

# ASHES, Vol. 11(13) - Co-occurring cannabis and nicotine dependence increases the odds for DUI

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Those who are caught driving under the influence of alcohol or drugs often have an [underlying mental health disorder](#). Compared to the general population, repeat DUI offenders are [more likely to be dependent on substances other than alcohol including nicotine or drug dependence](#) (Shaffer et al., 2007). This week's ASHES examines the relationship between cannabis dependence, nicotine dependence, and [co-occurring](#) cannabis and nicotine dependence on the prevalence of driving under the influence of alcohol ([Peters, Schwartz, Wang, O'Grady, & Blanco, 2014](#)).

## Methods

- Researchers examined associations between substance use, psychiatric disorders, and psychosocial correlates including driving under the influence from the second wave of the National Epidemiologic Survey on Alcohol and Related Conditions (i.e., NESARC), a nationally representative sample of US Adults.
  - The sample included 3,598 respondents: 3,424 who reported current nicotine dependence (ND); 100 who reported current cannabis dependence (CD); and 74 who reported current nicotine and cannabis dependence (ND + CUD).
  - Participants completed the Alcohol Use Disorder and Associated Disabilities Interview Schedule (AUDADIS-IV) which assess psychiatric disorders including nicotine dependence and cannabis dependence.
  - In additions to the AUDADIS-IV, participants also reported whether they drove under the influence of alcohol or drugs during the past 12 months.
  - Researchers used [logistic regressions](#) to calculate odds ratios of driving under the influence of alcohol or drugs in the past 12 months, adjusted for age, gender, race, and education.

## Results

- Compared to the nicotine dependence only group, those with co-occurring cannabis and nicotine dependence were more likely to report a number of other psychiatric disorders, including dependent personality disorder, narcissistic personality disorder, and bipolar disorder.
- As Table 1 shows, those with co-occurring nicotine and cannabis dependence were approximately twice as likely as those with nicotine dependence to drive under the influence of alcohol.
- When the researchers analyzed the full sample, they found that participants with co-occurring nicotine and cannabis dependence were more than 20 times more likely to drive under the influence of drugs. However, when they limited the analysis to only those who reported past year drug use, the difference was no longer [statistically significant](#) (see Table 1).
- The cannabis dependence group and the co-occurring cannabis and nicotine dependence group did not differ [significantly](#) in their risk of committing DUI.

Outcome	Adjusted Odds Ratios (95% confidence interval)
	CUD + ND vs ND only
Driving under the influence of alcohol <sup>a</sup>	1.96* (1.03 - 3.75)
Driving under the influence of alcohol	2.3* (1.23 - 4.33)
Driving under the influence of other drugs <sup>a</sup>	1.88 (0.40 - 8.85)
Driving under the influence of other drugs	21.72* (3.64 - 129.59)

Figure. Adjusted [odds ratios](#) and [confidence intervals](#) for past 12 months DUI among participants with current co-occurring nicotine and cannabis dependence, compared against participants with nicotine dependence (adapted from Peters et al., 2014)

<sup>a</sup> statistics are only for respondents who reported that they used the specified substance (alcohol or other drugs) in the past year.

\* [Statistically significant](#).

## Limitations

- The [cross-sectional](#) nature of this analysis makes it impossible to draw any conclusions about causation.
- The authors excluded from the study anyone with current alcohol or non-cannabis substance use disorders, limiting the [generalizability](#) of the results.
- The cannabis use item from NESARC only asks about joint and joint equivalents. Participants whose only exposure to cannabis came from sources such as edibles and vaporizers might not have reported cannabis use.

## Conclusion

It's likely that much of the findings have to do with the mental health profile of the cannabis and nicotine dependence group. In other words, people with cannabis and nicotine dependence might have been more likely to drive under the influence in part because of their other psychiatric disorders. Programs established to address nicotine dependence should consider screening for other psychiatric problems including cannabis dependence and personality disorders. [Addressing the underlying mental health problems will likely reduce the occurrence of driving under the influence of alcohol and drugs for this population](#) and might also improve smoking cessation efforts.

## References

Peters, Erica N, Schwartz, Robert P, Wang, Shuai, O'Grady, Kevin E, & Blanco, Carlos. (2014). Psychiatric, psychosocial, and physical health correlates of co-occurring cannabis use disorders and nicotine dependence. *Drug and alcohol dependence, 134*, 228-234.

Shaffer, Howard J., Nelson, Sarah E., LaPlante, Debi A., LaBrie, Richard A., Albanese, Mark J., & Caro, Gabriel. (2007). The epidemiology of psychiatric disorders among repeat DUI offenders accepting a treatment sentencing option. *Journal of Consulting and Clinical Psychology, 75*(5), 795-804.

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