HEALTH BASICS

Prevention endocarditis

A set of steps used to reduce infective endocarditis risk in certain situations.

WHAT IT IS
Steps that reduce infective endocarditis risk

WHERE IT COMES UP
Dental care, heart conditions, procedures, and active infections

WHY IT MATTERS
Helps protect people at highest risk of severe complications

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
Dentist, cardiologist, primary care clinician, or procedure team

HOW IT IS CHECKED
Medical and dental history review; no single screening test

Overview

"Prevention endocarditis" usually means preventing infective endocarditis . It is not a disease or diagnosis. It is a set of preventive steps considered before certain procedures or when managing infections.

Infective endocarditis is an infection of the inner lining of the heart, usually involving a heart valve. It can develop when bacteria or, less often, fungi enter the bloodstream and attach to damaged heart tissue or artificial heart material.

Prevention mainly involves good oral health, prompt care for infections, and clean techniques during medical procedures. A small group of people may also need an antibiotic like amoxicillin or doxycycline before certain dental procedures. This is called antibiotic prophylaxis , meaning an antibiotic given to prevent an infection rather than treat one.

Most people do not need preventive antibiotics for dental or medical procedures. Recommendations also differ somewhat between countries, so your specific heart history and local guidance matter.

How it works

Bacteria can enter the bloodstream during ordinary activities such as brushing, flossing, or chewing, especially when gums are inflamed. Dental procedures that disturb the gums or the area around a tooth root can also allow bacteria into the blood for a short time.

The immune system normally clears these bacteria. However, bacteria may be more likely to settle on certain artificial valves, damaged valves, or abnormal areas of the heart. Preventive measures aim to reduce either the amount of bacteria entering the blood or the chance that they will establish an infection.

Regular brushing, cleaning between the teeth, and professional dental care help control gum disease. This is important because exposure from everyday oral activity happens much more often than exposure from a single dental procedure.

Antibiotic prophylaxis is reserved for selected situations. In US and European guidance, it is generally focused on people at highest risk of a serious outcome from infective endocarditis. This may include people with:

Even within these groups, antibiotics are usually considered only for dental work that manipulates the gums, reaches the area around a tooth root, or breaks the lining of the mouth.

Routine injections through healthy tissue, dental X-rays, placement of removable braces, and loss of baby teeth generally do not fall into this category. Antibiotics are also not routinely recommended for many digestive, urinary, or respiratory procedures when there is no active infection, although local recommendations may differ.

- A prosthetic heart valve or certain prosthetic valve-repair materials
- A previous episode of infective endocarditis
- Certain forms of congenital heart disease
- A heart transplant followed by valve disease, under some guidance

Why it matters for your health

Infective endocarditis can damage heart valves and may require prolonged treatment or surgery. Prevention efforts are therefore concentrated on people most likely to have severe complications.

This does not mean every case can be prevented. Many people who develop infective endocarditis had no recent procedure, and preventive antibiotics cover only certain bacteria for a limited time.

Avoiding unnecessary antibiotics also matters. Antibiotics can cause side effects, including allergic reactions, diarrhoea, and disruption of normal bacteria. Their unnecessary use

contributes to antibiotic resistance, which makes some infections harder to treat.

The aim is a balanced plan: maintain good dental and skin health, treat active infections appropriately, and use preventive antibiotics only when the likely benefit is greater than the potential harm.

What can go wrong

Problems can arise when preventive measures are missed, misunderstood, or used when they are not needed.

Infective endocarditis may develop if microorganisms enter the bloodstream and attach to vulnerable heart tissue. Prevention lowers risk in selected settings but cannot remove it completely.

Untreated dental or skin infection can provide an ongoing route for bacteria to enter the bloodstream. Delaying necessary dental care because of concern about endocarditis may create more risk rather than less.

Unnecessary antibiotic use can cause drug reactions, antibiotic-associated diarrhoea, or resistant bacteria. Taking leftover antibiotics or someone else's prescription may also delay correct treatment.

Incorrect heart-history information can lead to an unsuitable plan. A heart murmur, a coronary stent, a pacemaker, or previous bypass surgery does not automatically mean you need dental antibiotic prophylaxis.

Contact a clinician promptly if you have an unexplained persistent fever, chills, night sweats, marked tiredness, new breathlessness, or other ongoing illness after a procedure or during an infection-especially if you have a prosthetic valve or previous infective endocarditis. These symptoms have many possible causes and do not confirm endocarditis.

Call emergency services for severe breathing difficulty, fainting, new confusion, or possible stroke signs such as facial drooping, arm weakness, or trouble speaking.

What you can do

Keep an accurate record of your heart history. Include the exact name of any congenital heart condition, previous infective endocarditis, valve surgery, artificial valve, valve-repair material, or heart transplant. A procedure date and implant card can be useful.

Before invasive dental work, ask:

Tell your dentist about relevant heart conditions before treatment begins. Also tell your cardiology or primary care team about major planned dental work if your need for prophylaxis is unclear.

Look after your teeth and gums through regular brushing, cleaning between teeth, and dental visits suited to your needs. Seek dental care for persistent gum bleeding, swelling, tooth pain, or signs of infection rather than relying on preventive antibiotics.

Clean cuts promptly and seek care for spreading redness, increasing pain, pus, or fever. Do not squeeze boils or use leftover antibiotics.

There is no routine blood test or heart scan that decides whether you need prophylaxis. Eligibility is based mainly on your heart condition and the planned procedure. Blood cultures and an echocardiogram, which is an ultrasound scan of the heart, are used when clinicians are investigating possible infective endocarditis-not as routine prevention checks.

For most people, there is nothing special to arrange before routine dental care beyond sharing an accurate medical history and maintaining good oral health.

- Am I in a highest-risk group under local guidance?
- Will this procedure disturb my gums or the area around a tooth root?
- Do I need an antibiotic, and what should I do if the planned procedure changes?
- Are my recorded antibiotic allergies and previous reactions accurate?

Common questions

Do I need antibiotics before every dental cleaning?

Usually not. Some cleanings disturb the gums, but prophylaxis is generally considered only when both the dental procedure and your heart history meet specific criteria.

Does a heart murmur mean I need antibiotics?

Not by itself. A murmur is a sound heard through a stethoscope, not a diagnosis. The underlying heart condition determines whether prophylaxis may be appropriate.

What about a pacemaker, coronary stent, or previous bypass surgery?

These do not usually qualify on their own for dental antibiotic prophylaxis. Other heart conditions may change the answer.

Do colonoscopy or urinary procedures require prophylaxis?

Many guidelines do not recommend endocarditis prophylaxis for routine digestive or urinary procedures when no active infection is present. The procedure team may make a separate

antibiotic plan if an infection is present or another surgical indication applies.

Why do recommendations differ between countries?

Guideline groups weigh limited evidence, antibiotic harms, and local healthcare practice differently. For example, US and European guidance supports prophylaxis for selected high-risk people undergoing certain dental procedures, while UK guidance states that it should not be offered routinely. Ask which local guideline applies to you.

Should I carry an endocarditis prevention card?

It can help if you have a qualifying high-risk heart condition. Make sure the card identifies the condition clearly and is updated after heart procedures.

Can I take leftover antibiotics before dental work?

No. The choice and timing require a specific plan based on the procedure, allergies, current medicines, and local guidance.

Sources

- American Heart Association: Prevention of Viridans Group Streptococcal Infective Endocarditis , scientific statement, Circulation , 2021
- American Dental Association: Antibiotic Prophylaxis Prior to Dental Procedures , clinical topic guidance
- European Society of Cardiology: 2023 ESC Guidelines for the Management of Endocarditis , European Heart Journal , 2023
- National Institute for Health and Care Excellence: Prophylaxis Against Infective Endocarditis , clinical guideline CG64
- Centers for Disease Control and Prevention: About Infective Endocarditis , patient information