

Evidence suggests e-cigs safer than cigarettes, researcher claims

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In a new report that bucks the concerns raised by the Food and Drug Administration, a Boston University School of Public Health (BUSPH) (sph.bu.edu) researcher concludes that electronic cigarettes are much safer than real cigarettes and show promise in the fight against tobacco-related diseases and death.

The review, which will be published online ahead of print this month in the *Journal of Public Health Policy*, is the first to comprehensively examine scientific evidence about the safety and effectiveness of electronic cigarettes, also known as e-cigarettes, said Michael Siegel, professor of community health sciences at BUSPH. The battery-powered devices provide tobacco-less doses of [nicotine](#) in a vaporized solution.

"Few, if any, chemicals at levels detected in electronic cigarettes raise serious health concerns," the authors said. "Although the existing research does not warrant a conclusion that electronic cigarettes are safe in absolute terms and further clinical studies are needed to comprehensively assess the safety of electronic cigarettes, a preponderance of the available evidence shows them to be much safer than [tobacco cigarettes](#) and comparable in toxicity to conventional nicotine replacement products."

The report reviewed 16 laboratory studies that identified the components in electronic cigarette liquid and vapor. The authors found that carcinogen levels in electronic cigarettes are up to 1,000 times lower than in tobacco cigarettes.

"The FDA and major anti-smoking groups keep saying that we don't know anything about what is in electronic cigarettes," Siegel said. "The truth is, we know a lot more about what is in electronic cigarettes than regular cigarettes."

Since coming onto the market in the United States more than three years ago, electronic cigarettes have proven to be controversial. The FDA has threatened to ban the sell of e-cigarettes and six national anti-smoking groups – the American Cancer Society, American Heart Association, American Lung Association, Campaign for Tobacco-Free Kids, American Legacy Foundation, and Action on Smoking and Health – have also called for the removal of electronic cigarettes from the market.

Their concerns are that the FDA has not evaluated any e-cigarettes for safety or effectiveness, that the devices contain dangerous chemicals, and that they are marketed toward children. In December, however, a federal appeals court ruled that the FDA should regulate e-cigarettes as tobacco products rather than as drug-delivery devices, such as nicotine-replacement patches or gum. The latter undergo much more stringent FDA regulations.

"Taking these products off the market would force thousands of users to return to cigarette smoking," Siegel said. "Why would the FDA and the anti-smoking groups want to take an action that is going to seriously harm the public's health? The only ones who would be protected by a ban on e-cigarettes are the tobacco companies, as these new products represent the first real threat to their profits in decades."

The report also reviews preliminary evidence that [electronic cigarettes](#) can be effective in suppressing the urge to smoke, largely because they simulate the act of smoking a real cigarette. E-cigarettes might also offer an advantage over traditional nicotine delivery devices, the authors argue, because smoking-related stimuli alone have been found capable of

suppressing tobacco abstinence symptoms for long periods of time.

Provided by Boston University Medical Center

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