

Migraine sufferers more prone to hangover headache

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Migraine sufferers, beware. You may be more prone to an alcohol-induced headache after a night of drinking, according to researchers from the Jefferson Headache Center. The research will be presented at Neuroscience 2009, the Annual Meeting of the Society for Neuroscience, in Chicago.

Until now, studying the mechanism behind migraine and other forms of recurrent headaches has not been possible in an [animal model](#), according to Michael Oshinsky, Ph.D., assistant professor of Neurology at Jefferson Medical College of Thomas Jefferson University, and a member of the Jefferson [Headache](#) Center team. In order to facilitate the study of migraine, Dr. Oshinsky developed a rat model in which headaches are induced by repeatedly stimulating, over weeks to months, the brain's dura mater with an inflammatory mixture.

Dr. Oshinsky and Christina Maxwell, a Ph.D. student in the Neuroscience program at the Jefferson College of Graduate Studies, used their [rat model](#) to study the effects of [alcohol](#) on rats who suffer recurrent migraines, compared to rats that do not get headaches. They analyzed four groups of rats: two groups received repeated dural stimulation, followed by an oral ingestion of saline or alcohol (the equivalent of one to two shots of liquor). Two control groups received no inflammatory stimulation, and received the similar oral ingestion of saline or alcohol.

Migraine headaches are associated with hypersensitivity to light, sound

and light touch on the head and face. The researchers measured the rats' sensitivity to touch around the eye, using von Frey monofilaments. They monitored the change in pain threshold of the face resulting from the repeated dural stimulation.

The rats that received dural stimulation followed by alcohol showed an initial analgesic effect within the first two hours after alcohol ingestion. However, four to six hours later, their pain sensitivity increased, indicating a more painful state. There were no changes in alcohol-induced sensitivity in the control groups.

"Our results suggest that dehydration or impurities in alcohol are not responsible for hangover headache," Dr. Oshinsky said. "Since these rats were sufficiently hydrated and the alcohol they received contained no impurities, the alcohol itself or a metabolite must be causing the hangover-like headache. These data confirm the clinical observation that people with migraine are more susceptible to alcohol-induced headaches."

Dr. Oshinsky and his laboratory are now also studying the mechanism for the induction of headache, and also the metabolites of alcohol that cause hangover.

Source: Thomas Jefferson University ([news](#) : [web](#))

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