

AHA Medical/Scientific Statement  
(Content edited by T. Hart to reflect primarily dental issues)



## Prevention of Bacterial Endocarditis: Selected Tables

**Table 1. Cardiac Conditions Associated With Endocarditis**

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### **Endocarditis prophylaxis recommended**

#### High-risk category

Prosthetic cardiac valves, including bioprosthetic and homograft valves  
Previous bacterial endocarditis  
Complex cyanotic congenital heart disease (eg, single ventricle states, transposition of the great arteries, tetralogy of Fallot)  
Surgically constructed systemic pulmonary shunts or conduits

#### Moderate-risk category

Most other congenital cardiac malformations (other than above and below)  
Acquired valvular dysfunction (eg, rheumatic heart disease)  
Hypertrophic cardiomyopathy  
Mitral valve prolapse with valvular regurgitation and/or thickened leaflets<sup>1</sup>

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### **Endocarditis prophylaxis not recommended**

#### Negligible-risk category (no greater risk than the general population)

Isolated secundum atrial septal defect  
Surgical repair of atrial septal defect, ventricular septal defect, or patent ductus arteriosus (without residua beyond 6 mo)  
Previous coronary artery bypass graft surgery  
Mitral valve prolapse without valvular regurgitation<sup>1</sup>  
Physiologic, functional, or innocent heart murmurs<sup>1</sup>  
Previous Kawasaki disease without valvular dysfunction  
Previous rheumatic fever without valvular dysfunction  
Cardiac pacemakers (intravascular and epicardial) and implanted defibrillators

**Table 2. Dental Procedures and Endocarditis Prophylaxis**

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**Endocarditis prophylaxis recommended\***

Dental extractions  
Periodontal procedures including surgery, scaling and root planing, probing, and recall maintenance  
Dental implant placement and reimplantation of avulsed teeth  
Endodontic (root canal) instrumentation or surgery only beyond the apex  
Subgingival placement of antibiotic fibers or strips  
Initial placement of orthodontic bands but not brackets  
Intraligamentary local anesthetic injections  
Prophylactic cleaning of teeth or implants where bleeding is anticipated

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**Endocarditis prophylaxis not recommended**

Restorative dentistry† (operative and prosthodontic) with or without retraction cord‡  
Local anesthetic injections (nonintraaligamentary)  
Intracanal endodontic treatment; post placement and buildup  
Placement of rubber dams  
Postoperative suture removal  
Placement of removable prosthodontic or orthodontic appliances  
Taking of oral impressions  
Fluoride treatments  
Taking of oral radiographs  
Orthodontic appliance adjustment  
Shedding of primary teeth

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\*Prophylaxis is recommended for patients with high- and moderate-risk cardiac conditions.

†This includes restoration of decayed teeth (filling cavities) and replacement of missing teeth.

‡Clinical judgment may indicate antibiotic use in selected circumstances that may create significant bleeding.

\*Prophylaxis is recommended for high-risk patients; it is optional for medium-risk patients.

†Prophylaxis is optional for high-risk patients.

**Table 4. Prophylactic Regimens for Dental, Oral, Respiratory Tract, or Esophageal Procedures**

<b>Situation</b>	<b>Regimen</b>	
Standard general prophylaxis	Amoxicillin	Adults: 2.0 g; children: 50 mg/kg orally 1 h before procedure
Unable to take oral medications	Ampicillin	Adults: 2.0 g IM or IV; children: 50 mg/kg IM or IV within 30 min before procedure
Allergic to penicillin	Clindamycin <b>or</b>	Adults: 600 mg; children: 20 mg/kg orally 1 h before procedure
	Cephalexin <sup>†</sup> or cefadroxil <sup>†</sup> <b>or</b>	Adults: 2.0 g; children: 50 mg/kg orally 1 h before procedure
	Azithromycin or clarithromycin	Adults: 500 mg; children: 15 mg/kg orally 1 h before procedure
Allergic to penicillin and unable to take oral medications	Clindamycin <b>or</b> Cefazolin <sup>†</sup>	Adults: 600 mg; children: 20 mg/kg IV within 30 min before procedure Adults: 1.0 g; children: 25 mg/kg IM or IV within 30 min before procedure

IM indicates intramuscularly, and IV, intravenously.

\*Total children's dose should not exceed adult dose.

<sup>†</sup>Cephalosporins should not be used in individuals with immediate-type hypersensitivity reaction (urticaria, angioedema, or anaphylaxis) to penicillins.

IM indicates intramuscularly, and IV, intravenously.

\*Total children's dose should not exceed adult dose.

<sup>†</sup>No second dose of vancomycin or gentamicin is recommended.

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