

# Middle-aged tooth loss linked to increased coronary heart disease risk

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Losing two or more teeth in middle age is associated with increased cardiovascular disease risk, according to preliminary research presented at the American Heart Association's Epidemiology and Prevention / Lifestyle and Cardiometabolic Health Scientific Sessions 2018, a premier global exchange of the latest advances in population based cardiovascular science for researchers and clinicians.

Studies have shown that dental health problems, such as periodontal disease and tooth loss, are related to inflammation, diabetes, smoking and consuming less healthy diets, according to study author Lu Qi, M.D., Ph.D., professor of epidemiology at Tulane University in New Orleans.

"Previous research has also found that dental health issues are associated with elevated risk of cardiovascular disease," Qi said. "However, most of that research looked at cumulative tooth loss over a lifetime, which often includes teeth lost in childhood due to cavities, trauma and orthodontics. Tooth loss in [middle age](#) is more likely related to inflammation, but it hasn't been clear how this later-in-life tooth loss might influence [cardiovascular disease risk](#)."

In a collaborative research effort between Tulane University School of Public Health and Tropical Medicine and Harvard T.H. Chan School of Public Health, Qi and colleagues analyzed the impact of tooth loss in large studies of adults, aged 45 to 69 years, in which participants had reported on the numbers of natural teeth they had, then in a follow-up questionnaire, reported recent tooth loss. Adults in this analysis didn't

have cardiovascular disease when the studies began. The researchers prospectively studied the occurrence of tooth loss during an eight-year period and followed an incidence of cardiovascular disease among people with no tooth loss, one tooth lost and two or more teeth lost over 12-18 years.

They found:

- Among the adults with 25 to 32 natural teeth at the study's start, those who lost two or more teeth had a 23 percent increased risk of cardiovascular disease, compared to those with no tooth loss.
- The increased risk occurred regardless of reported diet quality, physical activity, body weight and other [cardiovascular risk factors](#), such as high blood pressure, high cholesterol and diabetes.
- There wasn't a notable increase in cardiovascular disease risk among those who reported losing one tooth during the study period.
- Cardiovascular disease risk among all the participants (regardless of the number of natural teeth at the study's start) increased 16 percent among those losing two or more teeth during the study period, compared to those who didn't lose any teeth.
- Adults with less than 17 natural teeth, versus 25 to 32, at the study's start, were 25 percent more likely to have cardiovascular disease.

"In addition to other established associations between [dental health](#) and risk of disease, our findings suggest that middle-aged adults who have lost two or more teeth in recent past could be at increased risk for cardiovascular disease," Qi said. "That's regardless of the number of natural teeth a person has as a middle-aged adult, or whether they have traditional risk factors for cardiovascular [disease](#), such as poor diet or [high blood pressure](#)."

Armed with the knowledge that [tooth](#) loss in middle age can signal elevated [cardiovascular disease](#) risk, adults can take steps to reduce the increased risk early on, he said.

A limitation of the study was that participants self-reported [tooth loss](#), which could lead to misclassification in the study, according to Qi.

Provided by American Heart Association

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