

Juuls pack same nicotine punch as cigarettes

September 11 2018



(HealthDay)—Juuls, the latest craze in vaping, deliver levels of nicotine that nearly match what is inhaled with tobacco cigarettes, a new study finds.

Not only do these e-cigarette devices contain high levels of nicotine, they deliver it in a form that makes it easier for the body to absorb, the researchers said.

Juuls, which look much like computer flash drives, and similar devices use pods that produce a vapor users inhale. The pods are flavored, often tasting like fruit or candy.

For the study, scientists studied patients aged 12 to 21 seen at three Stony Brook Children's Hospital outpatient clinics in Long Island, N.Y., from April 2017 to April 2018.

More than 500 of the patients completed a 60-question questionnaire about their e-cigarette use, and more than half provided urine samples.

"We analyzed the samples looking at three things," explained study author Maciej Goniewicz, an associate professor of oncology at Roswell Park Comprehensive Cancer Center in Buffalo, N.Y.

"We measured how much nicotine is in the various products participants reported using, how much nicotine is in the vapor and could potentially be inhaled, and the concentration of nicotine metabolites in the urine of the 22 adolescents who reported using Juul or another pod within the last week, so we could see how much of the nicotine actually gets to the body," Goniewicz said in a Roswell Park news release.

The researchers found that the nicotine concentrations in Juul and similar products ranged from 23 milligrams per milliliter (mg/mL) to 56 mg/mL, which is significantly higher than seen in other e-cigarettes.

The nicotine in the vapor of these products was nearly at levels delivered by [tobacco cigarettes](#). Moreover, the users' levels of cotinine, a byproduct of nicotine, were even higher than the levels seen among teen

cigarette smokers.

That finding is most likely due to the salt form of nicotine in these devices, which is absorbed more easily than other forms, the researchers explained.

Study co-author Dr. Rachel Boykan, a pediatrician at Stony Brook Children's Hospital in New York, warned of the potential harm of these products.

"The levels of [nicotine](#) inhaled and absorbed by these pod users was alarmingly high," she said.

"While we acknowledge that this was a small study and further research is needed, it's critically important that users, parents, clinicians, public health advocates and regulatory bodies be informed about how Juul and similar devices work, and how they impact the body, as our results show that the risk for long-term product use and [nicotine addiction](#) is dangerously high," Boykan said.

The report was published recently in the journal *Tobacco Control*.

More information: The U.S. National Institute on Drug Abuse has more on [e-cigarettes](#).

Copyright © 2018 [HealthDay](#). All rights reserved.

Citation: Juuls pack same nicotine punch as cigarettes (2018, September 11) retrieved 24 May 2024 from <https://medicalxpress.com/news/2018-09-juuls-nicotine-cigarettes.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.