

Binge drinking during youth may impact future offspring

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A rat model found preconception binge drinking may have negative consequences on future offspring's growth, social interactions and pubertal development, according to a new study published in the

Endocrine Society's *Journal of the Endocrine Society*.

Binge [drinking](#) during adolescent development can have long-lasting effects in the brain, and recent data shows that these effects may directly impact first-generation [offspring](#). These observations could have consequences for human health as more than 4.5 million Americans under the age of 21 report engaging in binge-pattern alcohol abuse.

"Our animal study demonstrates that drinking large quantities of alcohol in a 'binge' fashion before pregnancy can impact future offspring," said the study's senior author, Toni Pak, Ph.D., of Loyola University Chicago in Maywood, Ill. "Importantly, this is true for drinking behaviors of both parents, not just the mother. Our previous data supports the idea that alcohol is affecting the parental sperm and eggs to induce these modifications in the offspring, but this most recent work shows the extent of those effects on social behavior, pubertal maturation, and stress hormones as the offspring grow to adulthood."

Researchers found that a [rat model](#) of binge-pattern drinking during puberty had several consequences for the animals' offspring, including smaller body weight, fewer play behaviors, and decreased circulating testosterone. In addition, the parents did not pass down to the offspring any adaptive traits that allowed them to better tolerate [alcohol](#).

"By better understanding which parental preconception behaviors impact future generations, we can do more to prevent their perpetuation," Pak said.

The study, "Binge Drinking and Intergenerational Implications: Parental Preconception Alcohol Impacts Offspring Development in Rats," will be published online.

Provided by The Endocrine Society

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