

Neonatal Abstinence Syndrome (NAS)

What is neonatal abstinence syndrome (NAS)?

Neonatal abstinence syndrome (NAS) is a drug withdrawal syndrome that some infants experience after birth and that generally follows exposure to an opioid. Opioids are a broad class of drugs that can be licit (eg, Vicodin) or illicit (eg, heroin). The severity can vary based on a myriad of factors, including type of opioid, other exposures, and genetics. The syndrome is characterized by tremors, high-pitched cry, loose stools, vomiting, poor feeding, uncoordinated suck, sleep disturbance, seizures, and irritability. Mild clinical signs, such as irritability, may persist for several months. Long-term consequences such as learning difficulties may also occur; however, the severity of such consequences remains an area of debate in the medical literature.

How common is it?

The Substance Abuse Mental Health Services Administration reported that in 2016, more than 20,000 pregnant women reported using heroin or misusing pain relievers in the past month. A May 2015 study in the *New England Journal of Medicine* reported that from 2004 through 2013, the rate of neonatal intensive care unit admissions for NAS increased from 7 cases per 1,000 admissions to 27 cases per 1,000 admissions.

What are some common characteristics of children who have had NAS?

There are no consistent characteristics among children who experience NAS. Researchers have been challenged to separate the effects of the drugs from other environmental effects.

Who might be on the treatment team?

- Pediatrician/primary care provider in the medical home.
- Early intervention professional.
- Developmental-behavioral pediatrician or follow-up team.
- Child welfare professionals might monitor the safety of the child, whether the child is in parental care or guardianship care.

What adaptations may be needed?

Medications

Medications are sometimes used to treat withdrawal symptoms during the acute phase, after birth, but are seldom continued by the time the infant is in out-of-home care.

Dietary Considerations

No dietary adaptations are usually needed; however, during the acute phase of NAS, infants may have increased suck but poor coordination of swallow and may require high-calorie feedings. Breastfeeding is allowed if the mother is in treatment without relapse.

Physical Environment and Other Considerations

Avoid overstimulation. A quiet, soothing atmosphere might be beneficial.

What should be considered an emergency?

No emergencies are associated with infants who have had NAS, unless they are not identified during the birth hospitalization and withdrawal occurs at home.

What types of training or policies are advised?

Staff should have a nonjudgmental approach to families. Trauma-informed care training might be helpful in understanding and supporting families raising children who have had prenatal substance exposure.

What are some resources?

March of Dimes: “Neonatal Abstinence Syndrome” (Web page), [www.marchofdimes.org/complications/neonatal-abstinence-syndrome-\(nas\).aspx](http://www.marchofdimes.org/complications/neonatal-abstinence-syndrome-(nas).aspx)