Severe Gum Disease Ups the Risk of High Blood Pressure

Adults with serious gum disease are more likely to develop hypertension and experience elevated blood pressure.

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New findings published in Hypertension, a journal of the American Heart Association, suggest that adults with periodontitis—a severe gum infection—face a significantly greater risk of developing high blood pressure than those with healthy gums.

For the study, researchers at the University College London (UCL) Eastman Dental Institute examined 250 adults with severe periodontitis and 250 adults without the condition. Both groups were otherwise healthy and free of chronic health conditions. Participants had a median age of 35 years, and 52.6% of them were women.

Scientists administered comprehensive periodontal exams that included thorough measures of gum disease severity, such as full-mouth dental plaque, gum bleeding and the depth of infected gum pockets. In addition, researchers checked individuals' blood pressure three times for accuracy, gathered fasting blood samples and assessed potential risk factors, such as a genetic history of cardiovascular disease, age, body mass index, gender, ethnicity, smoking and levels of physical activity.

Results showed that apart from these common risk factors for heart problems, gum disease was linked to a higher risk of hypertension. What's more, people with gum disease were twice as likely to exhibit a high systolic (the top number) blood pressure reading compared with people with healthy gums.

Scientists also noted that active gum inflammation was associated with a higher systolic blood pressure reading. In addition, when compared with those with healthy gums, people with periodontitis showed excessive levels of glucose, bad cholesterol, high sensitivity C-reactive protein and white blood cells—the latter two are markers of increased inflammation—as well as a decrease in good cholesterol. Almost 50% of individuals with gum disease and 42% of people in the control group registered blood pressure values high enough to be diagnosed with hypertension (greater than or equal to 130/80 mmHg).

"This would mean that the link between gum disease and elevated blood pressure occurs well

before a patient develops high blood pressure" said Francesco D'Aiuto, DMD, PhD, a professor of periodontology and head of the periodontology unit at the UCL Eastman Dental Institute and the study's corresponding author. "Our study also confirms that a worryingly high number of individuals are unaware of a possible diagnosis of hypertension."

To improve the detection and treatment of severe periodontitis and hypertension, D'Aiuto suggested that dental professionals conduct blood pressure screenings followed by referrals to primary care doctors. In addition, he advised that medical professionals administer periodontal disease screenings with referrals to periodontists.

D'Aiuto also advised people to brush their teeth twice daily to effectively manage and prevent common oral conditions, which, he stressed, is an "affordable and powerful tool to help prevent hypertension."

For related coverage, read "A Reason to Smile" to learn how a dental exam alerted former American Idol judge Randy Jackson that he needed a diabetes screening.

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