

CHICAGO

Teens' e-cigarette use linked with later smoking

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CHICAGO » Teens who use e-cigarettes are more likely than others to later smoke conventional cigarettes and other tobacco products, a study at 10 Los Angeles high schools suggests.

The study doesn't prove that electronic cigarettes are a "gateway drug" but some doctors say it bolsters arguments that the devices should be strictly regulated as proposed by the Food and Drug Administration.

Whether teens had tried just one e-cigarette or were habitual users isn't known, nor is whether they became heavy smokers or just had a few puffs. That information would be needed to help determine whether nicotine from e-cigarettes predisposed users to seek out other sources.

Despite those limitations, the study "is the strongest evidence to date that e-cigarettes might pose a health hazard by encouraging adolescents to start smoking conventional tobacco products," said Dr. Nancy Rigotti, director of a tobacco research and treatment center at Massachusetts General Hospital. Her commentary and the study were both published in Tuesday's *Journal of the American Medical Association*.

E-cigarettes haven't been extensively studied and there's no scientific consensus on any potential benefits or harms, in-

cluding whether they lead kids to become regular smokers.

The new, government-funded study involved about 2,500 14-year-olds who had never used conventional tobacco products including cigarettes. Students were first surveyed in fall 2013. The Los Angeles study population was diverse but whether the same results would be found nationwide is uncertain.

At the start, about 9 percent — 222 kids — said they had used e-cigarettes at least once, similar to rates seen in a recent national survey. Almost one-third of them tried cigarettes, cigars or water pipes within the following six months, versus just 8 percent of the kids who'd never tried e-cigarettes. The gap persisted when students were surveyed again, a year after the study began.

Hookahs and cigars were more popular than regular cigarettes in both groups.

The researchers considered traits that might make teens more likely to use tobacco, including impulsiveness, delinquent behavior and parents' smoking habits. Their analysis showed those traits played a role but didn't fully explain the link between e-cigarettes and later tobacco use.

University of Southern California researcher Adam Leventhal, the study's lead author, noted that e-cigarettes were ini-



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In file photo, a man exhales vapor from an e-cigarette in New York.

tially introduced as a potentially safer alternative to tobacco for smokers who were trying to cut down, but they have evolved into a recreational product for some users.

Available for nearly a decade, e-cigarettes are battery-powered devices that turn nicotine-containing liquid into vapor that is inhaled. Though nicotine can

be addictive, e-cigarettes lack the chemicals and tars of burning tobacco.

National data show e-cigarettes have become more popular among teens than regular cigarettes.

Leventhal said his study "does little to dispel concerns that recreational e-cigarette use might be associated with moving on to these very harmful tobacco

products." But he said more research is needed to determine if e-cigarettes are really the culprit.

University of Rochester tobacco researcher Deborah Ossip said because teens' brains are still developing, they're more sensitive to the effects of nicotine, and that using just a few e-cigarettes could make them vulnerable to

using nicotine in other forms. She had no role in the research.

The FDA in 2014 proposed rules that would ban the sale of electronic cigarettes to minors and would add the devices to the list of tobacco products it regulates. Laws banning the sale of e-cigarettes to minors have been enacted or proposed in several states.