, seizures, or extreme irritability. It does NOT treat opioid withdrawal directly, but it can quiet the brain's overall excitability.

Where this information comes from

- AAP Clinical Report on Neonatal Abstinence Syndrome (2020)
- ACOG Committee Opinion No. 711: Opioid Use and Opioid Use Disorder in Pregnancy
- Cochrane Review: Opioid Treatment for Neonatal Abstinence Syndrome
- CDC: Treating Opioid Use Disorder During Pregnancy

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