

# ADDICTION EXCHANGE

Mar. 15, 1999 1(5)

*News from the worlds of clinical practice and research*

Brought to you by FAX, email, and on the web by the  
Virginia Addiction Technology Transfer Center, part of the Mid-Atlantic ATTC  
**A CSAT-funded Center**

Welcome to *Addiction Exchange*, a forum for the exchange of clinical practice and research information among clinicians, scientists, educators, and administrators in the area of addiction. This month's topic is **Prenatal exposure to drugs: what do we really know?** In the last issue, we discussed the effects of prenatal exposure to alcohol and nicotine. In this issue, we will discuss the effects of prenatal exposure to marijuana, caffeine, and cocaine.

Other than alcohol and nicotine, one of the most frequently used drugs is marijuana. Is there evidence that marijuana is harmful if used prenatally? There are a few studies that have found that prenatal exposure to marijuana was associated with lower birth length, but any growth differences disappeared by 18 months of age. Newborn behavior, assessed with a variety of measures, is not negatively affected by marijuana exposure. Physical anomalies are not increased by marijuana exposure. In general, the research on longer term child development also suggests no effects, or minor effects that resolve over time. Women who smoke marijuana and consume alcohol or smoke nicotine cigarettes are likely to show the harmful effects related to consumption of these other, legal substances during pregnancy; the effects of high doses of smoked marijuana are unknown.

Probably the most frequently used drug during pregnancy is caffeine. Fortunately, few effects are found for caffeine exposure alone in the areas of obstetric complications, growth parameters, infant behavior, physical anomalies, or child development. Newborns exposed to high doses of caffeine showed greater rates of elevated blood pressure, premature atrial contractions, fine tremors, and rapid breathing, which can be serious, but these symptoms resolved within a week of age.

One of the most controversial drugs used during pregnancy is cocaine, especially its crack variant. However, although studies identified relationships between prenatal cocaine exposure and individual effects, including spontaneous abortions, pregnancy-induced hypertension, stillbirth, premature delivery, meconium staining (an indicator of fetal distress during labor), and others, many studies have not supported a relationship between prenatal cocaine exposure and these complications. To complicate the picture, many of the women who evidenced prenatal or perinatal problems had also experienced problems in earlier pregnancies that did not involve cocaine exposure; these problems may have increased the risk to the pregnancy under study, rather than cocaine use. It is critical to consider that many cocaine-using women also use other substances, including nicotine and alcohol, with clear evidence of harmful fetal effects. Although research does suggest an effect of cocaine on measures of growth, such as small head circumference through the age of 12 months, there is not strong evidence for cocaine as a teratogen (causing physical birth defects). Additionally, in contrast to sensational news stories, research does not support a relationship between prenatal cocaine exposure and child development problems. However, in some cases, women who used cocaine during pregnancy also evidence chaotic home environments, poor attachment, or poor parenting practices that are related to childhood learning, relationship, and behavioral problems. Therefore, although the evidence for damaging effects of prenatal cocaine exposure alone is minimal, it may be correlated with other factors that are predictive of fetal, obstetrical, and childhood problems. Ongoing longitudinal research that carefully tracks the amount of cocaine exposure and its effects will help to answer remaining questions.

Although prenatal exposure to marijuana and caffeine appears relatively benign, exposure to cocaine among some women has been associated with prenatal, perinatal, and postnatal problems. It is unknown whether the cocaine or the home environment, contributed most to these problems. Women are advised to use substances such as caffeine in moderation during pregnancy and to abstain from illegal drugs, as well as legal substances such as nicotine and alcohol that are clearly harmful to the fetus and infant.

Source: Britt, G.C., Ingersoll, K.S., & Schnoll, S.H. (1999). Developmental consequences of early exposure to alcohol and drugs. In Ott, P.J., Tarter, R.E., & Ammerman, R.T. (Eds.) *Sourcebook on Substance Abuse: Etiology, Epidemiology, Assessment, and Treatment*. Boston: Allyn and Bacon. 75-97

We hope you find *Addiction Exchange* useful in your work. Send feedback or suggestions for content by emailing the editor of *Addiction Exchange*, Dr. Karen Ingersoll, at [kingerso@vcu.edu](mailto:kingerso@vcu.edu), or discuss your training needs by calling us at (804)-828-9910, or contact the VATTTC office at [vattc@vcu.edu](mailto:vattc@vcu.edu). VATTTC's website address is <http://views.vcu.edu/vattc/>.



Please distribute to your colleagues and students!