

Children of older women appear vulnerable to the effects of prenatal alcohol exposure

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The presence and severity of Fetal Alcohol Spectrum Disorders (FASD) are influenced by factors beyond alcohol consumption. A new study of one of those factors that may increase the risk of FASD - maternal age - has found that the impact of maternal binge drinking during pregnancy on attention was greater among children born to older drinking mothers.

Results will be published in the October 2010 issue of *Alcoholism: Clinical & Experimental Research* and are currently available at Early View.

"Previous research had found that women drink more frequently as they become older," said Lisa M. Chiodo, an assistant professor in the college of nursing at Wayne State University. "In this study, we showed that older women were also likely to drink more often during their pregnancy than younger women. This increased drinking during pregnancy may be due to a general increase with age that is found for both genders, or may be related to greater tolerance to alcohol that comes with experience. In either case, if older women drink more during pregnancy, their fetuses will be at greater risk for FASD."

"Our clinical experience has shown that children born to older alcoholic mothers display greater cognitive-behavioral deficits and more physical anomalies than those born to younger alcoholic mothers," said Piyadasa W. Kodituwakku, associate professor of paediatrics and neurosciences at the University of New Mexico. "The moderating effect of maternal age on the degree of alcohol-induced damage can clearly be seen in children

born to the same mother who continued to drink, particularly to binge drink. In these families, the younger children tend to exhibit more physical anomalies and greater cognitive deficits than older children."

Chiodo and her colleagues examined the effects of maternal age on measures of attention in 462 children (231 boys, 231 girls) born to inner-city women were recruited during pregnancy at a university antenatal clinic. The study authors examined [binge drinking](#), smoking, and the use of cocaine, marijuana and opiates among the mothers. At seven years of age, the children completed a Continuous Performance Test, and their teachers completed the Achenbach Teacher Report Form.

"Our finding that children born to older drinking mothers have more alcohol-related attention deficits than children born to younger drinking women ... is consistent with prior studies," said Chiodo. "Although not conclusive, this finding may be due to older moms drinking for longer periods, greater alcohol tolerance, and having more alcohol-related health problems - all leading to higher levels of alcohol in their fetuses. It has also been suggested that changes in body size, metabolism or composition, or number of births, which are all related to maternal age, may be factors increasing the impact of prenatal alcohol exposure."

"More specifically," added Kodituwakku, "the children born to older mothers - those aged 30 or older - showed more deficits than those born to younger mothers (age 29 and younger). Analyses of specific attentional measures revealed that children born to older mothers who had a binge pattern of drinking were more cautious and consequently slower in responding on the Continuous Performance Task, and made more errors." In other words, he said, [maternal age](#) and binge drinking interactively contribute to attentional problems in alcohol-exposed children.

"The finding that binge drinking in older women is associated with a

higher risk of alcohol-induced brain damage in the offspring has implications for the development of programs for prevention of FASD," Kodituwakku noted. "Furthermore, the finding that children with prenatal alcohol exposure perform slowly, yet make more errors, on tests of attention has implications for designing training programs for alcohol affected children ... who may benefit from slow presentation and repetition of information."

"Furthermore," added Chiodo, "it is important for women and clinicians to understand that although previous children born to one woman following [pregnancy](#) drinking might not have been affected by the alcohol, this may not be true for subsequent pregnancies, or for other women. Children of older women appear to be particularly vulnerable to the effects of prenatal [alcohol](#) exposure."

Provided by Alcoholism: Clinical & Experimental Research

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