Dental Procedures for Which Endocarditis Prophylaxis Is Reasonable for Patients

All dental procedures that involve manipulation of gingival tissue or the periapical region of teeth or perforation of the oral mucosa*

*The following procedures and events do not need prophylaxis: Routine anesthetic injections through noninfected tissue, taking dental radiographs, placement of removable prostodontic or orthodontic appliances, adjustment of orthodontic appliances, placement of orthodontic brackets, shedding of deciduous teeth, and bleeding from trauma to the lips or oral mucosa.

### Regimens for a Dental Procedure

<table>
<thead>
<tr>
<th>Situation</th>
<th>Agent</th>
<th>Adults</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>Amoxicillin</td>
<td>2 g</td>
<td>50 mg/kg</td>
</tr>
<tr>
<td>Unable to take oral medication</td>
<td>Ampicillin</td>
<td>2 g IM or IV</td>
<td>50 mg/kg IM or IV</td>
</tr>
<tr>
<td>OR</td>
<td>Cefazolin or ceftriaxone</td>
<td>1 g IM or IV</td>
<td>50 mg/kg IM or IV</td>
</tr>
</tbody>
</table>

*Except for the conditions listed above, antibiotic prophylaxis is no longer recommended for any other form of CHD.

†Prophylaxis is reasonable because endothelialization of prosthetic material occurs within six months after the procedure.

### Cardiac Conditions Associated with the Highest Risk of Adverse Outcome from Endocarditis for Which Prophylaxis with Dental Procedures Is Reasonable

1. Prosthetic cardiac valve or prosthetic material used for cardiac valve repair
2. Previous infective endocarditis (IE)
3. Congenital heart disease (CHD)*
   Unrepaired cyanotic CHD, including palliative shunts and conduits
   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†
   Repaired CHD with residual defects at the site or adjacent to the site of a prosthetic patch or prosthetic device (which inhibit endothelialization)
4. Cardiac transplantation recipients who develop cardiac valvulopathy

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### Dental Procedures for Which Endocarditis Prophylaxis Is Reasonable for Patients

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*The following procedures and events do not need prophylaxis: Routine anesthetic injections through noninfected tissue, taking dental radiographs, placement of removable prostodontic or orthodontic appliances, adjustment of orthodontic appliances, placement of orthodontic brackets, shedding of deciduous teeth, and bleeding from trauma to the lips or oral mucosa.
Regimen: Single dose 30 to 60 minutes before procedure

<table>
<thead>
<tr>
<th>Situation</th>
<th>Agent</th>
<th>Adults</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergic to penicillins or ampicillin—oral</td>
<td>Cephalexin*†</td>
<td>2 g</td>
<td>50 mg/kg</td>
</tr>
<tr>
<td><strong>OR</strong></td>
<td>Clindamycin</td>
<td>600 mg</td>
<td>20 mg/kg</td>
</tr>
<tr>
<td>OR</td>
<td>Azithromycin or clarithromycin</td>
<td>500 mg</td>
<td>15 mg/kg</td>
</tr>
<tr>
<td>Allergic to penicillins or ampicillin and unable to take oral medication</td>
<td>Cefazolin or ceftriaxone†</td>
<td>1 g IM or IV</td>
<td>50 mg/kg IM or IV</td>
</tr>
<tr>
<td><strong>OR</strong></td>
<td>Clindamycin</td>
<td>600 mg IM or IV</td>
<td>20 mg/kg IM or IV</td>
</tr>
</tbody>
</table>

*IM = intramuscular; IV = intravenous
†Cephalosporins should not be used in an individual with a history of anaphylaxis, angioedema, or urticaria with penicillins or ampicillin.


In 1997 and 2003, the American Dental Association (ADA) and American Academy of Orthopedic Surgeons (AAOS) published an advisory statement on the dental management of patients with prosthetic joints (see Chapter 2). In February 2009, the AAOS published an “Information Statement” entitled “Antibiotic Prophylaxis for Bacteremia in Patients with Joint Replacements.” This AAOS Information Statement suggests that: “Given the potential adverse outcomes and cost of treating an infected joint replacement, the AAOS recommends that clinicians consider antibiotic prophylaxis for all total joint replacement patients prior to any invasive procedure that may cause bacteremia.” New guidelines from the ADA and AAOS were pending at the time this book went to press.

Table A23-3  Steroid Prophylaxis for Adrenal Insufficiency

- The major consideration for patients taking steroids is suppression of adrenal capacity to respond to stressful situations.
- Increasing the steroid dose for surgical procedures is rarely necessary but the risk from increasing the steroid dose is minimal to nonexistent. It is difficult to predict who might have an adrenal crisis under stress. The risk of this occurring during dental treatment is likely overstated and supplemental steroids are rarely indicated.
- Patients who have had prolonged or significant dental infection will benefit most from supplemental corticosteroids, particularly if surgical extractions are anticipated or general anesthesia is planned.
- Patients on very low doses (e.g., 5 mg prednisolone/day) or for short time periods (e.g., less than 10 days), or high doses (e.g., more than 40 mg prednisolone), or those undergoing short and nonstressful dental procedures likely do not benefit from supplementation. Patients on high doses (more than 40 mg/day) of prednisone would not normally require a supplemental dose, except perhaps for major surgery and/or general anesthesia.
- For patients on larger doses and/or for longer periods, consider either doubling the patient’s daily dose the morning of the procedure up to the physiologic output of adrenal glands (i.e., 20 to 30 micrograms/deciliter/day), or give 100 to 200 mg of intramuscular or intravenous hydrocortisone 30 minutes prior to the planned procedure. Consider supplementation 12 hours after the procedure as well.
- Some clinicians begin steroid supplementation the day before the procedure and continue it through the day following the procedure.
- Patients off long-term, high-dose steroids for over six months can have the drug instituted the day prior to treatment, at the discretion of the physician.
- Consult with the patient’s physician to determine current adrenal status, the reason for and duration of steroid therapy, and regarding adjustment of steroid dose prior to stressful dental treatment if the patient’s adrenal glands function poorly or not at all.
- The normal daily physiologic output of cortisol is 24 to 30 mg (equivalent to 5 to 7.5 mg prednisolone).
- The general goal for supplementation is to have 50 to 75 mg hydrocortisone available systemically for moderately stressful (surgical or psychological) procedures and 100 to 150 mg hydrocortisone/day for day of surgery and two to three days postoperatively for highly stressful procedures.
- Keep in mind that a major precipitating factor in an adrenal crisis is hypovolemia. Therefore, ensure that the patient is well hydrated prior to the procedure.