

Antibiotics: Your Heart and Joints (Antibiotic Prophylaxis)

Before some dental treatments, patients who have certain heart conditions and those with artificial joints take antibiotics. These people may be at risk of developing an infection in the heart or at the site of the artificial joint, respectively. Antibiotics reduce this risk. This is called *antibiotic prophylaxis* (pronounced *pro-fuh-lax-iss*).

When treating patients with heart conditions, dentists follow recommendations developed by the [American Heart Association \(AHA\)](#), with input from the ADA. For patients who have total joint replacements, they refer to recommendations developed by the [American Academy of Orthopedic Surgeons \(AAOS\)](#).

Recommendations for People with Heart Conditions

The AHA recommendations are meant to reduce the risk of infective endocarditis (pronounced end-o-car-die-tiss). Infective endocarditis (IE) is an infection of the lining inside the heart or the heart valves.

In the past, a number of heart conditions were thought to put patients at risk for IE. When writing the new recommendations, the AHA looked at published research and other scientific articles. They found that fewer conditions were associated with IE. As a result, a smaller group of patients needs to premedicate before dental treatments.

Why did the recommendations change?

After looking at the published scientific reports and articles, the AHA concluded that:

- the risks of adverse reactions to antibiotics outweigh the benefits of prophylaxis for most patients. Adverse reactions can range from mild (rashes) to severe (breathing problems that could result in death).
- when all the study results were looked at together, it wasn't clear that premedication prevented IE.
- bacteria from the mouth can enter the bloodstream during daily activities like brushing or cleaning between the teeth. Once in the bloodstream, it can travel to the heart. People at risk of infection might be more likely to develop IE from these activities than after a dental treatment.

Also, bacteria that cause infections can become resistant to antibiotics if those drugs are used too often. Because of this, doctors try to limit the use of antibiotics.

Patient selection

The current recommendations recommend use of preventive antibiotics before certain dental procedures for people with:

- artificial heart valves

- a history of infective endocarditis
- a cardiac transplant that develops a heart valve problem
- the following congenital (present from birth) heart conditions:*
- unrepaired or incompletely repaired cyanotic congenital heart disease, including those with palliative shunts and conduits
- a completely repaired congenital heart defect with prosthetic material or device, whether placed by surgery or by catheter intervention, during the first six months after the procedure
- any repaired congenital heart defect with residual defect at the site or adjacent to the site of a prosthetic patch or a prosthetic device.

* Check with your cardiologist if you're not sure whether or not you fall into one of these categories.

People who took prophylactic antibiotics in the past but no longer need them include those with:

- mitral valve prolapse
- rheumatic heart disease
- bicuspid valve disease
- calcified aortic stenosis
- congenital (present from birth) heart conditions such as ventricular septal defect, atrial septal defect and hypertrophic cardiomyopathy.

Talk to your dentist about how these recommendations might apply to you.