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Periodontal Disease Causes Cardiovascular Disease

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A diverse microbiome in the oral cavity is essential for good oral health and prevents harmful bacteria from growing. However, if this bacteria becomes unbalanced, it can result in an overgrowth of a harmful bacteria. These dangerous bacteria ferment the carbohydrates that remain on teeth after eating. Bacteria release acid as a byproduct, which erodes the tooth enamel and leaves teeth vulnerable for decay. Erosion of tooth enamel can result in dental carries and gingivitis, which may eventually develop into periodontal disease.

Periodontal disease is a chronic gum infection that leads to damage of the soft tissues that support the teeth. If left untreated, the gingival tissue will release chemokines and cytokines, which elicit an immune response to repair the damage. Periodontal disease not only causes local inflammation, but systemic chronic inflammation.

Due to periodontal disease's systemic effects, it is thought to contribute to complications throughout the body. Prior studies have shown support that periodontal disease increases a person's risk for cardiovascular disease. Cardiovascular disease is a broad term that includes disorders of the heart valves, blood vessels, and muscles. Both cardiovascular disease and periodontal disease increase chronic systemic inflammation. It is thought that inflammation from periodontal disease compounds with cardiovascular inflammation, and accelerate the process of atherosclerosis, which is a buildup of fatty materials on the inner walls of arteries.

Fortunately, periodontal disease can be prevented with routine tooth brushing and flossing. Patients who have already developed periodontal disease should visit a dentist who can help minimize future damage caused by the disease and decrease local inflammation. However, this important information is not promoted in an accessible way to the public. In this short video presentation, I will introduce periodontal disease, how to prevent it, and how it can have systemic effects, like cardiovascular disease, to a lay audience.