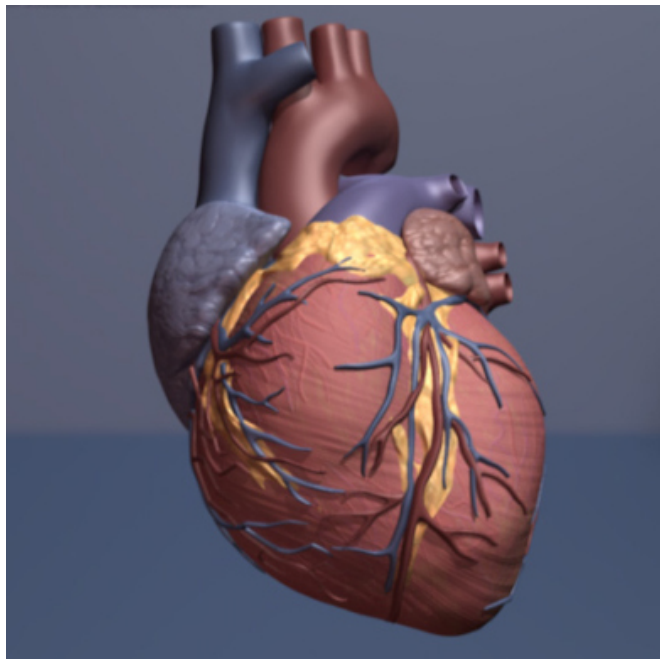


# Gum disease linked with new onset heart disease

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Human heart. Credit: copyright American Heart Association

Gum disease is associated with an increased risk of cardiovascular disease: the more severe the periodontitis, the higher the risk. The findings are presented at ESC Congress 2021. The association was particularly evident among patients who had experienced a heart attack in the past.

Study author Dr. Giulia Ferrannini of the Karolinska Institute, Stockholm, Sweden said: "Our study suggests that dental screening programs including [regular check-ups](#) and education on proper dental hygiene may help to prevent first and subsequent heart events."

The Swedish PAROKRANK study previously showed that periodontitis ([gum disease](#)) was significantly more common in first time [heart attack](#) patients compared to their healthy peers of the

same age and sex and living in the same area.

This long-term follow-up of PAROKRANK participants investigated whether the presence of gum [disease](#), both in heart attack patients and their healthy peers, was related to an increased risk of new cardiovascular events over time.

The analysis included 1,587 participants with an average age of 62 years. Participants underwent a dental examination between 2010 and 2014: 985 were classified as healthy, 489 had moderate periodontitis, and 113 had severe periodontitis. Participants were followed up for the occurrence of cardiovascular events and death. The primary endpoint was a composite of all-cause death, non-fatal heart attack or stroke, or severe heart failure. Follow-up data were collected until the end of 2018 from Swedish national death and patient registries.

During an average follow up of 6.2 years, there were 205 primary endpoint events. In the overall cohort, participants with periodontitis at baseline had 49% higher odds of the primary endpoint compared to those with healthy gums. The probability of the primary endpoint rose with increasing severity of gum disease.

When [heart](#) attack patients and healthy controls were assessed separately, the graded relationship between gum disease severity and the primary endpoint was significant only for patients.

Dr. Ferrannini said: "The risk of experiencing a cardiovascular event during follow-up was higher in participants with periodontitis, increasing in parallel with the severity. This was particularly apparent in patients who had already experienced a [myocardial infarction](#)."

She added: "We postulate that the damage of periodontal tissues in people with gum disease may facilitate the transfer of germs into the bloodstream. This could accelerate harmful changes to the [blood](#)

[vessels](#) and/or enhance systemic inflammation that is harmful to the vessels."

Dr. Ferrannini concluded: "It is important to underline that the quality of care in Sweden is high, as confirmed by the overall low number of total events during follow-up. Despite this, gum disease was linked with an elevated likelihood of cardiovascular disease or death."

**More information:** Abstract title: Periodontitis and cardiovascular outcome - a prospective follow-up of the PAROKRANK cohort.

Provided by European Society of Cardiology

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