

SYSTEMIC EFFECTS OF ORAL PATHOGENS



CARDIOVASCULAR HEALTH

Select bacteria such as **Aa, Td, Tf, Pg, Pi, & Fn** can leak from blood vessels in the gums and travel to the heart, where cholesterol and other lipids deposit. These bacteria can incite inflammation in arteries, and if occluded, cause a heart attack. A goal of treatment is to minimize the levels of these bacteria as much and as long as possible.



CANCER

Chronic gum disease, involving **Aa, Pg, Td, Tf, & Fn** is a risk factor for the development of certain cancers including ones involving the pancreas, esophagus, colon, lungs, and the head and neck. Additionally, untreated gum disease is a cause of ongoing inflammation, which may promote the advancing growth of tumors.



HEALTHY PREGNANCY

Bacteria associated with gum disease, especially **Aa, Pg, Tf, Ec, & Fn** are known to put a pregnancy at risk for pre-term birth, decreased birth weight and even blood infection in the placenta or newborn. Every pregnant woman should be tested for these harmful bacteria.



JOINT AND MUSCULOSKELETAL HEALTH

The periodontal bacteria **Pg, Fn, & Ec** are a cause of arthritis. The oral inflammation caused by these bacteria also leads to total body inflammation which, combined with changes in a person's immunity, may result in chronic joint diseases like rheumatoid arthritis.



DEMENTIA AND BRAIN HEALTH

Recent medical studies point to poor oral health, and high levels of the bacteria **Pg, Cr, & Cs** in our gums, increasing the risk of developing dementia such as Alzheimer's.



METABOLIC HEALTH

Obesity, lack of exercise and chronic gum disease involving the bacteria **Aa, Pg, Td, Tf, & Fn** cause chronic inflammation. Inflammation can damage the pancreas where insulin is produced, possibly leading to diabetes. Also, diabetes worsens oral health by increasing the level of harmful bacteria in the gums.