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EuroPerio9 press release

## Smoking influences the efficacy of non-surgical periodontal treatment

### Study finds more pronounced pocket depth reduction for non-smokers

*Amsterdam, the NETHERLANDS. 19 June 2018* – Results of a study (1) to be presented at EuroPerio9, the world's leading congress in periodontology and implant dentistry, found that smoking impacts periodontal healing after non-surgical treatment\*.

“Non-surgical periodontal treatment significantly reduced pockets greater than 4 millimetres deep in both smokers and non-smokers,” said Dr Aorra Naji, Periodontist, from the Centre for Oral Rehabilitation, Department of Periodontology, Falun, Sweden. “Nevertheless, we found that the reduction was more pronounced in non-smokers, one year after treatment.”

Periodontal “pockets” are formed between the gum and the root of the tooth, where bacteria can concentrate and release toxins that can affect the body's immune system and lead to loss of supporting attachment. If left untreated, pockets could lead to tooth loss. Reducing the inflammation and thereby also the pocket depth is important to avoid more attachment loss around the affected teeth.

“Our aim in this study was to investigate the impact of smoking on periodontal healing one year after non-surgical periodontal treatment,” said Dr Naji.

Data was obtained on 1551 individuals treated between 1980 and 2015 in a specialised clinic for periodontology in Sweden. The researchers established that one-year after active treatment there was a significant reduction of the clinical parameters among both smokers and non-smokers. While in non-smokers the pocket depth reduction was 72%, in smokers the reduction was 51%, showing that smoking impairs periodontal healing after non-surgical periodontal treatment. Researchers also found that the proportional reduction of plaque was 69% in non-smokers and 53% in smokers, one year after treatment.

“Even though this study has some limitations, (retrospective design, we could not analyse the impact of cigarette consumption or how former smoking influences periodontal healing), we found evidence that periodontal non-surgical treatment leads to more pronounced pocket depth reduction in non-smokers,” said Dr Naji. “Larger studies are needed to investigate the influence of smoking cessation on periodontal healing,” he added.

## Press and Media

Dr Naji concluded: “As non-smokers had more pronounced pocket depth reduction than smokers, it is important for members of the dental profession to work with smoking prevention, for example by information and motivational interviewing.”

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### Notes to Editors

\* Non-surgical periodontal treatment remains the gold standard for managing the majority of periodontal patients. The aim of the treatment is to reduce the inflammation, to achieve pocket depth reduction and clinical attachment gain. There is no certain magnitude of initial probing pocket depth where non-surgical periodontal therapy is no longer effective. However, it needs to be emphasized that the root instrumentation is only indicated for sites with probing depth 4mm and above, as intervening on shallow sites may potentially develop loss of attachment.

We also know that in patients with deep pockets ( $\geq 6\text{mm}$ ) access flap surgery may be beneficial, provided with regular supportive therapy and adequate oral hygiene.

Non-surgical treatment is often less traumatic compared to surgical treatment and tends to be less costly.

Non-surgical periodontal treatment can be performed by a periodontist/dentist/dental hygienist, who will begin by measuring the depth of the pocket. It is important to provide oral hygiene instruction alongside non-surgical treatment.

### References:

1. EuroPerio9 Abstract PR433, Impact of smoking on non-surgical periodontal treatment one year after active treatment. PD Dr Aorra Naji, Centre for Oral Rehabilitation, Department of Periodontology, Falun, Sweden. Poster session on Periodontal Therapy.

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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.

### [About EuroPerio9](#)

EuroPerio is the world's biggest scientific meeting devoted to periodontology. The most recent of these triennial meetings, EuroPerio8, took place in London in June 2015 and brought together almost 10,000 people. EuroPerio9 will take place from 20 to 23 June 2018 at the [RAI](#), Amsterdam, The Netherlands.

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## Press and Media

**Abstract PR433: Impact of smoking on non-surgical periodontal treatment one year after active treatment**

a) Periodontology / Periodontal Therapy

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Background & Aim: To investigate the impact of smoking on healing one year after non-surgical periodontal treatment.

Methods: Clinical data on treatment outcome for smokers and non-smokers after non-surgical treatment were available for 1551 individuals at 1-year follow-up. All individuals had been treated at a specialised clinic for periodontology between 1980 and 2015 by experienced dental hygienists. The number of teeth (NT), probing pocket depth (PPD), proportion of plaque (PLI) and bleeding on probing (BoP) were registered before and at 1-year after non-surgical treatment. The Wilcoxon signed rank test and Mann-Whitney U test was used to analyse data within and between groups. To analyse the impact of smoking on the PPD reduction, an ANOVA mixed model was used that had been adjusted for age, sex and the reduction of PLI, BoP, and NT.

Results: At 1-year follow-up there was a significant reduction of the clinical parameters among both non-smokers and smokers. The proportional reduction of PPD > 4 mm was 72% in non-smokers and 51% in smokers, with a significant difference between the groups ( $p < 0.001$ ). The proportional reduction of PLI was 69% in non-smokers and 53% in smokers. BoP also decreased in both groups, with a proportional change of 68% in non-smokers and 58% in smokers. The proportional differences were significant both within and between groups ( $p < 0.001$ ). To test whether smoking had any effect on the reduction of PPD > 4 mm, a mixed model adjusted for age, sex, change in PLI and BoP indicated that smoking significantly affected periodontal healing ( $p < 0.001$ ).

Conclusion: Non-surgical periodontal treatment significantly reduced pockets >4 mm deep in both non-smokers and smokers, but the reduction was more pronounced in non-smokers, indicating an impact of smoking on periodontal healing after one year.