

Prenatal Exposure to Methamphetamine

The effects of prenatal methamphetamine exposure on the developing fetus have not been well characterized. There have been isolated reports of cardiac defects, cleft lip and biliary atresia in infants but these findings are confounded by the observations that approximately 80% of methamphetamine-using women also used nicotine and alcohol. Nicotine and alcohol are two agents known to cause serious developmental issues in children prenatally exposed.

Few researchers are following methamphetamine-exposed infants, but the work of Rizwan Shah, M.D., at Blank Children's Hospital in Iowa and Lynne Smith, M.D., at University of California-Los Angeles are both longitudinal studies that involve cocaine and/or methamphetamine-exposed children. In Dr. Shaw's study, women who used methamphetamine and cocaine in the first trimester of pregnancy were more likely to continue use throughout pregnancy, into the third trimester. He also found that nicotine use was universal among his sample of drug-using pregnant women. The women were also engaged in polydrug use, as 60% of the methamphetamine and cocaine group were using marijuana and alcohol are their secondary drugs of choice. Not surprisingly, clinical outcomes of the methamphetamine and cocaine exposed infants included weight and head circumferences in the <10th percentile for 33% of these prenatally exposed babies. They also displayed a high percentage of a developmental delay in at least one domain assessed by Dr. Shah's group, with 66% of the methamphetamine and cocaine exposed infants having a delay in at least one of the domains assessed (e.g., gross motor skills, fine motor skills, language skills, and/or social skills).

Dr. Smith's findings also indicate areas of concern for those children born to methamphetamine-using women. Although Dr. Smith found no differences in growth parameters between methamphetamine-exposed and methamphetamine-unexposed infants, she did find significantly more small-for-gestational age infants in the methamphetamine exposed group. In addition, methamphetamine-exposed infants whose mothers smoked had significantly decreased growth relative to infants exposed to methamphetamine alone. Finally, Dr. Smith's group found a low incidence of withdrawal symptoms requiring pharmacologic intervention in the methamphetamine-exposed group. Only 4% of these babies required medical help due to exhibiting any withdrawal-type symptomatology.

Prenatal methamphetamine exposure is a serious public health concern. These children will certainly need many of the same services as other high-risk, drug-exposed children: drug treatment for the mothers, early intervention services for the children, and a comprehensive system of follow-up and support for the entire family.

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