



Facts about Opiate Use in Pregnancy

What are opiates?

Opiates are depressant drugs and include both illicit drugs and legal opioid-based prescription drugs. They are considered narcotics and depress the central nervous system. Drugs in the group include:

- Heroin
- Morphine
- Methadone
- Other prescription pain relievers such as codeine, Oxycontin, Vicodin, Percodan, Dilaudid, etc.

How frequently are these drugs used?

- According to the National Survey on Drug Use and Health (2010), about 200,000 individuals aged 12 or over reported past-month use of heroin, which is illegal, while 5.1 million individuals reported nonmedical use of legal prescription pain relievers in the same time period.
- For pregnant women in this national sample, .2% reported using heroin and .7% reported nonmedical use of pain relievers in the past 30 days. When use between 30 days ago and 12 months ago was examined, .1% reported use of heroin and 4.3% reported nonmedical use of pain relievers.
- Misuse of opioid-based prescription pain relievers is a significant public health problem. Drug sales, substance use treatment admissions, and mortality related to these drugs have increased dramatically in the last decade. Sales of opioid pain relievers to outlets (e.g., pharmacies, doctors' offices, hospitals) in 2010 were four times higher than in 1999. According to a report from the Centers for Disease Control and Prevention (CDC), opioid pain relievers were used nonmedically by 4.8% of the U.S. population 12 years of age or older in 2010.
- In 2008, about 14,800 individuals in the U.S. died from overdoses of prescription opioid pain relievers. This rate has more than tripled since 1999 and suggests that it is now an epidemic.

How does opiate exposure during pregnancy affect the newborn?

Studies of use of opiates* during pregnancy suggest that infants may

- Be born prematurely
- Have lower birth weight and/or head circumference
- Experience withdrawal symptoms or neonatal abstinence syndrome. Infants may have to be transitioned in the hospital to other drugs to treat the withdrawal symptoms and decrease their dependence on the opiates (see other side).
- No relationship has been shown between use of opiates during pregnancy and gross congenital malformations.
- Some studies show a relation between first-trimester use of opioid pain relievers and congenital heart defects, but this risk appears to be small.
- Heroin and methadone use have been related to more severe outcomes, including effects on the visual system and increased rates of neonatal mortality and sudden infant death syndrome.

*Most studies have been completed with infants exposed to heroin or methadone during pregnancy.





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What is Neonatal Abstinence Syndrome (NAS)?

This is the name for a cluster of symptoms that occur when an infant is withdrawn from exposure to an addictive substance that is a depressant drug, not a stimulant, at birth. Some depressant drugs that can cause NAS are opiates such as morphine, methadone, or heroin. Withdrawal symptoms can vary widely across infants.

Possible symptoms include:

- Frequent crying; high-pitched cry
- Irritability
- Respiratory signs- rapid breathing
- Sleep disturbances/wakefulness
- Hyperactivity, hyperarousal
- Gastrointestinal problems (diarrhea, vomiting)
- Sweating
- Sneezing, stuffiness
- Yawning
- Back arching, stiffness

How is NAS treated?

A pediatrician should determine whether the infant needs medical intervention. If NAS is not severe, it can sometimes be managed with supportive care. This might include use of effective soothing approaches such as swaddling, low lights or other modifications of mother-infant interaction while the infant adjusts to the physiological changes. If NAS is severe, infants are usually treated in the hospital with a small amount of an opioid-based drug. The drug dose is gradually decreased until it is no longer needed.

Methadone and buprenorphine: How do they compare?

Pregnant women who are addicted to opiates can be transitioned to another drug such as methadone or buprenorphine during the pregnancy. Babies do better when the mother is transitioned to one of these drugs than they do with no treatment at all. A recent research project, Maternal Opioid Treatment: Human Experimental Research (MOTHER) was sponsored by the National Institutes of Health and compared outcomes for the infant when either methadone or buprenorphine was administered during pregnancy. They report that infants of mothers treated with buprenorphine had less withdrawal distress and were able to leave the hospital sooner than those treated with methadone.

What is known about long term effects of exposure to opiates during pregnancy?

What we know is based on studies of exposure to heroin and methadone in pregnancy. These studies are complicated because factors such as whether the mother used alcohol or other drugs in pregnancy and the quality of the home environment may influence outcomes for the child.

- Some studies show that effects on physical growth (weight, head circumference) persist, but others suggest that catch-up growth occurs.
- Motor coordination, tenseness, and attention have been shown to be affected in the first year.
- Results on tests of cognitive function have not been consistent. While exposure is often related to lower cognitive function, these effects may be due to influence of the home environment.
- In a study of school-age children, exposure was related to parent reports of behavior problems and ADHD characteristics. Children reared by addicted mothers scored higher than those in adoptive homes; both scored higher than non-exposed children.

*While misuse of legal prescription pain relievers has increased recently, data on long term effects are not available yet.

