American Heart Association®
Healthy Smiles, Healthy Hearts™

The Oral-Systemic Connection

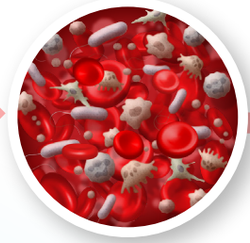
How Disease Progression from Gingivitis to Periodontitis Can Affect Cardiovascular Risk

HEALTHY Normal, healthy gums	GINGIVITIS Reversible gum disease	PERIODONTITIS Advanced gum disease
• Plaque-free enamel • Pink, firm gums • No bleeding • Normal bone level	• Plaque buildup • Inflamed gums • May have occasional bleeding • Reversible with treatment	• Substantial plaque and calculus buildup • Red, inflamed gums • May have frequent bleeding • Gum recession • Bone loss



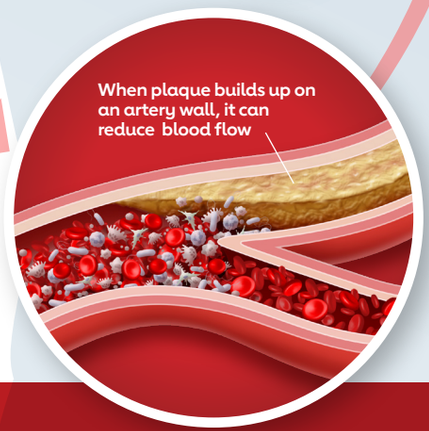
Chronic periodontitis can contribute to endothelial dysfunction, possible arterial plaque formation and increased risk of cardiovascular disease.[1,2]

1 Periodontal bacteria and bacterial products enter bloodstream

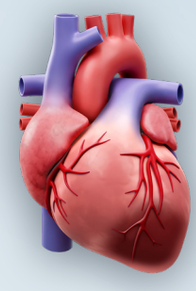


2 Systemic inflammatory response

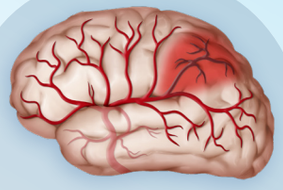
3 Endothelial dysfunction with possible arterial plaque formation



4 Associated with increased risk of heart disease[2,3,4]



5 Associated with increased risk of stroke[2,5,6]



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Every year, approximately **29 MILLION PEOPLE** have a dental visit but not a medical visit.[7]

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CITATIONS

Research suggests that periodontal disease is associated with cardiovascular disease through shared risk factors and inflammatory pathways. While studies support an oral-systemic connection, the exact relationships continue to be investigated.

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[4] Sen S, Meyer J, Mascari R, et al. Association of Dental Infections with Intracranial Atherosclerotic Stenosis. Cerebrovasc Dis. 2024; 53(1): 28-37.

[5] LaValley EA, Sen S, Mason E, et al. Dental Caries a Risk Factor for Intracerebral Hemorrhage. Cerebrovasc Dis. 2024; 53(1): 98-104.

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[7] Manski R, Rohde F, Ricks T, et al. Statistical Brief #54: Trends in the Number and Percentage of the Population with Any Dental or Medical Visits, 2019. NCBI Bookshelf. Published online 2022.