

Antimicrobial Prophylaxis Prior to Dental Procedures in Adults

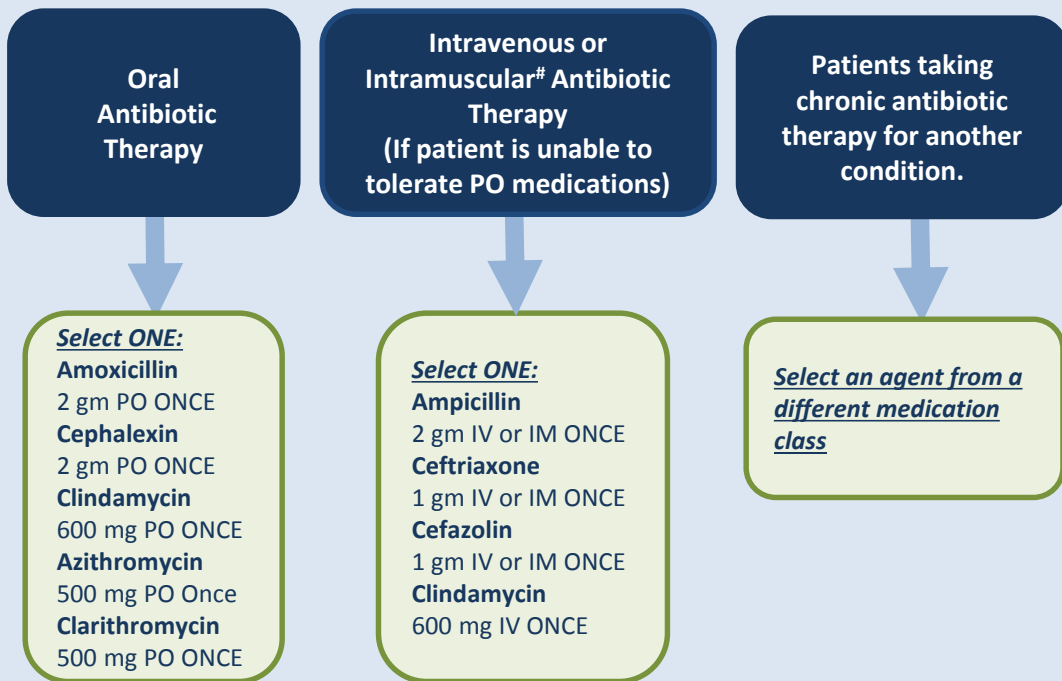
Prophylaxis for Infective Endocarditis

Conditions where antibiotic prophylaxis prior to dental procedure is reasonable:

1. Prosthetic cardiac valve or prosthetic material used for cardiac valve repair
2. Previous Infective Endocarditis
3. Congenital Heart disease (CHD)*
 1. Unrepaired cyanotic CHD, including palliative shunts and conduits
 2. Repaired CHD with prosthetic material or device during the first 6 months after procedure
 3. Repaired CHD with residual defects at the site or adjacent to site of prosthetic patch or device
4. Cardiac transplant recipients who develop cardiac valvulopathy

Prophylaxis is no longer recommended in patients who solely have an increased lifetime risk of IE

All antibiotic prophylaxis for dental procedures should be given as a single dose 30-60 minutes prior to procedure.



H= hours; IV= intravenous; IM = intramuscular; PO= oral; Q= every

Note: Refer to Table of Contents for section on Antimicrobial Dosing for Adult Patients Based on Renal Function for dosing in patients with renal impairment.

*CHD other than scenarios listed does not require antibiotic prophylaxis

Avoid use of IM formulations in adults who receive anticoagulants such as warfarin, dabigatran, or rivaroxaban

References:

1. *Prevention of Infective Endocarditis: Guidelines From the American Heart Association* *Circulation*. 2007;116:1736–1754
2. Kao, F.-C., Hsu, Y.-C., Chen, W.-H., Lin, J.-N., Lo, Y.-Y. and Tu, Y.-K. (2016) 'Prosthetic Joint Infection Following Invasive Dental Procedures and Antibiotic Prophylaxis in Patients With Hip or Knee Arthroplasty', *Infection Control & Hospital Epidemiology*, pp. 1–8. doi: 10.1017/ice.2016.248.
3. Guntheroth WG. How important are dental procedures as a cause of infective endocarditis? *Am J Cardiol*. 1984;54:797–801.

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Congenital heart defects:

- Cyanotic heart disease: group-type of CHD where deoxygenated blood bypasses the lungs and enters systemic circulation. **Ex: Tetralogy of Fallot, transposition of the great arteries, tricuspid atresia, total anomalous pulmonary venous connection.**
 - A palliative shunt may be placed if the defect cannot be completely repaired through surgery
- Repaired CHD within 6 months of surgery
 - **Endothelialization of prosthetic material occurs within 6 months of procedure**, thus prophylaxis after this time is not needed.
- Residual defects after surgical correction can inhibit endothelialization of the prosthetic material

Infective Endocarditis Facts

1. Bacteremia from daily activities (ex: eating, tooth brushing) is more likely to cause IE than a dental procedure.
2. Even if antibiotic prophylaxis was 100% effective, only a small number of cases of IE would be prevented.
3. Viridans group streptococci is part of the normal flora of the skin, mouth, respiratory and GI tract. They cause upwards of 50% of native valve infective endocarditis.
4. Bacteremia may result from any dental procedure that involves manipulation of the gingival or periapical region of teeth or perforation of the oral mucosa.

Prophylaxis to prevent prosthetic joint infections in patients with hip or knee arthroplasty is not recommended

References:

1. *Circulation*. 2007;116:1736–1754
2. Kao, F.-C., Hsu, Y.-C., Chen, W.-H., Lin, J.-N., Lo, Y.-Y. and Tu, Y.-K. (2016) 'Prosthetic Joint Infection Following Invasive Dental Procedures and Antibiotic Prophylaxis in Patients With Hip or Knee Arthroplasty', *Infection Control & Hospital Epidemiology*, , pp. 1–8. doi: 10.1017/ice.2016.248.