CONDITION

Plaque and tartar on teeth

Plaque is a sticky bacterial film on teeth that can harden into tartar and irritate the gums.

WHAT IT IS
Sticky bacterial film and hardened deposits on teeth

BODY SYSTEM
Mouth, teeth, and gums

MAIN SYMPTOMS
Fuzzy teeth, hard deposits, bad breath, bleeding gums

WHAT CAUSES IT
Dental biofilm and minerals in saliva

HOW IT IS DIAGNOSED
Visual and tactile dental examination

MAIN TREATMENT
Daily plaque removal and professional scaling

CAN IT BE CURED?
Yes - removable, but plaque continually reforms

IS IT AN EMERGENCY?
No - unless facial swelling or breathing difficulty develops

LONG-TERM OUTLOOK
Usually manageable with consistent home and professional care

Overview

Dental plaque is a sticky film that continually forms on your teeth. It contains bacteria held together in a soft layer called a biofilm. Plaque can collect around the gumline, between teeth, in grooves, and around fillings, braces, dentures, or other dental work.

Plaque is usually soft enough to remove with brushing and cleaning between the teeth. If it stays in place, minerals in saliva can harden it into tartar, also called dental calculus. Tartar feels rough and cannot be removed with ordinary brushing.

Plaque and tartar are not the same as tooth decay or gum disease. However, plaque bacteria can contribute to both. They produce acids that damage tooth enamel and substances that irritate the gums. Tartar creates a rough surface where more plaque can collect.

Regular cleaning matters because early gum inflammation is often reversible. If inflammation

progresses to periodontitis, a more serious form of gum disease, the bone and other tissues supporting the teeth can be permanently damaged.

Symptoms

Plaque is often difficult to see. Your teeth may feel fuzzy or sticky, especially near the gumline or after eating. A plaque-disclosing tablet or liquid can temporarily stain plaque, making missed areas easier to see.

Tartar is harder and more visible. It may appear as a yellow, cream, brown, or dark deposit, often behind the lower front teeth or along the outside of upper back teeth. It can also form below the gumline, where you may not be able to see it.

Possible signs include:

Plaque and tartar themselves do not usually cause severe pain. Toothache, pain when biting, marked sensitivity, or swelling may point to tooth decay, infection, gum disease, or another dental problem.

Bleeding gums are common but should not be ignored. They often signal inflammation rather than brushing "too well." Brushing gently and thoroughly is usually more helpful than avoiding the area.

- Rough or hard deposits that do not brush away
- Persistent bad breath or an unpleasant taste
- Red, swollen, or tender gums
- Bleeding during brushing or cleaning between teeth
- Gums pulling away from the teeth

Causes and risk factors

Plaque starts forming again soon after teeth are cleaned. Bacteria naturally present in the mouth attach to tooth surfaces and build a biofilm. Sugars and starches from food and drinks can support bacterial activity, including the production of acids that contribute to tooth decay.

Tartar forms when plaque remains long enough to absorb minerals from saliva. Some people develop tartar more quickly than others because saliva, tooth position, oral hygiene, and other factors differ.

Buildup is more likely in places that are difficult to clean, including between crowded teeth,

behind the lower front teeth, and around braces, bridges, implants, or denture clasps.

Factors that can increase plaque-related problems include:

Smoking may hide early gum inflammation by reducing visible bleeding. This means gum disease can still be present even if the gums do not bleed much.

- Infrequent or incomplete brushing and interdental cleaning
- Smoking or using other tobacco products
- A dry mouth, which reduces saliva's protective effects
- Medicines or health conditions that cause dry mouth
- Frequent sugary foods or drinks
- Braces, crowded teeth, or dental work that traps plaque
- Limited hand movement, vision, or ability to manage daily cleaning

Diagnosis

A dentist or dental hygienist can usually identify plaque and tartar by looking at and gently feeling the tooth surfaces with dental instruments. Tartar below the gumline may be detected during a gum examination even when it is not visible.

Your gums may be checked for redness, bleeding, recession, and pockets. A gum pocket is the space between a tooth and the surrounding gum. Deeper pockets can be a sign that the supporting tissues have been affected by periodontitis.

Dental X-rays are not usually needed simply to confirm visible plaque or tartar. They may be recommended to look for tooth decay, tartar below the gumline, or loss of bone supporting the teeth.

A professional examination can also distinguish tartar from surface staining, tooth-coloured fillings, enamel changes, or decay. Dark marks do not always mean that a tooth has a cavity.

Treatment and management

Soft plaque can be removed at home. Brush all tooth surfaces twice a day with fluoride toothpaste, paying attention to the gumline. A manual or powered toothbrush can work well when used thoroughly and gently.

Clean between your teeth regularly with floss, interdental brushes, or another tool suited to the size of the spaces. A dentist or hygienist can demonstrate a method that fits around braces,

bridges, implants, or limited hand movement.

Once plaque has hardened into tartar, it needs professional removal. During scaling, a dentist or hygienist uses hand instruments or an ultrasonic scaler to loosen deposits. The ultrasonic instrument uses rapid vibration and water rather than drilling the tooth.

If tartar and inflamed tissue extend below the gumline, deeper cleaning may be needed. This may be called root surface debridement, root planing, or non-surgical periodontal treatment. Local anaesthetic may be used to keep the area comfortable.

Your teeth or gums may feel temporarily sensitive after a professional cleaning, especially if there was heavy buildup or exposed root surface. This usually settles, but persistent or worsening symptoms should be checked.

Antiseptic mouthwash may sometimes be advised as a short-term addition to mechanical cleaning. It does not replace brushing or interdental cleaning. Some antiseptic products can stain teeth or affect taste, so they should be used as directed rather than continued indefinitely without advice.

Do not try to scrape tartar off with sharp household or dental-style tools. This can injure the gums, scratch tooth surfaces, or damage dental work.

The right interval between professional visits is based on your gum health, tartar buildup, medical history, smoking status, and ability to clean at home. Not everyone needs the same schedule.

Complications

Plaque around the gumline can cause gingivitis, meaning inflammation of the gums. Gingivitis can cause redness, swelling, tenderness, and bleeding. It does not involve loss of the bone that holds teeth in place and can often improve when plaque is consistently removed.

In some people, ongoing inflammation progresses to periodontitis. This damages the ligaments and bone supporting the teeth. Possible signs include receding gums, persistent bad breath, gaps developing between teeth, loose teeth, or changes in how the teeth meet.

Plaque bacteria also produce acids after exposure to sugars. Repeated acid attacks can weaken enamel and lead to cavities. Plaque collecting around braces, crowns, or the edges of fillings may increase the chance of decay in those areas.

Advanced tooth decay or gum disease can sometimes lead to a dental abscess, which is a pocket of infection. Plaque or tartar alone does not mean that an abscess is present.

Prevention

Plaque formation cannot be completely prevented because oral bacteria continually form a new biofilm. However, regular removal can limit buildup, reduce the chance of tartar forming, and protect your teeth and gums.

Useful measures include:

Brush with gentle pressure rather than scrubbing hard. Forceful brushing does not remove tartar and may wear the tooth surface or contribute to gum recession.

If dry mouth is making plaque control difficult, mention it at a routine dental or medical appointment. The cause may be related to medicines, dehydration, mouth breathing, or a health condition. Do not stop prescribed medicine without medical advice.

- Brush twice daily with fluoride toothpaste
- Clean between the teeth with an appropriate interdental tool
- Replace a worn toothbrush or brush head
- Limit how often teeth are exposed to sugary foods and drinks
- Avoid smoking and other tobacco products
- Attend dental examinations and cleaning at intervals suited to your needs

Living with it and what to expect

Plaque will return after cleaning, so control is an ongoing part of daily dental care rather than a one-time cure. Missing an occasional cleaning does not automatically cause permanent harm, but repeated buildup allows plaque to mature and may lead to tartar and gum inflammation.

If you have gingivitis, bleeding and swelling may improve after plaque and tartar are removed and daily cleaning becomes consistent. Improvement is not always immediate, particularly if the gums have been inflamed for some time.

Tartar that has already formed will remain until it is professionally removed. It cannot be dissolved safely with extra brushing, acidic products, or home scraping.

If periodontitis has developed, lost supporting bone does not usually grow back on its own. Treatment aims to control inflammation, slow or stop further damage, and help you keep your teeth. Some people need ongoing periodontal maintenance or care from a gum specialist.

Most people can keep plaque at manageable levels with a routine that fits their mouth and abilities. If floss is difficult, alternatives such as interdental brushes, floss holders, or

water-based devices may help. The most useful tool is one you can use safely and consistently.

When to get medical help

Arrange a routine dental appointment if you have tartar that does not brush away, frequent gum bleeding, persistent bad breath, gum recession, or difficulty cleaning around dental work. Also seek routine assessment if a tooth becomes sensitive or painful, even if you think tartar is the cause.

Ask for a prompt dental assessment if you develop:

Seek emergency care for difficulty breathing or swallowing, swelling that is spreading toward the eye or neck, severe facial swelling, or signs of serious illness. These symptoms may indicate a spreading infection rather than uncomplicated plaque or tartar.

- Increasing tooth or gum pain
- A lump, pus, or a bad-tasting discharge near a tooth
- New facial or jaw swelling
- Fever with dental pain or swelling
- A loose adult tooth or rapidly worsening gum symptoms

Common questions

Can I remove tartar at home?

No. Brushing and interdental cleaning remove soft plaque but do not safely remove hardened tartar. Professional scaling is needed. Home scraping tools can injure your gums or damage teeth and dental work.

Why does tartar keep coming back after a cleaning?

Plaque starts reforming naturally after teeth are cleaned. If some plaque remains in place, minerals in saliva can harden it again. Careful daily cleaning slows this process but cannot stop plaque from forming altogether.

Is yellow or brown buildup always tartar?

No. It may be tartar, staining, decay, or a natural variation in the tooth surface. Tartar is usually hard and rough, but a dental examination is the best way to identify an unexplained mark.

Will bleeding gums improve if I keep brushing?

Bleeding caused by mild plaque-related inflammation often improves with gentle, thorough cleaning. Do not scrub hard. If bleeding persists, happens without brushing, or comes with swelling, recession, or loose teeth, arrange a dental assessment.

Does mouthwash remove plaque and tartar?

Mouthwash may reduce some bacteria or support gum care, but it does not physically remove established plaque and cannot remove tartar. Brushing and cleaning between the teeth remain essential.

Is a professional cleaning painful?

Many routine cleanings cause little discomfort. Sensitive teeth, inflamed gums, or deposits below the gumline can make treatment less comfortable. The dental team can adjust the approach, and local anaesthetic may be available for deeper cleaning.

Sources

- National Institute of Dental and Craniofacial Research: Gum Disease
- Centers for Disease Control and Prevention: About Periodontal Disease
- American Dental Association, MouthHealthy: Plaque
- NHS: Gum disease
- American Academy of Periodontology: Gum Disease Information