



Teens using e-cigarettes show evidence of same toxic chemicals as smokers: Study

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iStock/Thinkstock (NEW YORK) — Using e-cigarettes has been promoted as a way to help adult smokers cut back or quit smoking, or at least to minimize the health damage that smoking causes. Teens, even middle schoolers, have taken up e-cigarettes as well. But as researchers continue to study their safety, a new report in Pediatrics shows vaping could lead to the presence of concerning levels of toxic chemicals.

Almost 100 teens from the San Francisco Bay area were examined in the University of California-San Francisco study: 67 teens used e-cigarettes only, 16 used both e-cigarettes and conventional cigarettes and 20 didn't smoke or vape at all.

Urine and salivary gland testing looked for breakdown products of toxic chemicals that have been associated with cancer — and found them in both smokers and vapers — but not those who didn't smoke at all.

Those who smoked cigarettes and used e-cigarettes had urine samples that indicated a higher presence of benzene, ethylene oxide, acrylonitrile, acrolein and acrylamide (all associated with higher risks of cancer). Levels were three times as high as those who used just e-cigarettes.

In turn, the “e-cigarette only” group had three times more evidence of the presence of acrylonitrile, acrolein, propylene oxide, acrylamide, and crotonaldehyde as non-users. Those chemicals, as well, are associated with a higher cancer risk.

The researchers write, “The presence of harmful ingredients in e-cigarette vapor has been established; we can now say that these chemicals are found in the body of human adolescents who use these products.”

Apparently, the “flavor” of the e-cigarette cartridge matters. Among e-cigarette-users, the levels of acrylonitrile were higher in those who preferred fruit flavors — compared to candy, tobacco or menthol flavors.

This is significant because 55 percent of e-cigarette users — and 67 percent of those who smoked and used e-cigs — preferred fruit flavors.

The study did not go on to see if any of these teens developed cancer.

This is the first study to assess the chemicals in e-cigarettes among adolescent use, highlighting the need to warn teenagers that there is not much known about the possible negative health risks associated with e-cigarettes.

This article was written by Dr. Najibah Rehman, a third-year resident in preventative medicine at the University of Michigan. Dr. Rehman works in the ABC News Medical Unit. Copyright © 2018, ABC Radio. All rights reserved.

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