



Obesity and periodontal disease

Obesity is a major health problem that is steadily increasing worldwide. The obesity epidemic that began in the United States during the late 1970s is now spreading to the rest of the world, with fast food a major factor. Each individual's body weight is the result of a combination of genetic, metabolic, behavioral, environmental, cultural, and socioeconomic influences.

Obesity increases a person's risk for developing many illnesses, including high blood pressure, type II diabetes, heart disease, and stroke. Beyond these health concerns, overweight people bear a psychological burden arising from the social stigma of being overweight. Obese children also have a strong predisposition for becoming obese adults, with a greater likelihood of developing a battery of serious chronic diseases including diabetes, cardiovascular disease, and in the end, a shortened life span.

Researchers at Case Western Reserve University found that the prevalence of periodontal disease among obese individuals aged 18 to 34 is 76% higher than for normal weight individuals in this age group.¹ Insulin resistance mediates the relationship between obesity and periodontal disease. Persons who have a high mass index produce cytokines that lead to systemic inflammation and insulin resistance. Chronic stimulation and secretion of proinflammatory cytokines associated with periodontal infection also occur, contributing to insulin resistance, which may further predispose the patient to diabetes mellitus.

If the association between obesity and periodontitis proves to be causal, promotion of healthy nutrition and adequate physical activity may help prevent or slow the rate of progression of periodontitis.² Therefore, dental care providers can have a serious impact on treatment outcomes by recognizing those patients who are at risk and by communicating the need for weight loss and physical activity, both of which are valuable lifestyle interventions that might evoke a much-desired remedy.

Nabil F. Bissada, DDS, MSD
 Professor and Chair
 Department of Periodontics
 School of Dental Medicine
 Case Western Reserve University
 Cleveland, Ohio
 nabil.bissada@case.edu

REFERENCES

1. Al-Zahrani MS, Bissada NF, Borowski EA. Obesity and periodontal disease in young, middle-aged and older adults. *J Periodontol* 2003;74:610-615.
2. Al-Zahrani MS, Borowski EA, Bissada NF. Periodontitis and three health-enhancing behaviors: normal weight, recommended level of exercise and high-quality diet. *J Periodontol* 2005;76:1362-1366.