

INFECTIVE ENDOCARDITIS: LESIONS FOR WHICH PROPHYLAXIS IS REQUIRED

PRACTICE GUIDELINE[®]

KEY POINTS

- This guideline applies to children with congenital or acquired heart disease undergoing certain dental procedures
- Prophylaxis guidelines have changed.
- **Antibiotic prophylaxis should be restricted to the following at-risk conditions:**
 1. Prosthetic cardiac valves
 2. Previous episode of infective endocarditis
 3. Cardiac transplantation recipients who develop cardiac valvulopathy
 4. Rheumatic Heart Disease with valvular pathology (modification in Australia & New Zealand)
 5. Selected congenital heart disease (CHD)
 - i. Unrepaired cyanotic CHD, including palliative shunts and conduits
 - ii. Completely repaired congenital heart defect with prosthetic material or device, whether placed by surgery or by catheter intervention, during the first 6 months after the procedure
 - iii. Repaired CHD with residual defects at the site or adjacent to the site of a prosthetic patch or prosthetic device (which inhibit endothelialisation)

The dental procedures for which prophylaxis is recommended, if required, include:

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

6. **The following procedures and events do not need prophylaxis: routine anesthetic injections through noninfected tissue, taking dental radiographs, placement of removable prosthodontic or orthodontic appliances, adjustment of orthodontic*

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

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Page 1 of 4

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This Guideline may be varied, withdrawn or replaced at any time.

appliances, placement of orthodontic brackets, shedding of deciduous teeth, and bleeding from trauma to the lips or oral mucosa.

- **For advice on whether a patient requires prophylaxis contact the Cardiology service of the child's cardiologist.**

A summary of recommendations for prophylaxis is available in **Tables 4 and 5** in "[Prevention of Infective Endocarditis: Guidelines From the American Heart Association: A Guideline From the American Heart Association Rheumatic Fever, Endocarditis, and Kawasaki Disease Committee, Council on Cardiovascular Disease in the Young, and the Council on Clinical Cardiology, Council on Cardiovascular Surgery and Anesthesia, and the Quality of Care and Outcomes Research Interdisciplinary Working Group](#)," however the related text in this article should also be read in conjunction with the 'Correction Guidelines' (see reference list).

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Infective Endocarditis – when Prophylaxis is required

Summary of the revised recommendations: lesions for which prophylaxis is required.

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Structural heart disease with associated flow turbulence increases the risk of infective endocarditis. For several decades antibiotic prophylaxis has been recommended prior to selected dental and surgical procedures on the premise that a high dose of antibiotics delivered at the time of a significant bacteremia would reduce the risk of endocarditis occurring. Several regimes have been recommended over time, with recent protocols involving single doses of antibiotics just prior to procedures. Most structural abnormalities, including minor valve lesions, septal defects, and persistent ductus arteriosus were included in the risk categories for which these regimes were recommended.

In 2006 & 2007 major revisions of these recommendation were made by a number of peak bodies including the American Heart Association and American College of Cardiology (supported by the American Academy of Paediatrics), the British Working Group for Antimicrobial Chemotherapy, and recently supported (with some minor modifications) by the Cardiac Society of Australia and New Zealand & its Paediatric Cardiac Council.

In effect these recommendations eliminated a wide range of structural cardiac lesions from the requirement for prophylaxis. The basis for this is the absence of evidence supporting the efficacy of these regimes.

The lesions for which endocarditis prophylaxis with at-risk dental procedures should now be given are shown in the [table above](#), labelled "Key Points".

Based on the changes described above, the number of patients requiring prophylaxis has been significantly reduced. In the case of post-operative congenital cardiac repairs, however, consideration and consultation is still required to determine which patients continue to require prophylaxis. Considering that these changes reflect a major change from conventional practice over an extended period of time, it is likely that there will be some delay in the dissemination of knowledge of these changes. Further revisions the guidelines may occur in the future.

The changes do not imply that patients with structural heart abnormalities are not at risk of endocarditis, only that the prophylaxis regimes are no longer judged to be necessary in selected lesions.

It is important that cases of suspected post-procedural endocarditis (within 3 months) are well documented, and reported to the patient's cardiologist, in order to monitor any adverse consequences of these changes.

References

- 1. Outcomes Research Interdisciplinary Working Group Council on Cardiovascular Surgery and Anesthesia, and the Quality of Care and Cardiovascular Disease in the Young, and the Council on Clinical Cardiology, Fever, Endocarditis, and Kawasaki Disease Committee, Council on Association. A Guideline From the American Heart Association Rheumatic Prevention of Infective Endocarditis. Guidelines From the American Heart Association.**
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