

# Study finds over 90 percent of people with gum disease are at risk for diabetes

December 14 2009

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The study, led by Dr. Shiela Strauss, Associate Professor of Nursing and Co-Director of the Statistics and Data Management Core for NYU's Colleges of Dentistry and Nursing, examined data from 2,923 adult participants in the 2003-2004 National Health and Nutrition Examination Survey who had not been diagnosed with diabetes. The survey, conducted by the National Center for Health Statistics of the Centers for Disease Control and Prevention, was designed to assess the health and nutritional status of adults and children in the United States.

Using guidelines established by the American [Diabetes](#) Association, Dr. Strauss determined that 93 percent of subjects who had [periodontal disease](#), compared to 63 percent of those without the disease, were considered to be at high risk for diabetes and should be screened for diabetes. The guidelines recommend diabetes screening for people at least 45 years of age with a [body mass index](#) (a comparative measure of weight and height) of 25 or more, as well as for those under 45 years of age with a BMI of 25 or more who also have at least one additional [diabetes risk](#) factor. In Dr. Strauss's study, two of those additional risk factors - high blood pressure and a first-degree relative (a parent or sibling) with diabetes - were reported in a significantly greater number of subjects with periodontal disease than in subjects without the disease. Dr. Strauss's findings, published today in the online edition of the [Journal of Public Health Dentistry](#), add to a growing body of evidence linking periodontal infections to an increased risk for diabetes.

Dr. Strauss also examined how often those with gum disease and a risk

for diabetes visit a dentist, finding that three in five reported a dental visit in the past two years; half in the past year; and a third in the past six months.

"In light of these findings, the dental visit could be a useful opportunity to conduct an initial diabetes screening -- an important first step in identifying those patients who need follow-up testing to diagnose the disease."

"It's been estimated that 5.7 million Americans with diabetes were undiagnosed in 2007," Dr. Strauss added, "with the number expected to increase dramatically in coming years. The issue of undiagnosed diabetes is especially critical because early treatment and secondary prevention efforts may help to prevent or delay the long-term complications of diabetes that are responsible for reduced quality of life and increased levels of mortality among these patients. Thus, there is a critical need to increase opportunities for diabetes screening and early diabetes detection."

Dr. Strauss said that dentists could screen patients for diabetes by evaluating them for risk factors such as being overweight; belonging to a high-risk ethnic group (African-American, Latino, Native American, Asian-American, or Pacific Islander); having high cholesterol; high blood pressure; a first-degree relative with diabetes; or gestational diabetes mellitus; or having given birth to a baby weighing more than nine pounds.

Alternatively, dentists could use a glucometer -- a diagnostic instrument for measuring blood glucose -- to analyze finger-stick blood samples, or use the glucometer to evaluate blood samples taken from pockets of inflammation in the gums.

"The oral [blood sample](#) would arguably be more acceptable to dentists

because providers and patients anticipate oral intervention in the dental office," Dr. Strauss noted. In an earlier study involving 46 subjects with periodontal disease published in June 2009 by the Journal of Periodontology, an NYU nursing-dental research team led by Dr. Strauss determined that the glucometer can provide reliable glucose-level readings for blood samples drawn from deep pockets of gum inflammation, and that those readings were highly correlated with glucometer readings for finger-stick blood samples.

Source: New York University ([news](#) : [web](#))

Citation: Study finds over 90 percent of people with gum disease are at risk for diabetes (2009, December 14) retrieved 9 April 2024 from <https://medicalxpress.com/news/2009-12-percent-people-gum-disease-diabetes.html>

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