Illicit Drug Use During Pregnancy

Nearly 3 percent of pregnant women use illicit drugs such as marijuana, cocaine, Ecstasy and other amphetamines, and heroin, according to a 2003 study by the Centers for Disease Control and Prevention. These and other illicit drugs may pose various risks for unborn babies and pregnant women. Some of these drugs can cause a baby to be born too small or to have withdrawal symptoms, birth defects, or learning or behavioral problems. However, because most pregnant women who use illicit drugs also use alcohol and tobacco (which also pose risks to unborn babies), it is often difficult to determine which health problems are caused by a specific illicit drug.

What are the risks with use of cocaine during pregnancy?

Cocaine use during pregnancy can affect a pregnant woman and her unborn baby in many ways. During the early months of pregnancy, it may increase the risk of miscarriage. Later in pregnancy, it can trigger preterm labor (labor that occurs before 37 weeks of pregnancy) or cause the baby to grow poorly. As a result, cocaine-exposed babies are more likely than unexposed babies to be born with low birthweight (less than 5½ pounds). Low-birthweight babies are 20 times more likely to die in their first month of life than normal-weight babies, and face an increased risk of lifelong disabilities such as mental retardation and cerebral palsy. Cocaine-exposed babies also tend to have smaller heads, which generally reflect smaller brains.

Some studies suggest that cocaine-exposed babies are at increased risk of birth defects, including urinary-tract defects and, possibly, heart defects. Cocaine also may cause an unborn baby to have a stroke, which can result in irreversible brain damage or a heart attack, and sometimes death.

Cocaine use also may cause the placenta to pull away from the wall of the uterus before labor begins. This condition, called placental abruption, can lead to extra, and bleeding and can be lethal to both mother and baby. (Prompt cesarean delivery, however, can prevent most deaths.) Babies who were regularly exposed to cocaine before birth may score lower than unexposed babies on tests given at birth to assess the newborn’s physical condition and overall responsiveness. They may not do as well as unexposed babies on measures of motor ability, reflexes, attention and mood control, and they appear less likely to respond to a human face or voice.

Studies are inconclusive regarding the risk of learning and behavioral problems. Studies from the National Institute on Drug Abuse suggest that most adolescents who were exposed to cocaine before birth seem to function normally. However, some may have subtle impairments in the ability to control emotions and focus attention that could put them at risk of behavioral and learning problems. Other studies suggest that poor health practices that often accompany maternal cocaine use (such as use of other drugs) also may play a major role in these deaths.

What is the long-term outlook for babies who were exposed to cocaine before birth?

Some studies suggest that most children who are exposed to cocaine before birth have normal intelligence. This is encouraging, in light of earlier predictions that many of these children would be severely brain damaged. A 2002 study at Harvard Medical School and Boston University found that children up to age 2 who were heavily exposed to cocaine before birth scored just as well on tests of infant development as lightly exposed or unexposed children. However, other studies suggest that cocaine use may sometimes cause mental development, possibly lowering IQ levels.

A 2002 study at Case Western Reserve University found that cocaine-exposed 2-year-olds were twice as likely as unexposed children from similar low socioeconomic backgrounds to have significant delays in mental development (14 percent and 7 percent, respectively). It is not known whether these children will continue to have learning problems when they reach school age.

What are the risks with use of marijuana during pregnancy?

Some studies suggest that use of marijuana during pregnancy may slow fetal growth and slightly decrease the length of pregnancy (possibly increasing the risk of premature delivery). Both of these factors can increase a woman’s chance of having a low-birthweight baby. These effects are seen mainly in women who use marijuana regularly (six or more times a week).

After delivery, some babies who were regularly exposed to marijuana in the womb appear to undergo withdrawal-like symptoms including excessive crying and trembling. Couples who are planning pregnancy also should keep in mind that marijuana can reduce fertility in both men and women, making it more difficult to conceive.

What is the long-term outlook for babies exposed to marijuana before birth?

There have been a limited number of studies following marijuana-exposed babies through childhood. Some did not find any increased risk of learning or behavioral problems. However, others found that children who are exposed to marijuana before birth are more likely to have subtle problems that affect their ability to pay attention and to solve visual problems. Exposed children do not appear to have a decrease in IQ.

What are the risks with use of Ecstasy and other amphetamines during pregnancy?

The use of Ecstasy has increased dramatically in recent years. To date there have been few studies on how the drug may affect pregnancy. One small study did find a possible increase in congenital heart defects and, in females only, of a skeletal defect called clubfoot. Babies exposed to Ecstasy before birth also may face some of the same risks as babies exposed to other types of amphetamines. Another commonly abused amphetamine is methylamphetamine, also known as speed, ice, crank and crystal meth. Some, but not all, studies suggest that this drug may cause an increased risk of birth defects, including cleft palate, and heart and limb defects. It also appears to contribute to pregnancy complications including maternal high blood pressure which can slow fetal growth and cause other complications for mother and baby), premature delivery, and excessive bleeding in the mother following delivery. For more information on methamphetamine and pregnancy, see the fact sheet from the Organization of Teratology Information Services.

After birth, babies who were exposed to amphetamines appear to undergo withdrawal-like symptoms, including jitteriness, drowsiness and breathing problems.

What is the long-term outlook for babies exposed to Ecstasy and other amphetamines before birth?

The long-term outlook for these children is not known. One very small study found that 7- and 8- year-old children who were exposed to Ecstasy before birth had altered levels of a specific brain chemical. However, it is not known whether this has any effect on learning or behavior, as there was no evidence of problems in these children. One recent animal study did find that rats that were exposed to Ecstasy during the period that corresponds to the third trimester of human pregnancy suffered life-long deficits in memory and learning. It is not yet known whether this will hold true for exposed children.

What are the risks with use of heroin during pregnancy?

The long-term outlook for these children is not known. One very small study found that 7- and 8- year-old children who were exposed to heroin during pregnancy had altered levels of a specific brain chemical. However, it is not known whether this has any effect on learning or behavior, as there was no evidence of problems in these children. One recent animal study did find that rats that were exposed to heroin during the period that corresponds to the third trimester of human pregnancy suffered life-long deficits in memory and learning. It is not yet known whether this will hold true for exposed children.
When a pregnant woman uses heroin, she and her baby may face many serious complications. Common pregnancy complications associated with heroin use include miscarriage, placental abruption, poor fetal growth, premature rupture of the membranes (the baby’s water breaks too soon), premature delivery and stillbirth. As many as half of all babies of heroin users are born with low birthweight. These babies, most of whom are premature, often suffer from serious prematurity-related health problems during the newborn period, including breathing problems and brain bleeds, sometimes leading to lifelong disabilities.

Most babies of heroin users suffer from withdrawal symptoms after birth, including fever, sneezing, trembling, irritability, diarrhea, vomiting, continual crying and, occasionally, seizures. Babies exposed to heroin before birth also face a ten-fold increased risk of sudden infant death syndrome (SIDS). While heroin can be sniffed, snorted or smoked, most users inject the drug into a muscle or vein. Pregnant women who share needles are at risk of contracting HIV (the virus that causes AIDS) and passing it on to their babies.

A pregnant woman who uses heroin should not attempt to suddenly stop taking the drug. This can put her baby at increased risk of miscarriage or premature birth. She should consult a doctor or drug treatment center about treatment with a drug called methadone. Although infants born to mothers taking methadone also may show some signs of dependence on the drug, they can be safely treated in the nursery and generally do far better than babies born to women who continue to use heroin.

What is the long-term outlook for babies exposed to heroin before birth?
The outlook for these children depends on a number of factors, including whether they suffered serious prematurity-related complications. Some studies suggest that children exposed to heroin before birth are at increased risk of low IQ (in the mentally retarded range) and of serious behavioral problems. However, socioeconomic factors also may play an important role in a child’s outlook. One study found that heroin-exposed children who were adopted soon after birth were no more likely to have developmental delays than unexposed children, though exposed children who were raised by their biological parents were at increased risk.

How can a woman protect her baby from the dangers of illicit drugs?
Birth defects and other problems caused by illicit drugs are completely preventable. The March of Dimes advises women who use illicit drugs to stop before they become pregnant or to delay pregnancy until they believe they can avoid the drug completely throughout pregnancy. The March of Dimes also encourages pregnant women who use illicit drugs (with the exception of heroin) to stop using the drug immediately, because of the harm continued drug use may cause. Women who use heroin should consult their health care provider or a drug treatment center about treatment with methadone treatment.

Where can someone find more information on stopping drug use?
To learn more about stopping drug use, ask a health care provider or contact:

Center for Substance Abuse Treatment
National Drug and Alcohol Treatment Referral Service
(800) 663-HELP (800-662-4357)

National Council on Alcoholism and Drug Dependence (NCADD) (800) NCA-CALL (800-622-2255)

Substance Abuse Treatment Facility Locator

Does the March of Dimes support research on illicit drug use during pregnancy?
The March of Dimes has supported a number of research grants aimed at learning more about the effects of drug exposure during pregnancy. For example, a recent grantee was seeking to determine how prenatal cocaine exposure may alter brain development in ways that can affect learning and memory, in order to develop better treatments for any cocaine-related developmental problems. The March of Dimes also produces a variety of educational materials that inform pregnant women and others of the dangers of cocaine and other drugs during pregnancy.

References

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