

# Effect of Pathogenic Microbes on Oral Health

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## DESCRIPTION

The bacteria in our body work as a functional organ that is essential to our health and physiology. Microbes and humans have coevolved and coexisted in a mainly symbiotic partnership. The mouth is home to the body's second most varied microbial ecosystem. In a healthy human mouth, around 700 bacterial species coexist. These species can be found on the hard palate, soft palate, teeth, tongue, and even the tonsillar portion of the mouth. New genomic technologies, such as Next-Generation Sequencing (NGS) and bioinformatic tools, have made it possible to better understand the role of the human microbiome in human health.

## Pathogenic bacteria

*Streptococcus mutans* is a bacteria that dwells in the mouth and feeds on sugars and starches that have been digested. That wouldn't be so awful if it didn't create enamel-eroding acids as a byproduct of its voracious hunger, making *Streptococcus mutans* the leading cause of tooth decay in humans.

*Porphyromonas gingivalis* and *Treponema denticola* have been strongly connected to periodontitis and are considerably associated with the severity of periodontal tissue loss. Periodontitis is a serious and progressive disease affecting the tissues of the mouth and gums. It is a serious illness that should not be taken lightly. It can cause severe dental pain and, in the worst-case scenario, tooth loss.

Some bacteria, such as *Granulicatella*, *Gemella*, and *Veillonella* are common in the oral cavity; however, the majority of bacteria are restricted to specific areas. Microorganisms belong to *Streptococcus*, *Eubacteria*, *Fusobacterium*, *Capnocytophaga*, *Eubacteria*, *Staphylococcus*, *Eikenella*, *Porphyromona*, *Leptotrichia*, *Prevotella*, *Peptostreptococcus*, *Treponema*, and *Actinomyces* genera can adhere to mucosa and tooth surfaces.

## Diseases associated with oral microbiota

Oral microbiota can produce compounds in the mouth that influence the progression of a variety of oral illnesses. Caries, Periodontitis, and Oral Cancer (*Prevotella spp*, *Lactobacillus spp*, *Dialister spp*, and *Filifactor spp* may be involved in the pathogenesis and progression of dental caries). Mouth disorders and systemic diseases, such as metabolic diseases like diabetes, obesity, liver diseases, colon cancer, and pancreatic cancer, are regulated by the oral microbiota.

## Ways to reduce tooth decay

Tooth decay isn't something that happens out of nowhere. Cavities and other dental problems are the consequence of a long process that starts with bacteria residing in plaque, a thin biofilm on tooth surfaces. At each level of decay, there are treatment options available, such as crowning or even tooth replacement.

**Brushing and flossing teeth on a daily basis:** It takes around 12 to 24 hours for enough plaque to form to support bacteria. Brushing and flossing at least once a day can remove the majority of this plaque, with dental cleanings twice a year to remove any hard-to-reach plaque a person may have missed.

**Limiting sweets:** The more sugar and other carbohydrates a person consumes, the more acid is produced. The best strategy is to avoid sugary snacks entirely and replace them with fresh fruits, raw veggies, or dairy products. Keep sweets to mealtimes only.

**Taking anti-decay supplements:** Mouth hygiene may require some support, particularly if a person has a poor saliva flow. An artificial saliva supplement, as well as items containing xylitol, an alcohol-based sugar, can help him achieve this. Because it suppresses bacterial development, xylitol has an extra benefit in the fight against decay. Also, before using any dental supplement, consult with us first.

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