Mom's Meth Use May Affect Kids' Behavior

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Women who use methamphetamine during pregnancy may be placing their unborn children at risk for behavioral problems during childhood, researchers found.

At ages 3 and 5, children who had been exposed to methamphetamine in the womb had greater emotional reactivity and higher levels of anxiety and depression than their unexposed peers, according to Linda LaGasse of Brown University in Providence, R.I., and colleagues.

Also, at age 5 only, exposure was associated with externalizing behavior problems (acting out) and attention-deficit/hyperactivity disorder (ADHD) symptoms, the researchers reported online ahead of the April issue of Pediatrics.

"The ability to identify specific behavioral syndromes in children as early as preschool age could lead to the development of preventive intervention programs," they wrote, adding that early intervention "may prevent escalation into delinquency and psychopathology."

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Methamphetamine is used by more people around the world than cocaine and opiates combined and, unlike other drugs, methamphetamine is used for the first time more often by women than by men.

That raises concerns about the effects of prenatal exposure to methamphetamine, which has been associated with adverse effects on fetal growth, infant neurobehavior, and fine motor function. Little is known, however, about the potential impact on early childhood behavior.

So the researchers turned to the Infant Development, Environment, and Lifestyle (IDEAL) study, a prospective, longitudinal study of prenatal methamphetamine exposure using participants from Los Angeles, Honolulu, Des Moines, Iowa, and Tulsa, Okla.

Methamphetamine use during pregnancy was either reported by the mothers or confirmed by a meconium screen. Women in the comparison group denied using methamphetamine and had a negative meconium screen.

The current analysis included 166 children who had been exposed to methamphetamine and 164 who had not. They were assessed for behavior problems at ages 3 and 5 using the caregiver-reported Child Behavior Checklist administered by a study interviewer.

After adjustment for numerous potential confounders -- including environmental risk and prenatal exposure to cigarettes, alcohol, and marijuana -- prenatal methamphetamine exposure was associated with some behavior problems in the children.

The significantly greater levels of externalizing and ADHD symptoms in the exposed children at age 5 were the result of decreases in these symptoms in the comparison group, but not in the methamphetamine-exposed group.

Heavy use of methamphetamine -- defined as use at least three days a week during pregnancy -- was associated with attention problems and withdrawn behavior at both ages. Prenatal methamphetamine exposure was not, however, associated with internalizing behavior or total behavioral problems.

The findings on externalizing behaviors in the current study are consistent with studies of prenatal cocaine exposure, despite differences in study populations. The cocaine studies were mostly conducted with inner-city, black, low-income, poorly educated mothers, while the IDEAL study was conducted with mostly non-black, working class, and educated mothers from rural areas.

"Despite adjustment for demographic factors, the population differences suggest that these effects on behavior problems are quite robust and may have substantial public health implications, because problems as noted on the Child Behavior Checklist tend to persist over time and predict later psychopathology and criminal behavior that place tremendous burdens on society," the authors wrote.

They acknowledged that the findings might not be generalizable to all women who use methamphetamine during pregnancy and that the study may be limited by recall bias regarding the use of methamphetamine during pregnancy and by reporting bias regarding children's behavior.