

# Asthma rates climb for high school students as cannabis use increases

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Asthma is more common among high school students who use cannabis, relative to those who do not and the prevalence of asthma increases with the frequency of its use among the students, according to a new study at

Columbia University Mailman School of Public Health and the City University of New York. The findings are [published](#) in the journal *Pediatric Pulmonology*.

The paper, titled "Asthma prevalence among US 9th–12th graders who report past 30-day [cannabis](#) use in 2019," sheds light on the correlation between recent cannabis use and asthma prevalence among American high school students, adjusting for demographic characteristics and cigarette use.

Data were drawn from the 2019 Youth Risk Behavior Surveillance System, a CDC national high school survey, which collects data from students in grades 9–12 across the U.S. bi-annually. The research team, led by Renee Goodwin in the Department of Epidemiology at Columbia Public Health, utilized logistical models to examine the prevalence of asthma with past 30-day cannabis use, current cigarette, alcohol, state-of-residence cannabis legal status, adjusting for sex, race and ethnicity, thus providing a valuable contribution to the understanding of the potential health impacts associated with cannabis use among adolescents.

Cannabis use was more common among female (17% vs. 14%, male users), Non-Hispanic Black and Hispanic youth relative to Non-Hispanic white youth (17% and 16% respectively vs. 14.6%). Cannabis use was much more common among the students who reported any past 30-day cigarette or alcohol use (45% vs. 6.5%, for non-users. Declines in cannabis use were observed independent of state-level cannabis law from 2013 to 2021 and cannabis use prevalence did not differ significantly by state-of-residence cannabis [legal status](#) among the 24 participating states in 2021.

Commenting on the significance of the research, Goodwin and colleagues believe that the study adds to the growing body of evidence linking cannabis use to [adverse health outcomes](#) among young people.

"Understanding these associations is crucial for developing effective prevention and intervention strategies to protect the health and well-being of our youth."

Goodwin, who is a [clinical psychologist](#) and expert in psychiatric and substance use epidemiology, continues, "The findings of this study have important implications for public health, education, and drug prevention programs targeting [high school students](#) although more public health and [clinical research](#) is needed."

Goodwin is also a researcher in the Department of Epidemiology and Biostatistics at the Graduate School of Public Health and Health Policy, The City University of New York. "Scientific data that can inform clinical guidelines and [public health](#) policy, as well as parents and youth, on the potential relationship between cannabis use and respiratory health among youth, is critical and we urge that more studies like this one be a priority," she added.

Co-author is Kevin D. Silverman, Graduate School of Public Health and Health Policy, The City University of New York.

**More information:** Kevin D. Silverman et al, Asthma prevalence among US 9th–12th graders who report past 30-day cannabis use in 2019, *Pediatric Pulmonology* (2024). [DOI: 10.1002/ppul.26840](https://doi.org/10.1002/ppul.26840)

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