

E-cigarettes may be as addictive as traditional ones

July 22 2015



A photo of 117mm e-cigarette. Image: Wikipedia.

Electronic cigarettes or "e-cigs" have been touted as a tool smokers can use to wean themselves off of traditional cigarettes, which many believe are more harmful than their "e" counterparts. But because e-cig liquid also contains nicotine and emits carcinogens, is that perception really true? One team now reports in the ACS journal *Chemical Research in Toxicology* that much of the nicotine in e-cigarettes is the addictive form of the compound.

Although e-cigs don't burn tobacco, they heat and vaporize a liquid that contains nicotine, flavorings and other substances. Out of concern for the potential effects that inhaling this mixture could have on the health of young people, many states have banned their sale to minors. Some experts say the nicotine content could lead users to become addicted to e-



cigs, or that it could even serve as a gateway to conventional <u>cigarettes</u> and other drugs. But not all nicotine is created equal, and studies had yet to investigate what kind of nicotine was in the liquids. Out of three forms, scientists believe "free-base" nicotine is the only one that gets absorbed by the body, making it the most addictive kind. Najat Saliba and colleagues wanted to find out which nicotine forms are in e-cigs.

The researchers tested commercial samples of liquids made for the devices and found that, by and large, the nicotine was in the most addictive form. They also determined that the concentration of <u>nicotine</u> varied and often didn't match the concentrations the labels claimed.

Provided by American Chemical Society

Citation: E-cigarettes may be as addictive as traditional ones (2015, July 22) retrieved 3 May 2024 from https://medicalxpress.com/news/2015-07-e-cigarettes-addictive-traditional.html

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