

MSA NEWSLINE

Up-to-date Information on Maternal Substance Abuse and Child Development

Maternal Smoking During Pregnancy Associated with Negative Toddler Behavior and Early Smoking Experimentation

Smoking During Pregnancy can cause Low Birth Weight

Smoking during pregnancy almost doubles a woman's chance of having a baby with a low birth weight. Low- birth weight babies (less than 5 1/2 lbs. at birth) face increased risks of serious health problems during the newborn period, chronic disabilities, or even death. These health consequences can be devastating to families as well as costly.

Poor intrauterine growth, preterm delivery, or a combination of both can cause low birth weight. Studies show that smoking increases the risk of preterm delivery by at least 20 percent. If, however, a woman stops smoking by the end of her first trimester, she is no more likely to have a low birth weight baby than a woman who never smoked. According to the American College of Obstetricians and Gynecologists, women who stop smoking any time up to the 30th week of pregnancy have babies with higher birth weights than women who smoke throughout pregnancy.

Prenatal Tobacco Exposure Contributes to an Array of Developmental and Behavioral Problems

Numerous studies have been performed on the effects of prenatal tobacco exposure. The National Institute on Drug Abuse, or NIDA, has taken an interest in the subject matter and their researchers have contributed to the evidence that smoking during pregnancy has negative consequences on child development. A few studies have associated prenatal tobacco exposure with early smoking experimentation by preadolescents, as well as negative behavior in toddlers.

In a study carried out by Dr. Judith Brook, Dr. David Brook, and Dr. Martin Whiteman, mothers who did and mothers who did not smoke during pregnancy were interviewed about their children's behavior. The mothers who did smoke reported that their toddlers displayed more negative behaviors than the toddlers of the mothers who did not smoke. These negative behaviors included "rebelliousness," "risk- taking," and impulsiveness."

Another study performed by NIDA researchers Dr. Marie Cornelius and Dr. Nancy Day revealed that smoking during pregnancy has more of an effect on early preadolescent experimentation than when the child is raised in an environment where the mother smokes. Researchers at the University of Pittsburgh School of Medicine discovered that, aside from exposure to maternal smoking contributing to early experimentation, there is also a correlation to increased anxiety, depression, and aggressive/violent behavior.

In addition to these findings, there was a strong correlation between the mother's disciplinary style and negative behavior exhibited by the toddler. However, even when this factor was taken into consideration and controlled, prenatal exposure independently influenced the toddler's behavior. Dr. Brook believes that overall there are three major contributing factors to toddler negativity which include

Recent studies suggest that smoking may also contribute to certain birth defects, especially when certain gene-environment interactions are present. One study found that women who smoked in the early months of pregnancy were 34 percent more likely than nonsmoking mothers to have a baby with a foot deformity called club foot. Another study found that babies with a predisposing gene had an increased risk of developing cleft lip or cleft palate if their mothers smoked during the first three months of pregnancy.

-Info from March of Dimes

prenatal tobacco exposure, a physically abusive or strongly assertive disciplinary style, and mother-child conflict.. Dr. Brook also hypothesizes that prenatal tobacco exposure disrupts the neurophysiological functioning of the fetus, which predisposes the child to later developmental difficulties. Implications have been made about future behavioral problems that could develop, such as mental illness, substance abuse, and delinquency.

(Brook, J.S.; Brook, D.W.; and Whiteman, M. The influence of maternal smoking during pregnancy on the toddler's negativity. *Archives of Pediatric and adolescent medicine* 154(4):381-385, 2000)

(Cornelius, M.D.; Leech, S.L.; Goldschmidt, L.; and Day, N.L. Prenatal tobacco exposure: Is it a risk factor for early tobacco experimentation? *Nicotine and Tobacco Research* 2:45-52, 2000)

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