

Health Bulletin

Both cavities and gum disease are caused by bacteria, right? Where on earth do they come from, and how do we get infected?

Even if you try your best not to get infected, completely blocking it out in daily life is next to impossible. The key isn't 'avoiding transmission' but 'taking steps to prevent them from multiplying'!

Keep your teeth!

"Symptoms and progression of gum disease"

Do you notice any of these warning signs?

	Caries-causing bacteria	Periodontal disease bacteria
Susceptible age group	Infancy (5 months–3 years)	Late teens to adults
Source of infection	Parents and caregivers	Partner, close contacts
Prevention measures	<ul style="list-style-type: none"> Remove plaque inside the mouth Reduce sugar intake Regular checkups and preventive care 	<ul style="list-style-type: none"> Brushing and flossing Regular professional cleanings Removal of dental plaque (tartar)



- Bleeding when brushing.
- Gums appear reddish.
- Gums appear puffy.
- Waking up with a sticky feeling in the mouth.



- Difficulty chewing hard things.
- Food gets stuck in my teeth more easily now.
- Teeth appear longer.



- Strong halitosis.
- Loose or wobbly teeth.
- Pus comes out when I press on my gums.

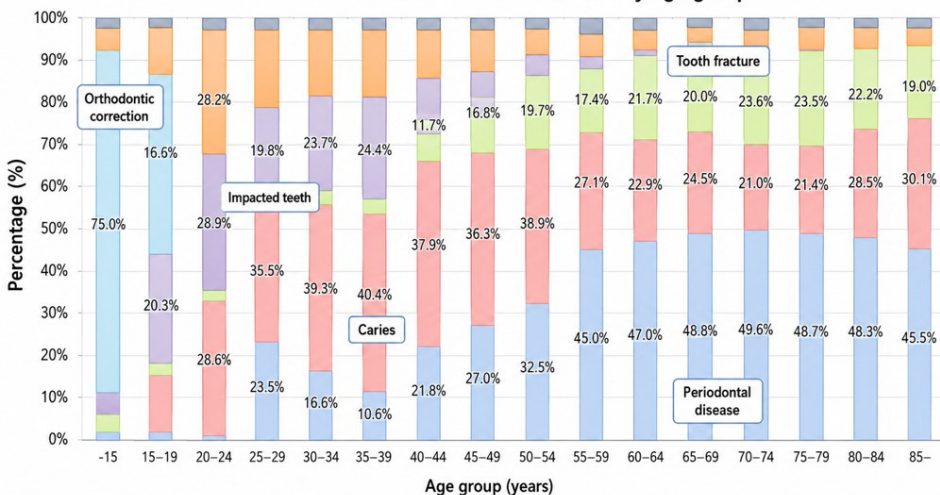
Mild periodontal disease symptoms



Severe periodontal disease symptoms

When do people usually lose their teeth?

Main reasons for tooth extraction by age group



Source: Ministry of Health, Labour and Welfare / 8020 Promotion Foundation, "The 2nd Survey on the Causes of Permanent Tooth Extraction"

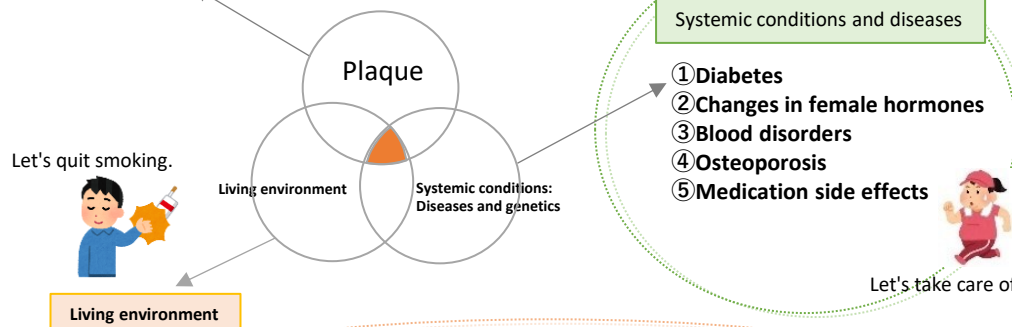
Plaque (a mass of bacteria)

Brush your teeth



Chemical products cannot clear away dental plaque. The key to protecting your teeth from gum disease is using toothbrushes, dental floss, and interdental brushes to bring plaque levels as close to zero as possible.

If these three factors intersect, your risk for gum disease increases significantly.



Let's quit smoking.



Living environment

Systemic conditions and diseases

- ① Diabetes
- ② Changes in female hormones
- ③ Blood disorders
- ④ Osteoporosis
- ⑤ Medication side effects

Let's take care of our health.

Is gum disease really the overwhelming cause of tooth loss?

That's right. It's obvious that this tendency becomes particularly noticeable once people reach their 50s.



20s: Orthodontic treatment, wisdom teeth, etc.
30s and older: Tooth decay (caries)

50s and older: Mostly due to gum disease (periodontal disease)

*Tooth extractions due to fractures also increase from around the 40s.

- **Smoking habits** Nicotine constricts blood vessels, preventing oxygen and nutrients from reaching the gums.
- **Dietary habits** Excessive sugar intake fuels periodontal bacteria, causing plaque to increase.
- **Lack of sleep, etc.** An imbalance in the autonomic nervous system lowers the body's immunity, making it easier for periodontal bacteria to multiply.
- **Mouth breathing** Mouth breathing leads to dryness; the drying of antibacterial saliva triggers bacterial proliferation.

Must-Know:
The Deep Link Between Gum Disease and Diabetes

Lately, an increasing number of doctors at diabetes clinics are advising patients to get regular dental checkups.



Even though you feel like you're brushing thoroughly, your gums still tend to swell up for some reason... The underlying cause might be related to diabetes.

ROUTE A

Gum disease worsens diabetes.

ROUTE B

Diabetes worsens gum disease.

STEP 1

Inflammatory substances overflow into the bloodstream.

When periodontal bacteria cause chronic inflammation in the gums, large amounts of inflammatory substances (such as cytokines) are produced and overflow into the bloodstream.

FACTOR 1

The body's resistance is weakened and fails to function properly.

When high blood sugar levels persist, the function of immune cells that fight bacteria in the mouth declines. As a result, the body can no longer suppress the growth of periodontal bacteria.

STEP 2

Blocks the action of insulin

The inflammatory substances carried throughout the body via blood vessels interfere with insulin—the only hormone that regulates blood sugar—and block its effectiveness.

FACTOR 2

Tissue repair fails, and healing stops progressing.

Damage to blood vessels also worsens blood flow in the gums. Because essential nutrients cannot reach the area, the self-repair of gum wounds and inflammation slows down, making it harder to heal.

STEP 3

Blood sugar levels go uncontrolled and rise.

Because insulin stops working properly (insulin resistance), cells can no longer absorb sugar from the blood, and as a result, diabetes metrics begin to worsen.

FACTOR 3

Dry mouth accelerates gum disease.

When blood sugar levels are high, urination increases, causing the body to become dehydrated. Since the entire body lacks water, it can no longer produce enough saliva—which normally keeps the mouth moist and promotes antibacterial effects. As a result, the mouth loses its self-cleaning ability, and periodontal bacteria multiply explosively.

Source: Ministry of Health, Labour and Welfare, "Health Japan 21 Action Support System

Tips for Preventing Gum Disease

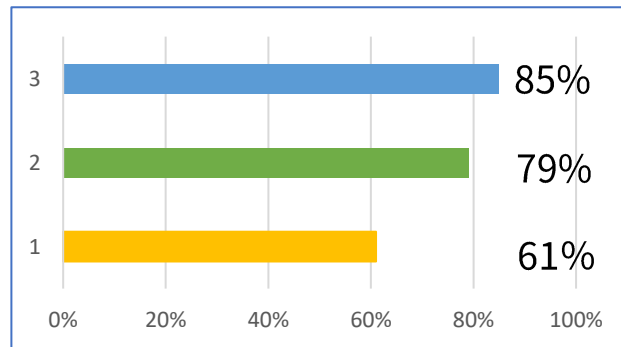
Aim for the gumline and between your teeth when brushing.



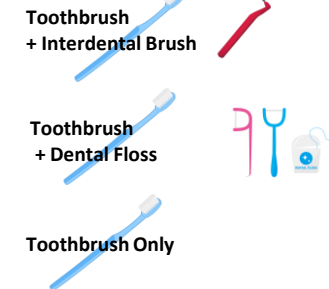
Periodontal bacteria dislike air, so they hide deep inside the periodontal pockets—the gaps between your teeth and gums. Instead of just scrubbing the surfaces, the most important thing is to focus on the gumline.

Essential use of floss and interdental brushes.

Plaque Removal Effectiveness of Various Interdental Cleaning Tools



Dental cleaning tools



Source: *The Japanese Journal of Conservative Dentistry*, 48(2): 272-277, 2005.

Brushing with a toothbrush alone removes only about 60% of plaque. To clean the spaces between your teeth—where gum disease is most likely to develop—make sure to use dental floss or an interdental brush once a day, especially before going to bed.

Using mouthwash does not completely eliminate gum disease bacteria. Since brushing and flossing are the only ways to actually remove bacteria and plaque from your mouth, make sure not to rely too heavily on mouthwash alone.



Factors like tooth alignment, brushing technique, saliva quality, and diet create a difference between people who get tartar easily and those who don't. We highly recommend having your teeth professionally cleaned at a dental clinic on a regular basis.

