

# Treatment of gum disease may lower blood sugar levels in type 2 diabetes

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A study to be published in the latest issue of *The Cochrane Library* and led by researchers at the University of Edinburgh and supported by colleagues at the Peninsula Dental School, the University of Ottawa and UCL Eastman Dental Institute, suggests that the treatment of serious gum (periodontal) disease in diabetics with Type 2 diabetes may lower their blood sugar levels.

The research team analysed randomised controlled trials of people with Type 1 and [Type 2 diabetes](#) who had also been diagnosed with periodontal disease. The team looked at 690 papers and included seven studies in the review that fulfilled pre-specified criteria for inclusion.

Their findings suggest that the treatment of periodontal disease can reduce [blood sugar levels](#) in Type 2 diabetes, although there was not enough available evidence to support the same benefit for those with Type 1 diabetes.

Current belief is that, when bacteria infect the mouth and cause inflammation, the resulting chemical changes reduce the effectiveness of insulin produced in the body, thus making it more difficult for diabetics to control their blood sugar.

The findings are key because many patients and health care professionals do not necessarily make the association between the treatment of [gum disease](#) and the control of blood sugar levels. The study suggests that the effective treatment of gum disease could have a positive impact on

diabetic patients, especially those with Type 2 diabetes, because it good blood sugar control contributes to lowering the risk of serious complications linked to the condition, such as eye problems and heart disease.

Terry Simpson, lead author at the Edinburgh Dental Institute, said: "It would be wise to advise patients of the relationship between treating periodontal disease and the possibility of lowering their blood sugar levels. Additionally, an oral health assessment should be recommended as part of their routine diabetes management."

David Moles, Professor of Oral Health Research and Director of Postgraduate Education and Research at the Peninsula Dental School, added: "In this study we have helped confirm a link between the effective treatment of gum disease and lower blood sugar levels in those with Type 2 diabetes. Now what are required are larger randomised trials to further study dental treatment and its long term outcomes for those with diabetes, including the possibility of marrying dental care for diabetics with wider diabetes support and treatment networks and closer collaboration between doctors and dentists."

Type 1 diabetes is the type of diabetes that typically develops in children and young adults. In [Type 1 diabetes](#) the body stops making insulin and the blood glucose level goes very high. Treatment to control the blood glucose level is with insulin injections and a healthy diet. Other treatments aim to reduce the risk of complications and include reducing blood pressure if it is high, and to lead a healthy lifestyle.

Type 2 diabetes occurs mainly in people aged over 40, although it is affecting a growing number of younger people. The 'first-line' treatment is diet, weight control and physical activity. If the blood glucose level remains high despite these measures, then tablets to reduce the blood glucose level are usually advised. Insulin injections are needed in some

cases. Other treatments include reducing blood pressure if it is high, lowering high cholesterol levels and also other measures to reduce the risk of complications.

Provided by The Peninsula College of Medicine and Dentistry

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