

Prevent periodontitis to reduce the risk of head and neck cancer

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Chronic periodontitis, a form of gum disease, is an independent risk factor for head and neck squamous cell carcinoma. This suggests the need for increased efforts to prevent and treat periodontitis as a possible means to reduce the risk of this form of cancer.

"Prevent periodontitis; if you have it already, get treatment and maintain good oral hygiene," said Mine Tezal, D.D.S., Ph.D., assistant professor in the Department of Oral Diagnostic Sciences, School of [Dental Medicine](#), University at Buffalo, and NYS Center of Excellence in Bioinformatics and Life Sciences at the University of Buffalo. She is also a research scientist in the Department of Dentistry and Maxillofacial Prosthetics at Roswell Park Cancer Institute, which is where the study was conducted.

Results of this study are published in *Cancer Epidemiology, Biomarkers & Prevention*, a journal of the American Association for Cancer Research.

Chronic periodontitis is characterized by progressive loss of the bone and soft tissue attachment that surround the teeth. The researchers assessed the role of chronic periodontitis on head and neck squamous cell carcinoma, as well as the individual roles on three subsites: oral cavity, oropharyngeal and laryngeal. They used radiographic measurement of bone loss to measure periodontitis among 463 patients; 207 of whom were controls.

Findings showed that chronic periodontitis might represent a clinical high-risk profile for head and neck [squamous cell carcinoma](#). The strength of the association was greatest in the oral cavity, followed by the oropharynx and larynx, according to Tezal.

When they stratified the relationship by tobacco use, they found that the association persisted in those patients who never used tobacco. The researchers did not expect the periodontitis-head and neck squamous [cell carcinoma](#) association to be weaker in current smokers compared to former and never smokers, according to Tezal. However, this interaction, although statistically significant, was not very strong.

"Confirmatory studies with more comprehensive assessment of smoking, such as duration, quantity and patterns of use, as well as smokeless tobacco history are needed," she said.

"Our study also suggests that chronic periodontitis may be associated with poorly differentiated tumor status in the oral cavity. Continuous stimulation of cellular proliferation by chronic inflammation may be responsible for this histological type. However, grading is subjective and we only observed this association in the oral cavity. Therefore, this association may be due to chance and needs further exploration," Tezal added.

Andrew Olshan, Ph.D., said these results lend further support to the potential importance of poor oral health in this form of cancer. Olshan is professor and chair of the Department of Epidemiology at the Gillings School of Global Public Health, and professor in the Department of Otolaryngology/Head and Neck Surgery, School of Medicine, University of North Carolina at Chapel Hill.

"The study of poor oral health including the possible carcinogenic role of microorganisms is part of a rapidly growing interest in how a community

of microbes that live in the various environments of the human body can affect health," Olshan said. "Although the study is comparatively small, the researchers were able to also see an association between bone loss and the risk of head and neck cancer."

Source: American Association for [Cancer](#) Research ([news](#) : [web](#))

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