

Infected Gums Leak Toxins Into Bloodstream

People with severe gum disease may be prone to releasing bacterial poisons known as endotoxins into their bloodstream, which may help explain the link between gum infections and cardiovascular disease.

The mouth can be a major source of chronic or permanent release of toxic bacterial components in the bloodstream during normal oral functions.

This could be the missing link explaining the **abnormally high blood levels of some inflammatory markers observed in patients with periodontal disease.**

Periodontal disease occurs when bacteria in plaque infect the gums and bones that anchor the teeth. If left unchecked, these bacteria will creep below the gum line, where they produce toxins that create a chronic inflammatory response that triggers the body to break down the tissues and bone around the teeth, leaving pockets of space that can become infected.

Previous research has found that people with periodontal disease are more likely to suffer strokes and coronary artery disease -- both conditions that may be associated with inflammation of the blood vessels. While researchers have shown that bacteria in the mouth can be released into the bloodstream, they have not shown that endotoxins -- poisons emitted by some bacteria -- can also enter the bloodstream via the mouth.

Investigators sought to determine whether endotoxins could in fact be released into the bloodstream by a usual and frequent oral habit, such as chewing gum, and if people with more severe gum disease might release more endotoxin into their blood.

To investigate, the researchers had 42 people with moderate to severe periodontal disease and 25 people with healthy gums chew gum 50 times on each side of their mouth.

The investigators also measured the level of endotoxins circulating in each individual's bloodstream before chewing and 5 to 10 minutes afterwards.

According to the report the average amount of endotoxins present in the blood were **significantly higher in all the patients after the gum chewing.** Those with severe periodontal disease were nearly four times as likely to have significant levels of endotoxins after chewing than those with healthy gums.

These findings provide additional evidence for a link between the bacteria present in the mouth of those with periodontal disease and inflammatory reactions linked to heart disease, the authors conclude.

Around 15% of adults aged 21 to 50 and around 30% of people over 50 suffer from severe periodontal disease.

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