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# Poor oral health linked to higher blood pressure, worse blood pressure control

**Date:** October 22, 2018

**Source:** American Heart Association

**Summary:** Poor oral health may interfere with blood pressure control in people diagnosed with hypertension. Periodontal disease -- a condition marked by gum infection, gum inflammation and tooth damage -- appears to worsen blood pressure and interferes with hypertension treatment. Study findings underscore the importance of good oral health in blood pressure control and its role in preventing the adverse cardiovascular effects known to stem from untreated hypertension.

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### FULL STORY

People with high blood pressure taking medication for their condition are more likely to benefit from the therapy if they have good oral health, according to new research in the American Heart Association's journal *Hypertension*.

Findings of the analysis, based on a review of medical and dental exam records of more than 3,600 people with high blood pressure, reveal that those with healthier gums have lower blood pressure and responded better to blood pressure-lowering medications, compared with individuals who have gum disease, a condition known as periodontitis. Specifically, people with periodontal disease were 20 percent less likely to reach healthy blood pressure ranges, compared with patients in good oral health.

Considering the findings, the researchers say patients with periodontal disease may warrant closer blood pressure monitoring, while those diagnosed with hypertension, or persistently elevated blood pressure, might benefit from a referral to a dentist.

"Physicians should pay close attention to patients' oral health, particularly those receiving treatment for hypertension, and urge those with signs of periodontal disease to seek dental care," Pietropaoli said.

"Likewise, dental health professionals should be aware that oral health is indispensable to overall physiological health, including cardiovascular status," said study lead investigator Davide Pietropaoli, D.D.S., Ph.D., of the University of L'Aquila in Italy.

The target blood pressure range for people with hypertension is less than 130/80 mmHg according to the latest recommendations from the American Heart Association/American College of Cardiology. In the study, patients with severe periodontitis had systolic pressure that was, on average, 3 mmHg higher than those with good oral health. Systolic pressure, the upper number in a blood pressure reading, indicates the pressure of blood

against the walls of the arteries. While seemingly small, the 3mmHg difference is similar to the reduction in blood pressure that can be achieved by reducing salt intake by 6 grams per day (equal to a teaspoon of salt, or 2.4 grams of sodium), the researchers said.

The presence of periodontal disease widened the gap even farther, up to 7 mmHg, among people with untreated hypertension, the study found. Blood-pressure medication narrowed the gap, down to 3 mmHg, but did not completely eliminate it, suggesting that periodontal disease may interfere with the effectiveness of blood pressure therapy.

"Patients with high blood pressure and the clinicians who care for them should be aware that good oral health may be just as important in controlling the condition as are several lifestyle interventions known to help control blood pressure, such as a low-salt diet, regular exercise and weight control," Pietropaoli said.

While the study was not designed to clarify exactly how periodontal disease interferes with blood pressure treatment, the researchers say their results are consistent with previous research that links low-grade oral inflammation with blood vessel damage and cardiovascular risk.

### Story Source:

Materials provided by **American Heart Association**. *Note: Content may be edited for style and length.*

### Journal Reference:

1. Davide Pietropaoli, Rita Del Pinto, Claudio Ferri, Jackson T. Wright, Mario Giannoni, Eleonora Ortu, Annalisa Monaco. **Poor Oral Health and Blood Pressure Control Among US Hypertensive Adults Results From the National Health and Nutrition Examination Survey 2009 to 2014**. *Hypertension*, 2018; DOI: 10.1161/HYPERTENSIONAHA.118.11528

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