HEALTH BASICS

Plaque

Plaque is a term for material that collects on teeth or in arteries, or for a raised area of skin.

WHAT IT IS
Material buildup or a broad, raised skin area

WHERE IT COMES UP
Dental visits, artery imaging, and skin examinations

WHY IT MATTERS
Its meaning guides possible tests, treatment, or follow-up

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
A dentist, primary care clinician, or relevant specialist

HOW IT IS CHECKED
Dental examination, skin examination, or imaging, according to location

Overview

"Plaque" is a medical word with several meanings. It is not a disease or a diagnosis by itself. What it means depends on where it is found.

Dental plaque is a sticky layer of bacteria and other material that forms on teeth. Arterial plaque is material that builds up within the walls of arteries, the blood vessels that carry blood away from the heart. In dermatology, a plaque is a broad, raised area of skin.

The word can also appear in specialist reports. For example, a scan may describe calcified plaque, meaning an area containing calcium. Laboratory or pathology reports may use "plaque" for a particular pattern of material in tissue. These uses are not interchangeable.

If you see "plaque" in a report, the most useful first step is to check its location and the full phrase around it. "Dental plaque," "coronary artery plaque," and "skin plaque" refer to very different findings.

How it works

Dental plaque is a biofilm , meaning an organized community of microorganisms attached to a

surface. It forms when bacteria combine with saliva and substances from food and drinks. It commonly collects along the gumline, between teeth, and in grooves on chewing surfaces.

Some bacteria in dental plaque turn sugars into acids. Repeated acid exposure can remove minerals from tooth enamel, the hard outer layer of a tooth. Plaque near the gums can also trigger inflammation. If plaque remains in place, it may harden into calculus, also called tartar. Brushing cannot remove hardened tartar; a dental professional uses instruments to remove it.

Arterial plaque forms through a different process called atherosclerosis . Cholesterol-containing particles enter and remain in an artery wall. Inflammation follows, and the area may develop fatty material, inflammatory cells, scar-like tissue, and calcium. Over time, this can thicken or stiffen the artery wall.

An arterial plaque may narrow an artery gradually. Some plaques can also break open, leading to a blood clot. The effect depends on which artery is involved and whether blood flow is reduced.

A skin plaque is not a substance that has collected on the skin. It is a description of shape: a raised, fairly broad area that can often be felt as well as seen. A plaque may be smooth, scaly, crusted, or differently colored from nearby skin. Conditions such as psoriasis, eczema, fungal infections, and some skin cancers can produce plaque-shaped areas, but appearance alone does not establish the cause.

Why it matters for your health

The meaning of plaque changes what, if anything, needs to happen next.

Dental plaque is expected to form repeatedly, but controlling it matters. Persistent plaque can contribute to tooth decay, also called cavities, and to gingivitis, an early form of gum inflammation. Ongoing gum inflammation can sometimes progress to periodontitis, which damages the tissues and bone supporting the teeth.

Arterial plaque is evidence of atherosclerosis. Its significance depends on factors such as its location, the amount of narrowing, whether it contains calcium, and your overall cardiovascular risk. Cardiovascular risk includes the chance of problems involving the heart or blood vessels.

A calcium score from a heart CT scan measures calcium in the coronary arteries. It does not show every type of plaque or directly measure every narrowing. Plaque found incidentally on another scan may still be useful information, but it should be interpreted alongside factors such as blood pressure, cholesterol, diabetes, smoking history, age, and symptoms.

For a skin plaque, the important issue is the condition causing the raised area. Many causes are manageable and not urgent. A persistent, changing, painful, or bleeding plaque may need

assessment because several conditions can look similar.

What can go wrong

Dental plaque can be involved in:

Arterial plaque is involved in atherosclerotic cardiovascular disease. Depending on its location, reduced blood flow or a blood clot can contribute to coronary artery disease, heart attack, stroke, peripheral artery disease, or reduced blood flow to other organs.

A skin plaque can be part of psoriasis, dermatitis, ringworm and other fungal infections, or less commonly a precancerous or cancerous skin condition. The word "plaque" does not tell you which one is present.

Routine follow-up is appropriate for dental plaque or tartar noticed during brushing, gums that bleed repeatedly, or a skin plaque that persists or changes. Arrange dental or medical review rather than trying to identify the cause from appearance alone.

Seek prompt dental care for severe tooth pain, increasing facial or jaw swelling, fever with a dental problem, or difficulty opening your mouth. Difficulty breathing or swallowing with facial or mouth swelling is an emergency.

Call emergency services for possible heart attack or stroke symptoms, such as new chest pressure, severe shortness of breath, sudden weakness on one side, facial drooping, or sudden difficulty speaking. Do not wait for a routine appointment because a report previously mentioned arterial plaque.

A rapidly spreading rash with blistering, skin peeling, mouth or eye sores, breathing difficulty, or marked illness also needs urgent medical assessment.

- Dental caries: acid-related damage that can lead to cavities
- Gingivitis: red, swollen, or bleeding gums caused by inflammation
- Periodontitis: deeper gum disease affecting tooth-supporting tissues
- Dental calculus: hardened plaque that needs professional removal

What you can do

First, find out which meaning of plaque applies. Ask, "Where is the plaque, and what does it mean in this report?" Keep a copy of the report so you can refer to the exact wording.

For dental plaque, brush regularly with fluoride toothpaste and clean between your teeth. A

dentist or dental hygienist can check for plaque, tartar, cavities, and gum disease. Ask how often you need dental follow-up based on your mouth and treatment history.

If arterial plaque appears on a scan, ask:

There is no single blood test that directly measures all arterial plaque. Imaging tests can show certain features, but testing people without symptoms is not automatically helpful. Additional scans should be based on the reason for testing and your overall risk, not on the word "plaque" alone.

For a skin plaque, note when it appeared and whether it changes, itches, hurts, scales, or bleeds. A clear photograph with a date can help document changes. A clinician may identify the cause by examining it, testing a skin scraping for fungus, or taking a small skin sample called a biopsy.

If "plaque" appears without an explanation and no follow-up was recommended, you do not need to treat the word itself. Ask the clinician who ordered the test whether the finding is important and whether any routine follow-up is needed.

- Which artery is affected
- Whether the report describes narrowing or only calcium
- Whether blood pressure, cholesterol, or blood glucose testing is appropriate
- How the finding changes your personal cardiovascular risk assessment

Common questions

Are dental plaque and arterial plaque the same material?

No. Dental plaque is a bacterial biofilm on teeth. Arterial plaque develops within artery walls and contains cholesterol-rich material, inflammatory cells, fibrous tissue, and sometimes calcium.

Is plaque the same as tartar?

No. Dental plaque is soft and sticky. Tartar, or calculus, is dental plaque that has hardened through mineral buildup.

Does calcified plaque mean an artery is completely blocked?

Not necessarily. Calcium indicates atherosclerotic change, but it does not by itself show that an artery is completely blocked. The type of scan, plaque location, and any reported narrowing all matter.

Can a skin plaque be diagnosed from a photograph?

A photograph can document appearance and change, but it may not establish the cause. Lighting, skin color, texture, and scale can be difficult to judge remotely. An in-person examination or test may be needed.

Can plaque be removed?

Dental plaque can be disrupted by brushing and cleaning between teeth; hardened tartar needs professional removal. Arterial plaque is not cleaned out through routine home care. Management focuses on cardiovascular risk and, in selected situations, procedures to restore blood flow. A skin plaque is treated according to its underlying cause.

Sources

- National Institute of Dental and Craniofacial Research - Gum Disease
- Centers for Disease Control and Prevention - About Periodontal (Gum) Disease
- National Heart, Lung, and Blood Institute - Atherosclerosis
- MedlinePlus - Atherosclerosis
- DermNet - Terminology in Dermatology
- American Academy of Dermatology - Psoriasis: Overview