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of Periodontology

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Title: People who don't see dentist regularly should be screened by their doctor for gum disease

- Subtitle: Poor oral health leads to general health problems
- Subtitle: Screening tool uses data routinely collected by doctors

Brussels, Belgium, 20 March 2019. People who do not visit a dentist regularly should be screened by their general medical practitioner (GP) for periodontitis.

That's the main message of a study published today, [World Oral Health Day](#), in the *Journal of Clinical Periodontology* (1), the official publication of the European Federation of Periodontology (EFP).

About 50% of people over 30 years of age have periodontitis, which is severe inflammation of the gums and structures supporting the teeth. If untreated, it causes tooth loss and inflammation throughout the body, which has been linked with higher risks of diabetes, heart attack, and stroke.

Dr Eduardo Montero, of the Complutense University of Madrid, Spain, and first author of the study, said: "Periodontitis is one of the most prevalent non-communicable diseases, with direct impacts on oral and general health. Many patients are undiagnosed because they don't see a dentist – in our study more than 40% of adults had not seen a dentist in the past year. GP appointments are more common in some countries, so we created a screening tool with five pieces of routinely collected information to identify people at risk of periodontitis who should be referred to a dentist for diagnosis and treatment if needed."

The screening tool uses age, sex, ethnicity, smoking, and blood sugar (2). It detected moderate-to-severe periodontitis in a representative sample of US adults with 70% sensitivity, 68% specificity, and an area under the curve (AUC) of 0.77, where 1 is perfect prediction and 0.5 is random.

Based on the model, the lowest relative risk (RR) of moderate-to-severe periodontitis corresponds to a non-Hispanic white female, non-smoker, aged 30–40 years, with normal blood sugar (RR=1). The highest risk – nearly ten-fold greater – corresponds to a Hispanic male, smoker, aged 70–80 years, with high blood glucose (RR=9.91).



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Dr Corneliu Sima, assistant professor of oral medicine, infection and immunity, Harvard School of Dental Medicine, Boston, US, and director of the study, said: “There is a need for clinical decision support tools to better integrate oral and medical care worldwide, improve quality of life, and reduce healthcare costs. We have developed a periodontitis screening tool using commonly-registered cardiometabolic risk factors to aid primary care physicians in initiating coordinated care with periodontists.”

Dr Montero said: “Screening for periodontitis in primary care could have a big impact on public health. Treatment of periodontitis improves oral health, helps people with diabetes control their blood sugar, and reduces systemic inflammation and other factors indirectly associated with the development of clogged arteries (atherosclerosis).”

Warning signs of periodontitis:

- Red, swollen, bleeding, or receding gums.
- Bigger gaps between teeth, loose teeth.
- Bad breath, bad taste.

How to prevent periodontitis:

- Clean between your teeth every day with an interdental brush or floss.
- Brush your teeth for at least two minutes, twice a day.
- Avoid smoking, eat a healthy diet high in fruits and vegetables and low in sugar, and exercise daily.
- Visit your dentist twice a year.
- Control your blood sugar if you have diabetes.

The model was developed and tested in 3,017 adults over 30 years of age with more than 14 teeth from the 2011–2012 National Health and Nutrition Examination Survey (NHANES). Around half had moderate-to-severe periodontitis, with 13% having severe and 37% having moderate periodontitis. The authors said the model should be validated in other countries, ideally in studies with long-term follow-up.

The study was a collaboration between the University Complutense of Madrid, the Forsyth Institute, and the Harvard School of Dental Medicine.

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Notes for Editors

References and notes

- 1) Montero E, Herrera D, Sanz M, Dhir S, Van Dyke T, Sima C. Development and validation of a predictive model for periodontitis using NHANES 2011–2012 data. *J Clin Periodontol*. 2019. doi:10.1111/jcpe.13098.
- 2) Blood sugar was assessed using glycated haemoglobin.



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About the EFP

The European Federation of Periodontology (EFP) is an umbrella organisation of 30 national scientific societies devoted to promoting research, education and awareness of periodontal science and practice. It represents more than 14,000 periodontists and gum-health professionals from Europe, northern Africa, and the Middle East.

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