



ORGANIZATION
OF TERATOLOGY
INFORMATION
SERVICES

For more information regarding OTIS or a Teratology Information Service in your area, call OTIS Information at (866) 626-6847 or visit us online at: www.OTISpregnancy.org.

Cocaine and Pregnancy

The information below will help you determine if your prenatal exposure to cocaine will increase the fetal risk above the background risk. With every pregnancy, any woman has a 3 to 5 percent chance to have a baby with a birth defect.

Cocaine

What is cocaine?

Cocaine is a local anesthetic and a powerful stimulant of the central nervous system. Recreational cocaine use is by inhalation, or by smoking crack, a cocaine derivative.

Is there any safe amount of cocaine I can use during pregnancy?

No. Researchers have not determined just how much cocaine it takes to cause birth defects and other adverse outcomes for an exposed baby. It is recommended that cocaine, in any amount or any form, be avoided during pregnancy.

How long does cocaine stay in my body after use?

Cocaine by-products can be found for 30 hours in the urine of the pregnant woman, and for 2 to 4 days in the newborn after the drug is used.

When I use cocaine, does it get into my baby's body too?

Yes. Cocaine crosses the placenta and enters the baby's circulation. Cocaine can be found in both the urine and the hair of an exposed newborn. The elimination of cocaine is considerably slower in the fetus and newborn than in an adult. Therefore, the cocaine remains in the baby's body for a longer period of time.

I have heard that cocaine can cause a miscarriage. Is this true?

Yes. During the early months of pregnancy, cocaine exposure may increase the risk for miscarriages. Later in pregnancy, cocaine use can cause the placenta to separate from the wall of the uterus before labor begins. This condition, called abruption placentae, can lead to extensive bleeding and can be fatal for both the mother and baby.

What types of birth defects can cocaine use cause?

Most babies exposed to cocaine prior to birth do not have a birth defect. The risk for a birth defect appears to be greater when the mother has used cocaine frequently during the pregnancy. Birth defects that have been reported with maternal cocaine use include abnormalities of the brain, skull, face, eyes, heart, limbs, intestines, genitals, and urinary tract.

Can cocaine cause other problems besides miscarriage and birth defects?

Yes. Not all damage is structural (birth defects that can be seen). Cocaine-exposed infants, especially those exposed near birth, have been found to be more irritable, jittery, and have interrupted sleep patterns, visual disturbances, and an inability to deal appropriately with sensory stimulation. Some of these complications may last 8 to 10 weeks after birth or even longer.

Cocaine can cause significant central nervous system problems that may not be observed until the child is older. These effects may include delays in cognitive development or learning ability, and behavioral changes. Additional studies are needed to determine long-term neurobehavioral effects.

Cocaine may also increase the risk for premature delivery.

What if my baby is born too early or too small? What will this mean?

Premature infants often have low birth-weight. Low birth-weight babies are more likely to die in their first month than normal-weight babies are. They are also more likely to have life-long disabilities, including learning, visual, and hearing problems. Since cocaine can reduce the supply of nutrients and oxygen to the baby, even full-term newborns may have intrauterine growth retardation.

Babies of mothers who use cocaine during pregnancy tend to weigh less, be shorter in length, and have smaller heads than babies born without exposure to cocaine. This can be an indicator of possible developmental disabilities. Babies who are born prematurely often start life with serious health problems, especially breathing difficulties. These babies may also have an intracranial hemorrhage (stroke) before or soon

after birth, and this can cause permanent brain damage and other disabilities.

If I can't stop using cocaine during my pregnancy, will my baby be born addicted?

Withdrawal symptoms have been reported in the newborns of mothers who have used cocaine during pregnancy. These may include increased irritability, tremulousness, muscular rigidity, poor sucking ability that hampers feeding, sleeplessness, and hyperactivity or, in some cases, tiredness. Less frequently observed symptoms have been vomiting, diarrhea, and seizures. These symptoms usually start at 1 to 2 days after birth and symptoms are most severe on days 2 and 3. Even though it may be difficult, you should seek prenatal care immediately and let your obstetrician know about your cocaine use so that he/she can prepare for the best care for you and your baby after delivery.

What about using cocaine and other drugs at the same time?

Using other drugs, including alcohol or cigarettes, can also harm the baby and may even intensify the effects of cocaine on the baby. This is one of the problems in determining exactly what birth defects cocaine causes. The combined effect of cocaine and other drugs may be worse than cocaine alone. More study is needed before this question can be answered thoroughly.

Is it a problem if the baby's father is using cocaine when I get pregnant?

Cocaine appears in the semen and may reduce the number of sperm or increase the number of abnormal sperm. This can result in fertility problems. Cocaine binds to sperm. Authors of one study suggested that delivery of cocaine by the sperm to the egg might be associated with developmental problems. No birth defects have been identified as a direct result of paternal exposure to cocaine. However, the safest approach is for a man to avoid cocaine use three months prior to conception when sperm are developing.

Is there any way to know if my baby has been harmed before delivery?

If you are concerned that your baby may have a birth defect or other problem due to cocaine use, you should speak to your health care provider. He/she can evaluate your situation and recommend any available tests. A level II ultrasound may be able to identify major malformations caused by prenatal exposure to cocaine. However, there are no tests available that can be done prenatally to determine whether a developmental disability will be present. The

pediatrician who will care for your baby should also be informed of any concerns you have. If tests are performed, your health care provider can share the results with the pediatrician.

What about cocaine use while I breast feed?

Cocaine has been found in breast milk. Some infants show signs of cocaine intoxication following nursing. Based on these reports, an infant should not be given breast milk following cocaine use by the mother. You should avoid applying the cocaine to your nipples to treat soreness. The American Academy of Pediatrics recommends that cocaine not be used during breast-feeding.

August 2001
Copyright by OTIS
Reproduced by permission.



References:

- American Academy of Pediatrics Committee on Drugs: The transfer of drugs and other chemicals into human milk. *Pediatrics* 1994; 93:137-150.
- American College of Obstetricians and Gynecologists. Cocaine abuse: implications for pregnancy. ACOG committee opinion no. 81, March 1990.
- Behnke M, Eyler F et al: The search for congenital malformations in newborns with fetal cocaine exposure. *Pediatrics* 2001 May; 107 (5): E74.
- Bracken MB, Eskenazi B, Sachse K et al.: Association of cocaine use with sperm concentration, motility, and morphology. *Fertil Steril* 1990; 53:315-322
- Briggs GG, Freeman RK, Yaffe SJ: Drugs in Pregnancy and Lactation. Fifth Edition, 1998, Baltimore: Williams and Wilkins, pp 238-253.
- Chasnoff IJ, Anson A, Hatcher R et al: Prenatal exposure to cocaine and other drugs. Outcome at four to six years. *Ann NY Acad Sci* 1998; June 21: 846: 314-28.
- Chasnoff U, Burns KA, Burns WJ: Cocaine use in pregnancy: perinatal morbidity and mortality. *Neurotoxicol Teratol* 1987; 9:291-3.
- Chavez GG, Mulinare J, Cordero JF: Maternal cocaine use during early pregnancy as a risk factor for congenital urogenital anomalies. *JAMA* 1989; 262:795-8.
- Cone EJ, Kato K, Hillgrove M: Cocaine excretion in the semen of drug users. *J Anal Toxicol* 1996; 20:139-140.
- Doering PL, Davidson CL, LaFauce L, Williams CA: Effects of cocaine on the human fetus: a review of clinical studies. *Annals of Pharmacotherapy* 1989; 23:639-643.
- Giacoaia GP: Cocaine in the cradle: a hidden epidemic. *Southern Medical Journal* 1990; 83:947-951.
- Hoyme HE, Jones KL, Dixon SD et al.: Prenatal cocaine exposure and fetal vascular disruption. *Pediatrics* 1990; 85:743-747.
- Little BB, Snell LM, Klein VR, et al.: Cocaine abuse during pregnancy: maternal and fetal implications. *Obstet Gynecol* 1989; 73:157-160.
- Napiorkowski B, Lester BM, Frier MC, et al.: Effects of in utero substance exposure on infant neurobehavior. *Pediatrics* 1996; 98(1): 71-75.
- Neerhof MG, MacGregor SN, Retzky SS, et al.: Cocaine abuse during pregnancy: peripartum prevalence and perinatal outcome. *Am J Obstet Gynecol* 1989; 161:633-638.
- Ryan L, Ehrlich S, Finnegan L: Cocaine abuse in pregnancy: effects on the fetus and newborn. *Neurotoxicol Teratol* 1987;9:295-299.
- Singer LT, Arendt R, Minnes S et al: Neurobehavioral outcomes of cocaine-exposed infant. *Neurotoxicol Teratol* 2000; 22 (5): 653-66.
- Weathers WT, Crane MM, Sauvain KJ, et al.: Cocaine use in women from a defined population: prevalence at delivery and effects of growth in infants. *Pediatrics* 1993; 91(2): 326-239.
- Yazigi RA, Odem RR, Polakoski KL: Demonstration of specific binding of cocaine to human spermatozoa. *JAMA* 1991; 266:1956-1959.