

Periodontal Disease Linked to Obesity

The rise in obesity today has raised significant public health concerns in our nation. The Center for Disease Control reports that one third of US adults, more than 72 million people, and 16% of our children are obese. The health consequences of obesity have long been linked to heart disease and diabetes, and now there is a link to periodontal disease. The experts suggest the common denominator may be inflammation.

Two research studies were cited this year at the 87th General Session of the International Association for Dental Research (ADR) in Miami that support this link of obesity to periodontal disease. The first study was conducted by Monik Jimenez, a doctoral candidate at Harvard School of Public Health. She analyzed the data of approximately 37,000 men participating in the Health Professional Follow-Up Study, a long term evaluation of nutrition and other health factors with disease incidence in male health professionals. None of the participants had periodontal disease at the beginning of the sixteen year study. By the conclusion of the study in 2002, scientists found that male health professionals who met the standard level of obesity were at a 29% higher risk for developing periodontal disease.

In another study cited at the 2009 ADR session, researchers from Harvard University and the University of Puerto Rico took measurements of 146 Puerto Rican men and woman 70 years and older to evaluate the association of excess body fat to periodontal disease. Their results showed that elderly individuals with excess body fat had a significant incidence of periodontal disease.

In 2003 researchers from Case Western Reserve University looked at 13, 665 people aged 18-34 years whose body mass index and waist circumference indicated obesity. Their findings indicated a 76% higher incidence of periodontal disease compared to normal weight individuals in this age group. Nutrition and stress were two factors considered in the high incidence of periodontal disease in this age group. The dietary trends in adolescents ages 11-18 reveal a significant decrease in raw fruits and vegetables which are good sources of Vitamin C. They also decrease their calcium intake and increase their intake of soft drinks and non-citrus juices. The low dietary intake of calcium and vitamin C has been associated with periodontal disease. Stress is also a factor because of the social stigma obese children or adolescents endure. Stress has been shown to increase a person's risk for periodontal disease.

Why is obesity linked to periodontal disease? The Academy of Periodontology states gum diseases include a mild form called gingivitis, in which gums bleed easily. Gingivitis can progress to periodontitis in which bacteria in the plaque irritate the gums and provoke an inflammatory response. Dr. David Cochran, president of the American Academy of Periodontology states, "The common denominator may be inflammation." There is emerging evidence that continues to suggest obesity is associated with low grade

chronic inflammation which can trigger pro inflammatory cytokines. Cytokines are chemicals made by the cells that act on other cells to stimulate or inhibit their function. The increase of cytokines may increase the risk of periodontal disease.

The Academy of Periodontology encourages dental professionals to promote the awareness of the adverse health conditions associated with obesity including cardiovascular disease and diabetes. Obesity has been increasingly identified as a potential precursor to periodontal disease. Ellen Zanichelli, RDH, BS is the owner of La Plaza Dental Hygiene in Evergreen.

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