

NEONATAL ABSTINENCE SYNDROME (NAS)

Neonatal abstinence syndrome (also called NAS) is a group of conditions caused when a baby withdraws from certain drugs he's exposed to in the womb before birth. NAS is most often caused when a woman takes drugs called opioids during pregnancy. But it also can be caused by antidepressants (used to treat depression), barbiturates or benzodiazepines (sleeping pills). When you take these drugs during pregnancy, they can pass through the placenta and cause serious problems for your baby. The placenta grows in your uterus (womb) and supplies your baby with food and oxygen through the umbilical cord.

If you've been injured or had surgery, your provider may give you a prescription for opioids to help relieve pain. Prescription opioids include:

- Codeine
- Hydrocodone (name brand Vicodin®)
- Morphine (name brands Kadian®, Avinza®)
- Oxycodone (name brands OxyContin®, Percocet®)
- Tramadol
- The street drug heroin also is an opioid.

You may hear NAS also called NOWS. NOWS stands for neonatal opioid withdrawal syndrome. NOWS is the same as NAS except it's caused only by opioids.

If you're pregnant or trying to get pregnant and taking any of these drugs, tell your health care provider right away.

What are signs of NAS?

Signs of NAS can be different for every baby. Most happen within 3 days (72 hours) of birth, but some may happen right after birth or not until a few weeks after birth. They can last from 1 week to 6 months after birth. Signs may include:

- Body shakes (tremors), seizures (convulsions), overactive reflexes (twitching) and tight muscle tone
- Fussiness, excessive crying or having a high-pitched cry
- Poor feeding or sucking or slow weight gain
- Breathing problems, including breathing really fast
- Fever, sweating or blotchy skin
- Trouble sleeping and lots of yawning
- Diarrhea or throwing up
- Stuffy nose or sneezing

Signs of NAS depend on:

- What drug was used during pregnancy, how much was used and how long it was taken and how the mother's body breaks down the drug.
- Baby's gestational age at birth (number of weeks of pregnancy)



What complications can NAS cause baby?

We don't know a lot about long-term effects of NAS on a baby. We need more research to see how NAS affects a child in the first few years of life and longer. We think that NAS may cause long-term problems for your baby, like:

- Developmental delays. Developmental delays are when your child doesn't reach developmental milestones when expected. Developmental milestones are skills and activities that most children can do at a certain age, like sitting, walking, talking, having social skills and having thinking skills.
- Motor problems. These are problems with your baby's bones, muscles and movement.
- Behavior and learning problems. Babies with NAS are more likely than babies who don't have NAS to be checked for learning problems and to get special education services in school.
- Speech and language problems
- Sleep problems
- Ear infections
- Vision problems

How is baby tested for NAS?

Providers can use these tests to see if a baby has NAS:

- NAS scoring system. With this system, the baby's provider uses points to grade how severe the baby's withdrawal is.
- Urine and meconium tests to check for drugs. Meconium is the baby's first bowel movement.
- The baby's provider also needs to know about what drugs or medicine the mother has used and when they were last taken.

How is NAS treated?

Treatment may include:

- Taking medicines to treat or manage severe withdrawal symptoms. Once withdrawal is under control, a baby gets smaller doses of the medicine over time so her body can adjust to being off the medicine. Medicines used to treat severe withdrawal include morphine, methadone and buprenorphine.
- Getting fluids through a needle into a vein (also called intravenous or IV) to prevent the baby from getting dehydrated. Dehydrated means not having enough water in the body. Babies with NAS can get dehydrated from having diarrhea or throwing up a lot.
- Being fed higher-calorie baby formula. Some babies with NAS need extra calories to help them grow because they have trouble feeding or slow growth.

Most babies with NAS who get treatment get better in 5 to 30 days.

For more information about NAS visit:

www.marchofdimes.org



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