

Enhanced brain acetate metabolism may reward heavy drinkers

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In addition to its well-known effects on the CNS, alcohol consumption has a significant impact on metabolism. After consumption, the body rapidly begins converting ethanol to acetate, which can serve as an energy source for the brain and other organs. Lihong Jiang and colleagues at Yale University used a brain imaging technique, magnetic resonance spectroscopy, to track acetate uptake and metabolism in the brains of heavy drinkers (consumed at least 8 drinks/week) and light drinkers (consumed less than 2 drinks/week).

In this issue of the *Journal of Clinical Investigation*, they report that heavy drinkers had greater, more rapid acetate uptake and metabolism compared to light drinkers. Because ethanol consumption can cause acute drops in [blood glucose levels](#), acetate has the potential to provide a compensatory energetic reward. Additionally, acetate metabolism produces adenosine, which has a sedating effect similar to alcohol.

These findings suggest that the provision of acetate and/or enhancement of adenosine during alcohol detoxification could help alleviate withdrawal symptoms.

More information: Increased brain uptake and oxidation of acetate in heavy drinkers, *J Clin Invest*. doi:[10.1172/JCI65153](https://doi.org/10.1172/JCI65153).

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