

# Smoking, vaping both bad for your teeth and gums: Study

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For those who care about their teeth, a new study sounds a pretty clear

alarm: using tobacco in any form—including the increasingly popular practice of vaping—is a recipe for a dental nightmare.

The warning comes from the U.S. National Institute of Dental and Craniofacial Research (NIDCR), after scientists analyzed several years of tracking data that looked at associations between smoking and poor dental health among thousands of American men and women.

The bottom line: regular users of cigarettes, electronic cigarettes (vapes), cigars, pipes, hookahs and/or smokeless tobacco face a notably higher risk for various forms of dental trouble.

Depending on the type of tobacco involved, that includes a significantly heightened likelihood for six different types of dental concerns, including gum disease; precancerous oral lesions; [bone loss](#) surrounding the teeth; loose teeth; and/or tooth loss due to tooth decay or gum disease.

And vaping, which is sometimes viewed as a safer form of tobacco use, was linked to a 27% higher risk for bleeding following brushing or flossing.

"We've always known that smoking increases your odds for gum disease," said [Dr. Purnima Kumar](#), a spokesperson for the American Dental Association.

Though not a part of the study team, Kumar—who is also chair of the department of periodontics and oral medicine at the University of Michigan School of Dentistry, in Ann Arbor—stressed that the new analysis reconfirms that broad concern.

The study was led by [Marushka Silveira](#), an epidemiologist who conducted her research while with the NIDCR, a division of the U.S.

National Institutes of Health.

Between 2021 and 2022, Silveira and her colleagues analyzed three to five years of annual tracking data collected from 2013 to 2019. The six dental issues under consideration were tracked among roughly 10,000 to 16,000 men and women.

About 16% to 19% of them smoked cigarettes regularly, while 2% to 3% smoked cigars or used smokeless tobacco, respectively.

In the end, cigarettes were linked to a 33% greater risk for [gum disease](#), a 35% higher risk for loose teeth and a 43% higher risk for losing teeth, while cigar use was linked to a more than doubling of the risk for precancerous oral lesions.

But the investigators also focused on the 2% to 3% of participants who regularly vaped.

That's important, said Kumar, because the specific threat to dental health posed by vaping is "a much newer phenomenon."

"Vaping has only been in the U.S. market since 2009," she noted. "So, what we're looking at here is just a 10- to 12-year exposure timeframe."

Even so, she was not at all surprised by the finding of a significantly higher risk for gum bleeding after flossing/brushing among vapers.

And that is because "this study validates everything we have ourselves observed at the molecular/[cellular level](#), which is that in some ways vaping may actually be worse for your dental health than smoking," Kumar said.

The concern, she explained, is predicated on what her own prior work

has already revealed about vaping's impact on the bacteria that lives in everyone's mouth, an environment that researchers refer to as "the biofilm."

"What we learned is that the bacteria that live in your mouth treat vape exposure as if it's a food group," Kumar noted. "Which means that when vape products enter the mouth, the nicotine, heat and other organic compounds involved are immediately broken down by this bacteria. And in terms of dental health, that process is the equivalent to exposing your teeth and gums to a supersized McDonald's meal every day."

So, "over time, what seems to happen is that a slime layer gets added to your biofilm, which makes it 'gunkier,' to use a technical term. And that leads to inflammation," Kumar said.

In fact, after stacking the dental health of people who had vaped for only five months against smokers who had been smoking for at least five years, "what we found is that the amount of inflammation among vapers was as much as among smokers, even though vapers had far less exposure to tobacco in terms of time. And that means that vapers appear to get to the point of bacterial destruction much faster."

Exactly if or how that all translates into serious dental damage among vapers is not entirely clear, the researchers cautioned.

They noted, for example, that most vapers are former smokers. And they pointed out that means the increased gum bleeding risk among vapers could potentially have something to do with quitting cigarette smoking.

On the other hand, the team warned that despite only linking gum bleeding to vaping, it could be that such bleeding is a [early warning](#) for dental problems as yet undetected. More research to track such longer-term risk will be needed, the study team said.

The findings were published online Dec. 9 in *JAMA Network Open*.

**More information:** There's more on dental health and tobacco at the [U.S. Centers for Disease Control and Prevention](#).

Marushka L. Silveira et al, Tobacco Use and Incidence of Adverse Oral Health Outcomes Among US Adults in the Population Assessment of Tobacco and Health Study, *JAMA Network Open* (2022). [DOI: 10.1001/jamanetworkopen.2022.45909](#)

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