

 RISK FACTORS

## Periodontitis increases risk of a first MI

An association between periodontitis — an inflammatory state that damages the tissues that support the teeth — and cardiovascular disease is known, but the exact nature of this relationship is uncertain. A study by Lars Rydén and colleagues now shows that the risk of a first myocardial infarction (MI) is significantly increased in patients with moderate-to-severe periodontitis.

Cardiovascular and periodontal disease have many risk factors in common, such as smoking, glucose perturbations, and socio-economic environment, which could explain the association between the two diseases. However, Rydén *et al.* found that the positive association between periodontitis and a first MI remained (OR 1.28, 95% CI 1.03–1.60) even after adjusting for potential confounders (smoking, diabetes mellitus, years of education, and marital status). “These findings strengthen the possibility of an independent relationship between periodontitis and MI,” conclude the investigators.

Periodontal disease was assessed by radiographic bone loss in 805 patients

with a first MI and 805 age-matched and geographically-matched volunteers, and was defined as healthy ( $\geq 80\%$  remaining bone), mild–moderate (79–66%), or severe ( $< 66\%$ ). The researchers found that periodontitis was more common in patients than in control volunteers (43% vs 33%;  $P < 0.001$ ). “Our findings should encourage early detection and prevention of periodontal disease as a tool not only to improve oral but also cardiovascular health,” concludes Rydén.

This study was observational and does not prove a causal relationship between periodontitis and cardiovascular disease. However, long-term follow-up is ongoing. “If periodontitis is independently related to future events it will further underline a causal importance of periodontal disease for atherosclerotic illness,” explains Rydén.

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**ORIGINAL ARTICLE** Rydén, L. *et al.* Periodontitis increases the risk of a first myocardial infarction: a report from the PAROKRANK study. *Circulation* <https://dx.doi.org/10.1161/CIRCULATIONAHA.115.020324>