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Want to fight off gum disease? Maybe eat chocolate, sip coffee

A main alkaloid in cacao beans that is found in chocolate, as well as coffee and tea, may reduce the risk of developing periodontitis, according to a new study.

By — Melissa Busch

Mar 28th, 2025

Theobromine, a main alkaloid in cacao beans that is found in chocolate, as well as coffee and tea, may reduce the risk of developing periodontitis, according to a new study published in March in [*BMC Oral Health*](#).

Furthermore, drugs derived or based on theobromine may help prevent the progression of mild gum disease, the authors wrote.

"From a public health standpoint, promoting theobromine intake could aid in the tertiary prevention of periodontitis," wrote the authors, led

by Ju-Kun Song of the Affiliated Stomatological Hospital of Guizhou Medical University in China.

Research has shown that theobromine has anti-inflammatory, antithrombotic, antifat, and other effects. In March 2024, new research presented at the International Association for Dental Research General Session and Exhibition revealed that [theobromine may slow dental erosion, lesion progression, and stimulate an intact layer](#). Compared to rinsing with water, a rinse made with theobromine significantly prevented the [demineralization of enamel](#) from human samples.

Since gum disease is an inflammatory disease, this study explored whether the consumption of theobromine was associated with periodontitis and whether it is a risk or a protective factor.

Data from the U.S. National Health and Nutrition Examination Survey collected between 2009 and 2014 were used to conduct a cross-sectional design study. The exposure factor was patients' consumption of theobromine, derived from two-day, 24-hour total nutrient intake data. Periodontitis-related indicators were taken from the oral health from dental exam data, according to the study.

Furthermore, multiple logistic regressions were completed to investigate the relationship between theobromine dietary intake and periodontitis severity based on weighting and adjusting for confounding factors, including gender, race, and health conditions.

After adjusting for relevant factors, it was determined that theobromine intake was negatively correlated with periodontitis-related indicators such as mean periodontal pocket depth, mean clinical attachment loss, and the percentage of sites with a probing depth ≥ 4 mm. Additionally, theobromine consumption was positively associated with the number of teeth, the authors wrote.

Moreover, the study had shortcomings. Due to its large cross-sectional design, it was impossible to determine a causal relationship between the intake of theobromine and gum disease, they wrote.

"Clinically, the development of theobromine-based or derived drugs may help prevent the progression of mild periodontitis to more severe forms, offering potential therapeutic benefits in disease management," Song and colleagues wrote.

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