



Letter to the Editor

Understanding hangxiety: The link between alcohol and anxiety

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Dear Editor,

Alcohol consumption is a common social activity, yet its after-effects can be distressing. Beyond the typical symptoms of a hangover—such as headache, nausea, and fatigue—many individuals experience heightened anxiety the day after drinking. This phenomenon, commonly referred to as "hangxiety," can range from mild unease to severe panic attacks.^[1] Understanding the mechanisms behind hangxiety is crucial for developing effective coping strategies.

Alcohol affects neurotransmitters by initially enhancing gamma-aminobutyric acid (GABA) activity, promoting relaxation and reducing anxiety.^[1,2] However, as alcohol leaves the system, GABA levels drop while glutamate activity rises, leading to increased brain excitability and heightened anxiety.^[1] Additionally, alcohol disrupts the hypothalamic-pituitary-adrenal (HPA) axis, causing a surge in cortisol levels post-consumption,^[3] which contributes to stress and restlessness. Furthermore, alcohol-induced sleep disturbances, particularly reduced REM sleep, impair emotional regulation and can worsen anxiety symptoms the next day, creating a cycle of physiological and neurochemical imbalance.^[3,4]

Frequent episodes of hangxiety can contribute to chronic anxiety and depression, exacerbating mental health issues over time.^[5] Alcohol-induced anxiety also places strain on the cardiovascular system, temporarily increasing heart rate and blood pressure.^[6] Additionally, the combination of stress and poor sleep weakens the immune system, making individuals more vulnerable to illness.^[4] Cognitive functions such as decision-making and concentration may also be impaired due to

poor emotional regulation and heightened brain excitability.^[7] In the long term, persistent hangxiety can signal an underlying anxiety disorder or problematic drinking habits, highlighting the need for intervention and lifestyle adjustments.^[5]

Individuals with anxiety-prone personalities or a history of social anxiety disorder are more susceptible to hangxiety, as their baseline stress levels heighten the rebound effect.^[8] Drinking patterns and alcohol expectancy also play a role, with those who consume alcohol to ease social anxiety experiencing intensified anxiety once its effects subside.^[8] Additionally, genetic predisposition and environmental stressors can further amplify post-drinking anxiety, making some individuals more vulnerable to its impact than others.^[9]

Practicing moderation and mindful drinking by limiting alcohol intake and avoiding binge drinking can help reduce the severity of hangxiety.^[7,10] Staying hydrated and replenishing lost electrolytes also aids in alleviating hangover symptoms and supporting overall recovery. Additionally, mental health strategies such as mindfulness, deep breathing exercises, and therapy can be effective in managing alcohol-related anxiety.^[11] In more severe cases, medical intervention may be necessary to address both anxiety and potential alcohol dependence, ensuring a comprehensive approach to prevention and coping.^[12]

This letter equips psychiatric nurses with a better understanding of how alcohol affects neurotransmitter activity, including the suppression of GABA (Gamma-Aminobutyric Acid) during consumption and the rebound overstimulation of glutamate during withdrawal.^[1,2] Such biochemical effects can lead to acute anxiety symptoms, reinforcing cycles of alcohol depen-

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dence as individuals seek to self-medicate their anxiety. Psychiatric nurses can use this knowledge to educate patients about the risk of "hangxiety" and how alcohol exacerbates anxiety symptoms in the long term.

The letter also emphasizes the importance of recognizing hangxiety as a symptom of potential alcohol dependence or an early warning sign of alcohol use disorder (AUD).^[9,12] Psychiatric nurses can incorporate this understanding into their assessments, identifying patients who may be struggling with both anxiety disorders and substance misuse. By tailoring interventions to address both issues simultaneously, nurses can enhance the effectiveness of treatment plans, including Cognitive Behavioral Therapy (CBT), medication management, and psychoeducation.^[11]

Additionally, the insights from this letter underscore the need for psychiatric nurses to promote alternative coping strategies for anxiety—such as mindfulness, stress reduction techniques, and support groups—while fostering an environment of trust and empathy for patients battling alcohol-related challenges.^[12,13]

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References

1. Aitken B, Rothman R. Hangxiety 101: The brain chemistry behind post-drinking dread. *PsyPost*; 2024. Available at: <https://www.psypost.org/hangxiety-101-the-brain-chemistry-behind-post-drinking-dread/>. Accessed Sep 4, 2025.
2. Nutt, D. The best alcohol to drink to avoid "hangxiety". *New York Post*; 2204. Available: <https://simplelivingglobal.com/the-real-truth-about-alcohol/>. Accessed Sep 4, 2025.
3. Holt S. The worst alcoholic drinks for hangxiety. *The Daily Telegraph*. 2024. Available at: <https://www.bodyandsoul.com.au/health/health-news/the-worst-alcoholic-drinks-for-hangxiety/news-story/f05cab59300610b12c0e0daf2b2efb98>. Accessed Sep 4, 2025.
4. Walker MP. *Why we sleep: Unlocking the power of sleep and dreams*. New York: Scribner; 2017.
5. Chouhan DS. Stress and its major effects on human health. *Int J Multidiscip Allied Res Rev Pract* 2016;3:45–52.
6. Koshy B. A review: Anti-psychotic drugs and its adverse effects on health. *Universe Int J Interdiscip Res* 2021;2:30–6.
7. Chouhan DS, Lodhi M. Impact of screen time used by children and its mental health effects in the digital age: A study. *Int J Res Soc Sci Res* 2019;9:22–8.
8. Carroll SL, Mikhail ME, Burt SA. The development of youth antisocial behavior across time and context: A systematic review and integration of person-centered and variable-centered research. *Clin Psychol Rev* 2023;100:102253.
9. Gilpin NW, Koob GF. Neurobiology of alcohol dependence: Focus on motivational mechanisms. *Alcohol Res Health* 2008;31:185–95.
10. Novotna G, Nielsen E, Berenyi R. Harm reduction strategies for severe alcohol use disorder in the context of homelessness: A rapid review. *Subst Abuse* 2023;17:11782218231185214.
11. Robson D. 'Resilience interventions do work' – Why coping strategies should be a staple of education. *The Guardian*. 2024. Available at: <https://www.theguardian.com/society/2024/nov/24/resilience-interventions-do-work-why-coping-strategies-should-be-a-staple-of-education>. Accessed Sep 4, 2025.
12. National Institute on Alcohol Abuse and Alcoholism. Alcohol and the brain: An overview. 2022. Available at: <https://www.niaaa.nih.gov/publications/alcohol-and-brain-overview>. Accessed Sep 4, 2025.
13. Machado MPA, Opaleye ES, Bedendo A, Bowen S, Noto AR. A mindfulness-based intervention for Substance Use Disorder in a Brazilian vulnerable population: A feasibility mixed method study. *Front Public Health* 2024;12:1381489.