

Periodontal Disease and Alzheimer's Disease

Dental researchers at the New York University (NYU) College of Dentistry have found the first long-term evidence that periodontal disease may increase the risk of cognitive dysfunction associated with Alzheimer's disease in healthy

ble causal link between periodontal disease and Alzheimer's disease. "The research suggests that cognitively normal subjects with periodontal inflammation are at an increased risk of lower cognitive function compared to

Kamer's latest findings are based on an analysis of data on periodontal inflammation and cognitive function in 152 subjects in the Glostrup Aging Study, which has been gathering medical, psychological, oral health, and social data on Danish men and women. Dr. Kamer examined data spanning a 20-year period ending in 1984, when the subjects were all 70 years of age. Dr. Kamer's team compared cognitive function at ages 50 and 70 years, using the Digit Symbol Test (DST) a part of the standard measurement of adult IQ. The DST assesses how quickly subjects can link a series of digits to a corresponding list of digit-symbol pairs.

Dr. Kamer's team found that periodontal inflammation at age 70 years was strongly associated with lower DST scores at age 70

years. Subjects with periodontal inflammation were 9 times more likely to test in the lower range of the DST compared to subjects with little or no periodontal inflammation. This strong association held true even in those subjects who had other risk factors linked to lower DST scores, including obesity, cigarette smoking, and tooth loss unrelated to gum inflammation. The strong association also held true in those subjects who already had a low DST score at age 50 years.

Dr. Kamer plans to conduct a follow-up study involving a larger, more ethnically diverse group of subjects to further examine the connection between periodontal disease and low cognition. (Source: NYU College of Dentistry news release, August 2, 2010)◆

Evidence indicates periodontal disease may increase the risk of cognitive dysfunction.

individuals, as well as in those who already are cognitively impaired. The NYU study offers fresh evidence that gingival inflammation may contribute to brain inflammation, neurodegeneration, and Alzheimer's disease.

The research team, led by Dr. Angela Kamer, assistant professor of Periodontology and Implant Dentistry, examined 20 years of data that support the hypothesis of a possi-

cognitively normal subjects with little or no periodontal inflammation," Dr. Kamer said.

This study builds upon a 2008 study, also by Dr. Kamer, that found that subjects with Alzheimer's disease had a significantly higher level of antibodies and inflammatory molecules associated with periodontal disease in their plasma compared to healthy people. Dr.

Be true to your teeth, or they'll be false to you," my grandma would always remind me. This was one of her favorite adages when I was young. And while few can dispute the benefits of good oral care, recent studies show that the positive effects are even more far-reaching.

Research shows that an alarming 75 percent of Americans over age 35 have periodontal disease, and many of them don't even know it. Periodontal disease, which is defined as an inflammation of the gums, often has few or no symptoms. Some key warning signs to look for are bleeding, redness, pain and swelling of your gums.

Periodontal disease does more than simply harm the gums. According to studies published in the *Journal of Periodontology*, the official publication of the Academy of Periodontology, periodontal disease can lead to serious complications for those with diabetes or coronary heart disease, and pregnant women. Further study is also being done to determine possible complications for those with arthritis, cancer and respiratory diseases, among others.

Connections Between Oral Health and Diabetes

According to one study, the relationship between periodontal disease and diabetes goes both ways – people with diabetes are more susceptible to periodontal disease, and periodontal disease increases blood sugar levels and complications in people with diabetes. This is especially evident in those with poorly controlled type 2 diabetes. Periodontal disease may also further the progression of prediabetes.

Periodontal disease can increase insulin resistance and disrupt glycemic control. Serum triglycerides are elevated in people with diabetes, which in turn leads to bacterial plaque on the gums. Treating dental problems can help improve metabolic control by lowering the HbA1c (glycated hemoglobin) count in people with diabetes.

It's important that people with diabetes monitor their blood sugar and have their cholesterol and serum triglycerides checked regularly. Reducing these levels, especially through diet and exercise, will improve quality of life and oral health.

Connections Between Oral Health and Coronary Artery Disease

Research finds that people with periodontal disease are almost twice as likely to develop cardiovascular disease. Bacteria appear to be the likely culprit, but there are several theories as to why. When bacteria from the mouth enter the blood stream, they attach to fatty proteins in blood vessels and may cause blood clots and plaque build-up. Or, inflammation caused by periodontal disease increases plaque build-up, which may cause the arteries to harden.

Periodontal disease can also complicate existing heart conditions. Several conditions may require you to take antibiotics for dental procedures; consult your doctor about your specific case.

Conversely, periodontal treatment can reduce the risk of coronary artery disease. To prevent bacteria and plaque build-up in your mouth and arteries, visit your dentist

regularly and brush and floss at least twice daily.

Connections Between Oral Health and Pregnancy

Studies show that pregnant women with periodontal disease may be up to seven times more likely to give birth to a premature baby. Researchers theorize that periodontal disease can cause an increased level of labor-inducing fluid, resulting in pre-term, low-birth-weight babies. This risk increases in pregnant women whose oral conditions worsen during pregnancy.

Several tests of pregnant women with periodontal disease also found the presence of oral bacteria in their amniotic fluid. Such disruptions to the amniotic fluid can cause bacterial infections, which can be dangerous to both the mother and baby.

Research finds, however, that pregnant women who treat their periodontal disease by the second trimester reduce the risk of delivering a premature baby by about 60 percent. It's recommended that women considering pregnancy have an oral evaluation first and maintain a strict dental routine throughout the pregnancy. However, be sure to consult your doctor before having an X-ray while pregnant.

While we all should make caring for our teeth and gums a priority, those in these three risk groups should make oral care a top concern. If you suspect that you have periodontal disease, see a dentist immediately. To prevent developing the disease, visit a dentist for a cleaning twice a year and brush and floss after meals, or at least twice daily. Your physical health may depend on it. 