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Prenatal exposure to alcohol can make alcohol smell more pleasant

DETROIT – Young adults exposed to high levels of alcohol before birth found the smell of alcohol more pleasant than a control group, according to researchers at Wayne State University. In the sample of 75 participants, higher levels of prenatal alcohol exposures were related to higher relative ratings of pleasantness for odors of alcohol beverages. This is the first published study to assess the influence of prenatal alcohol exposure on young adult responses to alcohol odors.

Exposure to alcohol *in utero* can lead to life-long neurobehavioral and social problems including a higher risk of early alcohol use and drinking-related problems. WSU's findings are consistent with the idea that positive associations to the odor of alcohol are acquired prenatally and retained into young adulthood despite many years of intervening experiences. Additional research could investigate the relationships between altered responses to alcohol odors and drinking behavior.

John H. Hannigan, deputy director of the Merrill Palmer Skillman Institute at WSU and co-lead author Lisa M. Chiodo of the University of Massachusetts, found that young adults with prenatal exposure to alcohol were more than twice as likely to rate alcohol odors as "pleasant" compared to those without such exposure. "Prenatal exposure may increase the likelihood of people using alcohol at younger ages and drinking more often, because the smell of alcohol is more pleasing to them," Dr. Hannigan said. The question of how prenatal exposure changes the perception of alcohol odors remains, but a larger study could examine those mechanisms, the influence of other pre- and postnatal factors, and the young adults' current drinking patterns.

This study was funded by the National Institute of Health and is published as "Prenatal alcohol exposure selectively enhances young adult perceived pleasantness of alcohol odors," in the January 19 issue of *Physiology & Behavior*.

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