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Infective Endocarditis: New Guidelines

On Thursday, April 19, 2007, the American Heart Association's latest guidelines were published in its scientific journal, *Circulation: Journal of the American Heart Association*.

The guidelines are based on a growing body of scientific evidence, which shows that the risks of taking preventive antibiotics outweigh the benefits for most patients. The risks include adverse reactions to antibiotics that range from mild to potentially severe and, in very rare cases, death. Inappropriate use of antibiotics can also lead to the development of drug-resistant bacteria. Scientists also found no compelling evidence that taking antibiotics prior to a dental procedure prevents IE in patients who are at risk of developing a heart infection. Their hearts are already often exposed to bacteria from the mouth, which can enter their bloodstream during basic daily activities, such as brushing or flossing. The new guidelines are based on a comprehensive review of published studies that suggests IE is more likely to occur as a result of these everyday activities than from a dental procedure. The new recommendations apply to most dental procedures, including scaling, maintenance and extractions.

The guidelines say that patients who have taken prophylactic antibiotics routinely in the past, but no longer need them, include people with:

- mitral valve prolapse
- rheumatic heart disease
- bicuspid valve disease
- calcified aortic stenosis
- congenital heart conditions, such as ventricular septal defect, atrial septal defect and hypertrophic cardiomyopathy

The new guidelines are aimed at patients with more serious conditions. These guidelines represent a major change in philosophy.

Preventive antibiotics prior to a dental procedure are advised for patients with:

1. Artificial heart valves
2. A history of infective endocarditis
3. Certain specific, serious congenital (present from birth) heart conditions, including:
 - a. Unrepaired or incompletely repaired cyanotic congenital heart disease, including those with palliative shunts and conduits.
 - b. A completely repaired congenital heart defect with a prosthetic material or device, whether placed by surgery or by catheter intervention, during the first six months after the procedure.
 - c. Any repaired congenital heart defect with a residual defect at the site or adjacent to the site of a prosthetic patch or a prosthetic device. Patients with congenital heart disease can have complicated circumstances. They should check with their cardiologist if there is any question at all as to the category that best fits their needs.
4. A cardiac transplant that develops a problem in a heart valve