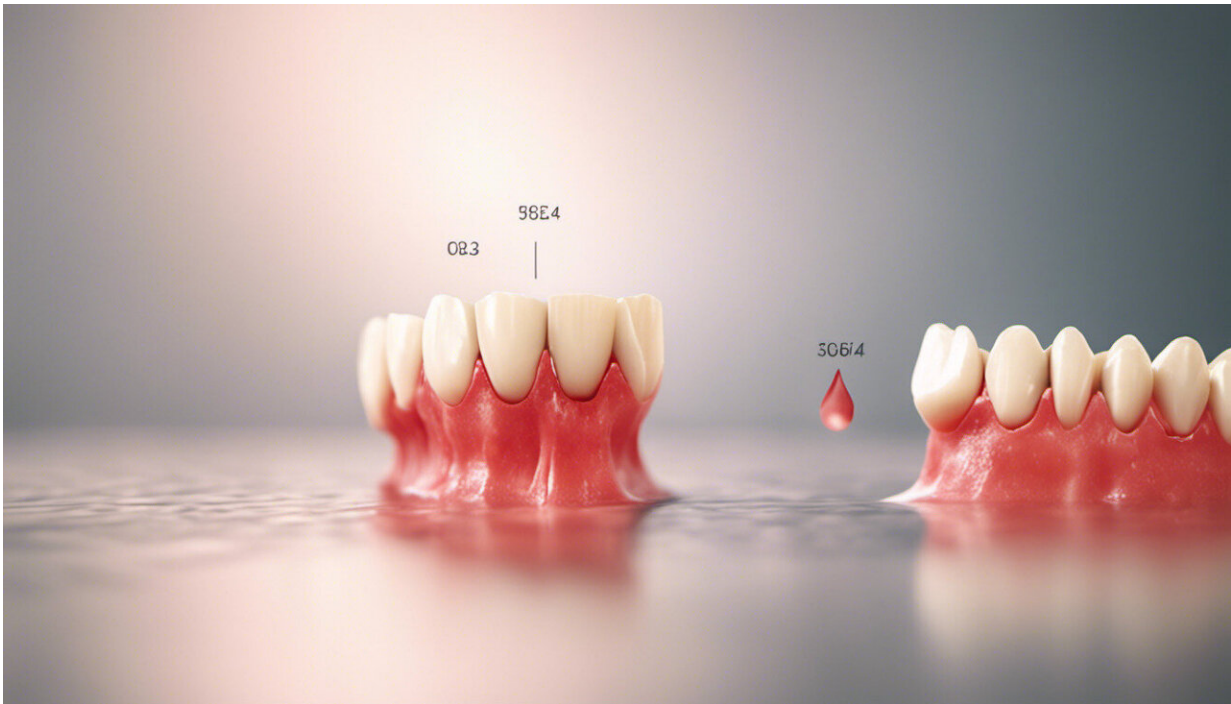


# Four health conditions linked to gum disease

September 27 2022, by Christine Bryson

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Credit: AI-generated image ([disclaimer](#))

Gum diseases are among the most common chronic [human diseases](#), affecting between [20 to 50% of people worldwide](#). They happen when plaque, a sticky film of bacteria, builds up on teeth. The earliest stages of gum disease are treatable and reversible (gingivitis). But some people develop a chronic destructive form of gum disease, [which is irreversible](#). This disease progresses to tooth loss. A [growing body of evidence](#) shows that gum disease can also make people more likely to [develop other](#)

[serious health conditions](#).

Here are a few of the common health conditions linked to [gum disease](#) and how they are connected.

## 1. Alzheimer's disease

Several large studies and meta-analyses agree that moderate or severe gum disease is significantly associated with dementia. For example, one study showed suffering from chronic gum disease for ten years or more was associated with a [70% higher risk](#) of developing Alzheimer's than those without. Research has also shown a link between gum disease and a [sixfold decline](#) in cognitive ability.

Initially, it was thought bacteria were directly responsible for this link. *P. gingivalis*, bacteria common in chronic gum disease, was [found in the brains](#) of people who had died of Alzheimer's disease. Toxic bacterial enzymes called gingipains were also found, which are thought to worsen gum disease by preventing the [immune response](#) from [turning off](#) and hence prolonging inflammation.

However, it's not certain whether bacteria in the brain, a modified [immune response](#) or other factors—such as damage from [systemic inflammation](#)—explain the link. But taking care of your oral health could be one way to [reduce the risk of](#) Alzheimer's disease.

## 2. Cardiovascular disease

Cardiovascular disease is also firmly associated with gum disease.

In a large study of over 1,600 people aged over 60, gum disease was linked with an almost 30% higher risk of [first heart attack](#). This link

even persisted after researchers adjusted for other conditions (such as diabetes and asthma), or lifestyle habits (such as smoking status, education and marriage) that are known to increase a person's risk of a heart attack.

More recently, studies have also shown that [systemic inflammation](#) caused by chronic gum disease causes the body's stem cells to produce a [hyper-responsive](#) group of neutrophils (a type of early defense white blood cell). These cells may damage the lining of arteries by damaging the cells that line the arteries—triggering the [build-up of plaques](#).

### 3. Type 2 diabetes

Gum disease is a known complication of type 2 diabetes, and chronic gum disease increases the risk of [developing type 2 diabetes](#).

The processes that link the two diseases are the focus of much research, and it's likely that inflammation caused by each condition affects the other. For instance, type 2 diabetes raises the risk of gum disease by [increasing inflammation](#) in the gums. Gum disease has also been shown to contribute to impaired insulin signaling and [insulin resistance](#)—which can both exacerbate type 2 diabetes.

Several [clinical trials](#) have shown an intensive dental cleaning can improve [blood sugar control](#) in [diabetic patients](#) for several months, further showing the links between the two diseases.

### 4. Cancers

Gum disease is also linked to a greater risk of developing many types of cancer. For instance, patients who reported having a [history of gum disease](#) were shown to have a 43% greater risk of esophageal cancer, and

a 52% greater risk of stomach cancer. Other research has also reported people with chronic gum disease had a between [14–20% higher risk](#) of developing any type of cancer. The same study also showed a 54% higher risk of [pancreatic cancer](#).

It's not clear why this relationship exists. Some think it has to do with inflammation, which is a factor in both [gum disease](#) and [cancer](#). Inflammation disrupts the environment that cells need to stay healthy and function properly and is a factor in the progression of both gum disease and [tumor growth](#).

## Improving gum health

Gum disease is preventable and reversible in the early stages.

While some risk factors for gum disease can't be changed (such as your genetics), you can change your lifestyle to reduce your overall risk. For example, eating less sugar, avoiding tobacco and alcohol and reducing stress can all help. It's also important to know that certain medications (such as some antidepressants and hypertension drugs) may lower saliva production, which can increase your risk of gum disease. People taking these medicines need to take extra precautions, such as using special gels or sprays to increase saliva production, or making sure to take extra care while brushing their teeth.

Of course, the most important things you can do to protect yourself from gum disease (and subsequently your overall health) are brushing twice daily with fluoride toothpaste and avoiding using mouthwash after brushing—and taking care not to rinse after brushing to allow the fluoride to remain on your teeth. Interdental cleaning at home (such as flossing) and regular dental visits will also help you keep your oral health in check.

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