

# Immune system suppression may be related to problem drinking

February 3 2017

---

Cytokines are small proteins in the immune system that act as chemical messengers between cells. Prior research suggests that pro- and anti-inflammatory cytokines are dysfunctional during alcohol dependence and may contribute to the progression from healthy to problem drinking. This study compared social and non-dependent problem drinkers on the impact of alcohol-related changes in the body's immune response to stress, alcohol-cue induced craving and anxiety, motivation to drink, and alcohol consumption.

Researchers studied 26 (21 male, five female) problem drinkers and 38 (26 male, 12 female) social drinkers. During three consecutive days, all participants were exposed to three personalized five-minute imaging sessions that represented stressful (S), relaxing (R), and alcohol cues (C), followed by an "alcohol taste test" (ATT) to measure alcohol motivation and intake. Additional measures were obtained at baseline, post-imagery, and at alcohol-cue presentation during ATT.

The study showed that problem drinkers who are at risk for AD had a dampened biological response at baseline – specifically, suppressed pro- and anti-inflammatory markers – compared to [social drinkers](#). The immunologic changes seen in problem drinkers were associated with elevated levels of stress and cue-induced alcohol craving and anxiety. The changes also predicted alcohol craving, the motivation to drink, [alcohol intake](#) and the severity of problem drinking. Based on these findings, the authors concluded that selective immunosuppression may contribute to problem drinkers' motivation to drink.

**More information:** Verica Milivojevic et al. Peripheral Immune System Adaptations and Motivation for Alcohol in Non-Dependent Problem Drinkers, *Alcoholism: Clinical and Experimental Research* (2017). [DOI: 10.1111/acer.13317](https://doi.org/10.1111/acer.13317)

Provided by Research Society on Alcoholism

Citation: Immune system suppression may be related to problem drinking (2017, February 3) retrieved 22 March 2023 from <https://medicalxpress.com/news/2017-02-immune-suppression-problem.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.