



Health News from the DCF Medical Team

Drug Exposed Babies: Neonatal Abstinence Syndrome

What is Neonatal Abstinence Syndrome (NAS)?

NAS is a group of symptoms caused by alcohol or drug (illegal or prescription) withdrawal in babies. Usually drug exposure occurs during pregnancy, but it also may also occur if drugs are given to the mother during delivery or after birth to infants with serious illness. NAS occurs in 60% of all babies exposed to drugs. Withdrawal may start within hours (alcohol) or in days to weeks (methadone).

What are the symptoms and possible complications from drug exposure before birth?

Exposure to drugs before birth can cause health problems such as low-birth weight, premature birth, small head, and sudden infant death syndrome (SIDS). Symptoms depend on the type, amount, frequency and length of drug use during pregnancy. Drug-specific symptoms are:

Alcohol: Hyperactivity, crying, irritability, poor sucking, tremors, seizures, poor sleeping patterns, sweating, usually appears within 3-12 hours of birth and may last for 18 months. Alcohol exposure may cause Fetal Alcohol Syndrome and other birth defects.

Barbiturates: Irritability, severe tremors, excessive crying, sweating and fever, diarrhea, restlessness, increased tone, vomiting, and problems with sleep. Symptoms may not develop until 7 to 10 days after birth.

Opiates: High-pitched cries, increased muscle tone, irritability, jitteriness, feeding or digestion problems, breathing problems, yawning, sneezing and fever. Withdrawal symptoms usually occur within 72 hours after birth.

Marijuana: Sensitive hearing, startle easily, fine tremors; symptoms rarely require treatment.

Nicotine: Mild signs, including fine tremors and abnormal muscle tone; however, there is no treatment given.

Narcotics: Poor feeding; spitting; vomiting; diarrhea; yellow skin; difficulty sleeping; overly vigorous suck or uncoordinated suck; jitteriness; occasionally seizures; hiccoughs and/or sneezing; fever; sweating; diaper rash usually begin 1 to 4 days after birth.

Methadone: Symptoms are within 48-72 hours and may not start for 3 weeks, particularly for infants whose mothers took much higher doses.

Cocaine: Tremors, high-pitched cry, irritability, excess suck, increased alertness, breathing problems, and increased heart rate can be seen with the first 72 hours of life. Withdrawal usually appears within the first 48 hours of life.

How do healthcare providers assess newborns that have NAS?

Tests that may be done to diagnose withdrawal in a newborn include the NAS scoring system and toxicology screens of the baby's first bowel movements (meconium) and urine. The Finnegan Neonatal Abstinence Scoring System assesses 21 signs and symptoms and rates their severity and helps with treatment. Infants with scores of 8 or greater require more intensive observation and may need medication to lessen symptoms. A urine screen only signifies recent use or heavy use of drugs. The length of time that a drug is present in urine after use is: Marijuana: 7 days to 1 month; Cocaine: 72-96 hours; Heroin: 24-48 hours; and Methadone: Up to 10 days.

What is the treatment for NAS?

Treatment depends on the baby's symptoms, observation by hospital staff and NAS scores. Different hospitals may have different treatment protocols, however morphine solution and Phenobarbital are the most common medications used to treat withdrawal in newborns. The baby should be monitored by newborn nursery staff until symptoms have decreased or the baby has been slowly taken off of the medication.

What are the questions to ask when a baby with NAS is being discharged from a hospital?

Was the baby born prematurely? What drug(s) was the baby exposed to? Has the baby had a continued pattern of weight gain? Has the baby had normal body temperature in an open air crib? Is the baby able to bottle feed without heart or breathing difficulties? Has the medication used to treat withdrawal, such as morphine, been stopped for 48 hours? Have the NAS scores been less than five for 24 hours? Will the parents or foster parent need to provide any special care? Will the baby have any follow up with specialists or need a visiting nurse?

What special care is needed for babies with NAS?

Care needs include loose swaddling; gentle and frequent holding and slow rocking; an environment with quiet areas; low lighting; a pacifier for excessive sucking; frequent diaper changes; reducing noise and lighting; and medications. Babies withdrawing from drugs have higher calorie needs and may lose calories from vomiting, drooling, and diarrhea. They need a high calorie formula in frequent small feedings with more frequent burping. Because of the great demands of caring for a baby with NAS, appropriate foster placement selection is very important. Foster parents should be offered services such as visiting nurses, Early Intervention, case management, education and respite.

References: <http://www.nlm.nih.gov/medlinesplus/print/ency/article/007313.htm>; Marvin Wang, MD, "Perinatal Drug Abuse and Neonatal Drug Withdrawal", Jan 10, 2008
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