Smoking Tobacco in Pregnancy and Later Outcomes

Prenatal Tobacco Smoke Exposure Affects Sound Perception

Research on the effects of maternal smoking during pregnancy has suggested that children of women who smoke may have poorer learning skills and problems in their ability to process sounds. This question was addressed in a study conducted at Emory’s Child Development Laboratory in collaboration with the Centers for Disease Control and Emory School of Public Health. Babies’ learning abilities were assessed using the Bayley Scales of Infant Development-II (BSID-II) and two information processing tasks.

Psychologists use changes in heart rate to measure infants' attention and their learning rates. In this study, two tests were used to measure response to sounds and sights - these were sounds (tone pairs) and pictures. Typically, babies' heart rates slow down when they are paying attention and learning about something new. These changes happen within seconds of first seeing or hearing something new. How quickly the heart rate slows down and the amount of change in heart rate reveals how the baby responded to the sight or sound.

"... infants of mothers who smoked in pregnancy have a deficit in auditory perception ..."

After controlling for important family lifestyle variables and mother's intake of alcohol and caffeinated beverages, maternal smoking predicted poorer language scores on the BSID-II and less effective response to the...
News Briefs
Drug Abuse and Conduct Disorder Linked to Prenatal Tobacco Exposure

Researchers at Columbia University followed 147 mother-child pairs through adolescence and early adulthood. Study evidence revealed an increased risk for drug abuse and conduct disorder in children whose mothers smoked during pregnancy.

The study revealed striking gender differences, with girls at increased risk for substance abuse and boys at increased risk for conduct disorder.

Risk for drug abuse in adolescent girls was more than 5-fold higher if their mothers smoked significant amounts during pregnancy. Seventy percent of girls who abused drugs, abused more than one substance.

Among boys whose mothers smoked significant amounts during pregnancy, the risk for conduct disorder was increased 4-fold.

![Graph showing Heart Rate Change in Response to Auditory Stimuli by Prenatal Smoking Status]

Maternal Substance Abuse and Child Development Project
1256 Briarcliff Rd., NE Suite 323W
Emory West Campus
Atlanta, GA 30306

The Maternal Substance Abuse and Child Development Project is dedicated to the study and prevention of the effects maternal substance abuse. Since 1978, the project has studied the development of children exposed to alcohol and other drugs prenatally and their caregivers and provided training for Prevention statewide. For additional information call (404) 712-9800.