

Sunset Oral & Maxillofacial Surgery

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AHA Guidelines for Prophylactic Antibiotic Coverage (PAC) for Prevention of Bacterial Endocarditis

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Primary Reasons for Revision of the Infective Endocarditis (IE) Prophylaxis Guidelines:

- IE is much more likely to result from frequent exposure to random bacteremias associated with daily activities than from bacteremia caused by a dental procedure.
- Prophylaxis may prevent an exceedingly small number of cases of IE, if any, in individuals who undergo a dental procedure even if it were 100% effective.
- The risk of antibiotic-associated adverse events exceeds the benefit, if any, from prophylactic antibiotic therapy.
- Maintenance of optimal oral health and hygiene may reduce the incidence of bacteremia from daily activities and is more important than prophylactic antibiotics for a dental procedure to reduce the risk of IE.

The new guidelines are based on recommending prophylactic antibiotic coverage for only those patients with the highest risk of adverse outcome from developing IE.

Cardiac Conditions Associated with the Highest Risk of Adverse Outcome - PAC recommended only for these conditions:

- Prosthetic heart valves
- Previous history of infective endocarditis
- Congenital Heart Disease (CHD)
 - Unrepaired cyanotic CHD, including palliative shunts & conduits
 - Completely repaired CHD with prosthetic material or device, whether placed by surgery or by catheter intervention, during the first 6 months after the procedure
 - Repaired CHD with residual defects at the site or adjacent to the site of a prosthetic patch or prosthetic device
- Cardiac transplantation recipient who develops cardiac valvulopathy

Dental Procedures for which PAC is recommended for the patient:

Need PAC: All dental procedures that involve manipulation of gingival tissue or the periapical region of the teeth or perforation of the oral mucosa.

Do not need PAC: routine local anesthetic injections, dental radiographs, placement of removable appliances, adjustment of orthodontic appliances, placement of orthodontic brackets, shedding of deciduous teeth or trauma to the lips or oral mucosa.

An antibiotic for prophylaxis should be administered in a single dose before the procedure. If the dosage of antibiotic is inadvertently not administered before the procedure, the dosage may be administered up to two hours after the procedure.

Regimen for Dental Procedures requiring PAC:

Regimen: Single Dose 30-60 minutes
Before Procedure

Situation	Agent	Adults	Children
Oral	Amoxicillin	2 g	50 mg/kg
Unable to take oral	Ampicillin	2 g IM or IV	50 mg/kg IM or IV
	OR		
	Cefazolin or Ceftriaxone	1 g IM or IV	50 mg/kg IM or IV
Allergic to PCN-oral	Cephalexin	2 g	50 mg/kg
	OR		
	Clindamycin	600 mg	20 mg/kg
	OR		
	Azithromycin /Clarithromycin	500 mg	15 mg/kg
Allergic to PCN Unable to take oral	Cefazolin / Ceftriaxone	1 g IM or IV	50 mg/kg IM or IV
	OR		
	Clindamycin	600 mg IM or IV	20 mg/kg IM or IV

Special Situations:

- Patient already receiving antibiotics:
 - Oral: If a patient is already receiving long-term oral antibiotic therapy with an antibiotic that is also recommended for IE prophylaxis for a dental procedure, it is prudent to select an antibiotic from a different class rather than increase the dosage of the current antibiotic.
 - Parenteral: Patients receiving parenteral antibiotic therapy for IE may require dental procedures during antimicrobial therapy. The parenteral antibiotic should be continued and the timing of the dosage adjusted to be administered 30-60 minutes before the dental procedure.
- There is no evidence that coronary artery bypass graft surgery is associated with a long-term risk for infection, therefore PAC is not needed for these individuals.
- Antibiotic prophylaxis for dental procedures is not recommended for patients with coronary artery stents.

References:

Wilson, W, Etal. Prevention of Infective Endocarditis. Guidelines from the American Heart Association. Circulation, 2007; published online April 19, 2007.

<http://circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.106.183095>