

# Tooth health may indicate diabetes risk

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Poor dental health may be linked with increased risk for diabetes, a new study suggests. The results will be presented in a poster Monday, March 19, at ENDO 2018, the 100th annual meeting of the Endocrine Society in Chicago, Ill.

"The health of your teeth maybe a sign of your risk for [diabetes](#)," said lead author Raynald Samoa, M.D., an assistant professor in the Department of Diabetes, Endocrinology & Metabolism at City of Hope National Medical Center in Duarte, Calif.

"Our findings suggest that dental exams may provide a way to identify someone at risk for developing diabetes. We found a progressive positive relationship between worsening [glucose tolerance](#) and the number of missing teeth. Although a causal relationship cannot be inferred from this cross-sectional study, it demonstrates that poor dental outcome can be observed before the onset of overt diabetes," he said.

Samoa and colleagues investigated the impact of glucose tolerance on dental health in a representative population in the United States.

The researchers reviewed the records of 9,670 adults 20 years of age and above who were examined by dentists during the 2009-2014 National Health and Nutrition Examination Survey. They analyzed their reported body mass index (BMI) and glucose tolerance states by fasting plasma glucose, two-hour postchallenge plasma glucose, hemoglobin A1c (HbA1c), established diabetes and whether the condition was treated with oral agents or insulin.

They recorded the numbers of missing teeth due to caries, or cavities, and periodontal disease for individual patients; and they determined the relationship between glucose tolerance and dental condition by considering age, gender, racial and ethnic group, family history of diabetes, smoking status, alcohol consumption, education and poverty index.

The authors found a progressive increase in the number of patients with missing teeth as glucose tolerance declined, from 45.57 percent in the group with normal glucose tolerance (NGT), to 67.61 percent in the group with abnormal glucose tolerance (AGT), to 82.87 percent in the group with [diabetes mellitus](#) (DM). Except for gender, all other covariates had significant impact on the number of missing teeth.

The differences in the average number of missing [teeth](#) among the three [glucose tolerance](#) groups were significant: 2.26 in the NGT group, 4.41 in the AGT group and 6.80 in those with DM.

The authors wrote in their abstract that as far back as the 1930s, periodontal disease and dental caries have been suggested to be linked with diabetes, and that that by 2050, one-third of Americans are expected to be affected by diabetes.

Provided by The Endocrine Society

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