E-Cigarettes 'just as harmful as tobacco' for Oral Health!

New Research Suggests Vaping May Be as Harmful as Smoking

With limited data on how e-cigarette vapor affects oral health, a recent study found that the chemicals in e-cigarette vapor were equally as damaging – in some cases, more damaging – to mouth cells as tobacco smoke. Such damage can lead to an array of oral health problems, including gum disease, tooth loss, and oral cancer.



To address this gap in knowledge, a NY research team at the University of Rochester School of Medicine and Dentistry exposed the gum tissue of nonsmokers to either tobacco flavored, or menthol-flavored, e-cigarette vapor. The tobacco-flavored vapor contained 16 milligrams of nicotine, while the menthol flavor contained 13-16 milligrams or no nicotine at all.

The researchers found that all e-cigarette vapor <u>caused damage to gum tissue cells</u> comparable to that caused by exposure to tobacco smoke. They showed that vapors from an e-cigarette caused cells to release inflammatory proteins, which in turn aggravate stress within cells, resulting in damage that could lead to various oral diseases. The researchers note that nicotine is a known contributor to gum disease, but e-cigarette flavoring appeared to exacerbate the cell damage caused by the e-cigarette vapor, with menthol-flavored vapor posing the most harm.

Another study, conducted by the Faculty of Dental Medicine at Laval University in Canada, placed epithelial cells from the mouth in a chamber that contained a liquid similar to saliva. To simulate vaping, the researchers pumped e-cigarette vapor into the chamber at a rate of two 5-second puffs every 60 seconds for 15 minutes a day. This was performed over 1, 2, or 3 days.

On analyzing the vapor-exposed epithelial cells under a microscope, the researchers identified a significant increase in the rate of cell damage and death. The rate of damage or death in unexposed cells is around 2%, but with exposure to e-cigarette vapor the number of dead or dying cells rose to 18%, 40%, and 53%, over 1, 2, and 3 days, respectively.

While the cumulative effects of the cell damage caused by e-cigarette vapor are unclear, the findings of both studies are cause for concern.

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Yours in Dental and Oral Health,

Dr. Brenda Paulen

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