

What is Bacterial Endocarditis?

Bacterial endocarditis is an infection of either:

- the heart's inner lining (endocardium) or
- the heart valves

Bacterial endocarditis is a serious — and sometimes fatal — illness. Two things cause it

to occur: bacteria and a weakened heart.

Men, women and children and people of all racial and ethnic groups can get it. In the United States, there are about 15,000 to 20,000 cases of bacterial endocarditis a year.

What's the role of bacteria?

Certain bacteria normally live on parts of your body. They live in or on:

- the mouth and upper respiratory system
- the intestinal and urinary tracts
- the skin

Bacteria can get in the bloodstream. This is called bacteremia. These bacteria can settle on abnormal heart valves or other damaged heart tissue. If this happens, they can damage or even destroy the heart valves.

The heart valves are important in guiding blood flow through the heart. They work like doors to keep the blood flowing in one direction. If they become damaged, the results can be very serious.

A brief bacteremia is common after many invasive procedures (medical procedures that break the skin). Certain surgical and dental procedures are examples. Not all bacteria cause endocarditis, though. Only certain kinds do.

What's the heart's role?

People with normal hearts rarely get endocarditis. Those who have certain preexisting heart conditions are at risk for developing endocarditis when a bacteremia occurs.

Heart conditions that put people at higher risk include:

- artificial (prosthetic) heart valves
- a history of endocarditis
- heart valves damaged (scarred) by rheumatic or other heart disease
- congenital heart or heart valve defects
- hypertrophic cardiomyopathy (an enlarged heart)

People who've had endocarditis before are at high risk of getting it again. This is true even when they don't have heart disease.

Some congenital heart defects can be successfully repaired surgically and the person will no longer be at risk for endocarditis. Examples include:

- Ventricular septal defect — The opening between the heart's two lower chambers can be closed.
- Atrial septal defect — The opening between the heart's two upper chambers can be closed.
- Patent ductus arteriosus — The open passageway between the artery to the lungs and the large artery that takes blood from the heart to the body is closed.

After the defects are completely repaired surgically, there's no longer an increased risk for endocarditis.

How can bacterial endocarditis be prevented?

Not all cases can be prevented. That's because we don't always know when a bacteremia occurs.

Under certain circumstances, the American Heart Association recommends antibiotics for people whose heart condition puts them at higher risk of developing endocarditis. For example, antibiotics are prescribed before certain dental or surgical procedures. These include procedures most likely to produce bacteremia with organisms that commonly cause endocarditis.

Examples of these types of procedures are:

- professional teeth cleaning
- tonsillectomy or adenoidectomy
- examination of the respiratory passageways with a rigid bronchoscope
- certain types of surgery on the respiratory passageways, the gastrointestinal tract or the urinary tract

- gallbladder or prostate surgery

Antibiotics may be recommended for other types of procedures if the tissue is infected. It normally involves taking a dose of antibiotics an hour before the procedure.

The American Heart Association has created an endocarditis wallet card in both English and Spanish. People who are at risk of this type of infection should carry it. You can get it from your doctor or on our Web site, americanheart.org. Show the card to your dentist or doctor. It will help them take the precautions necessary to protect your health.

You can also take steps to reduce your risk. For example, it's important to brush and floss daily and visit the dentist regularly. This will reduce the chance of a bacteremia.

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721), or visit americanheart.org to learn more about heart disease.

3. For information on stroke, call 1-888-4-STROKE (1-888-478-7653) or visit us online at StrokeAssociation.org.

We have many other fact sheets and educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one.

Knowledge is power, so *Learn and Live!*

Do you have questions or comments for your doctor or nurse?

- Take a few minutes to write your own questions for the next time you see your healthcare provider.
