



## **Neonatal Abstinence Syndrome (NAS)**

**Some babies who are exposed to opioids during pregnancy are born with NAS, or Neonatal Abstinence Syndrome.**

**What is neonatal abstinence syndrome (NAS)?**

# What is neonatal abstinence syndrome (NAS)?

- \* Neonatal abstinence syndrome (NAS) is a term for a group of problems a baby experiences when withdrawing from exposure to narcotics.
- \* It is estimated **that 3 to 50 percent** of newborn babies have been exposed to maternal drug use, depending on the population and area of the country.

# What causes NAS?

- \* Almost every drug passes from the mother's blood stream through the placenta to the fetus.
- \* Illicit substances that cause drug dependence and addiction in the mother also cause the fetus to become addicted.
- \* At birth, the baby's dependence on the substance continues.
- \* However, since the drug is no longer available, the baby's central nervous system becomes overstimulated causing the symptoms of withdrawal.

# What causes NAS?

- \* Some drugs are more likely to cause NAS than others, but nearly all have some effect on the baby.
- \* Opiates, such as heroin and methadone, cause withdrawal in over half of babies exposed prenatally. Cocaine may cause some withdrawal, but the main symptoms in the baby are due to the toxic effects of the drug itself.

# What causes NAS?

- \* Other drugs such as amphetamines, barbiturates, and narcotics can also cause withdrawal.
- \* Alcohol use causes withdrawal in the baby, as well as a group of problems including birth defects called fetal alcohol spectrum disorders (FASDs).

# What are the symptoms of NAS?

- \* Symptoms of NAS may vary depending on the type of substance used, the last time it was used, and whether the baby is full-term or premature.
- \* Symptoms of withdrawal may begin as early as 24 to 48 hours after birth, or as late as five to 10 days.
- \* Next, we provide common symptoms of NAS...

# Symptoms of withdrawal in full-term babies may include:

Tremors (trembling)

Irritability (excessive crying)

Sleep problems

High-pitched crying

Tremors (trembling)

Irritability (excessive crying)

Diarrhea

Dehydration

Tight muscle tone

Hyperactive reflexes

Seizures

Yawning, stuffy nose,

Poor feeding and suck

Vomiting

Sweating

**Premature babies** may not have the classic signs of withdrawal listed above, but more often experience the following symptoms:

- \* Tremors (trembling)
- \* High-pitched crying
- \* Rapid breathing
- \* Poor feeding



# How is neonatal abstinence syndrome diagnosed?

- \* An accurate report of the mother's drug usage is important, including the time of the last drug taken.
- \* A neonatal abstinence scoring system may be used to help diagnose and grade the severity of the withdrawal.
- \* Using the scoring system, points are assigned for certain signs and symptoms and the severity of each. This scoring may also help in planning treatment.

# Treatment for NAS

- \* Specific treatment for NAS will be determined by your baby's doctor based on:
  - \* Your baby's gestational age, overall health, and medical history
  - \* Extent of the disease
  - \* Your baby's tolerance for specific medications, procedures, or therapies
  - \* Expectations for the course of the disease
  - \* Your opinion or preference

# Treatment for NAS

- \* Babies suffering from withdrawal are irritable and often have a difficult time being comforted.
- \* **Swaddling, or snugly wrapping the baby in a blanket, may help comfort the baby.**
- \* Babies also may need **extra calories** because of their increased activity and may need a higher calorie formula.
- \* Intravenous (IV) fluids are sometimes needed if the baby becomes **dehydrated** or has **severe vomiting or diarrhea**.

# Treatment for NAS

- \* Some babies may need medications to treat severe withdrawal symptoms, especially for seizures and to help relieve the discomfort and problems of withdrawal.
- \* The treatment drug is usually in the same class as the substance the baby is withdrawing from.
- \* Once the signs of withdrawal are controlled, the dosage is gradually decreased to help wean the baby off the drug.
- \* Consult your baby's doctor to learn which treatments might be effective for your baby.

# Thank you St. Louis Children's Hospital!

- \* We thank St. Louis Children's Hospital for providing this helpful information.
- \* <http://www.stlouischildrens.org/diseases-conditions/neonatal-abstinence-syndrome>