### ANTIBIOTIC PROPHYLAXIS FOR THE PREVENTION OF INFECTIVE ENDOCARDITIS

Risk factors for developing IE include:

* Unrepaired cyanotic congenital heart defect (birth defects with oxygen levels lower than normal)
* repaired congenital heart defect, with residual shunts or valvular regurgitation at the site adjacent to the site of a prosthetic patch or prosthetic device.
* Previous [heart valve surgery](https://www.heart.org/en/health-topics/heart-valve-problems-and-disease/understanding-your-heart-valve-treatment-options) including replacement and including transcatheter-implanted prostheses and homografts.
* Previous history of IE
* Hypertrophic cardiomyopathy
* Heart transplant
* Intravenous drug use

**AHA Guidelines**

People with the highest risk for poor outcomes from IE may be prescribed antibiotics (IE prophylaxis) prior to certain dental procedures including

* procedures that involve manipulation of gingival (gum) tissue, or
* the periapical region (area around the roots) of teeth, or
* perforation of the oral mucosa.

Except for the conditions listed above, antibiotic prophylaxis before dental procedures is not recommended for any other types of congenital heart disease.

**Nice guidelines**

Antibiotic prophylaxis against infective endocarditis is not recommended routinely:

* for people undergoing dental procedures
* for people undergoing non-dental procedures at the following sites:
  + upper and lower gastrointestinal tract
  + genitourinary tract; this includes urological, gynaecological and obstetric procedures, and childbirth
  + upper and lower respiratory tract; this includes ear, nose and throat procedures and bronchoscopy. [2015]

The evidence reviews for this guideline covered only procedures at the sites listed in this recommendation. Procedures at other sites are outside the scope of the guideline



**Antibiotic Regimens for a Dental Procedure Regimen: Single Dose 30-60 Minutes Before Procedure**

| **Situation** | **Agent** | **Adult** | **Children** |
| --- | --- | --- | --- |
|
| Oral | Amoxicillin | 2 g | 50 mg/kg |
| Unable to take oral medication | Ampicillin OR | 2 g IM or IV | 50 mg/kg IM or IV |
| Cefazolin or Ceftriaxone | 1 g IM or IV | 50 mg/kg IM or IV |
| Allergic to Penicillin or Ampicillin - Oral | Cephalexin\*┿ OR | 2 g | 50 mg/kg |
| Azithromycin or Clarithromycin OR | 100 mg | 15 mg/kg |
| Doxycycline | 100 mg | <45 kg, 2.2 mg/kg >45 kg, 100mg |
| Allergic to Pencillin or Ampicillin and unable to take oral medication | Cefazolin or Ceftriaxone┿ | 1 g IM or IV | 50 mg/kg IM or IV |

Clindamycin is no longer recommended for antibiotic prophylaxis for a delta procedure.

IM indicates intramuscular and IV indicates intravenous.

\*Or other first- or second-generation oral Cephalosporin in equivalent adult or pediatric dosing.

┿Cephalosporins should not be used in an individual with a history of anaphylaxis, angioedema, or urticarial with a history of anaphylaxis, angiodema, or urticarial with penicillin or amppcillin.

*References*

1. Prophylaxis against infective endocarditis: antimicrobial prophylaxis against infective endocarditis in adults and children undergoing interventional procedures. London: National Institute for Health and Care Excellence (NICE); 2016 Jul. (NICE Clinical Guidelines, No. 64.)
2. Wilson WR;Gewitz M;Lockhart PB;Bolger AF;DeSimone DC;Kazi DS;Couper DJ;Beaton A;Kilmartin C;Miro JM;Sable C;Jackson MA;Baddour LM; ; (n.d.). Prevention of viridans group streptococcal infective endocarditis: A scientific statement from the American Heart Association. Circulation. https://pubmed.ncbi.nlm.nih.gov/33853363/