Surgical antibiotic prophylaxis: cardiac surgery

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis. **See *Therapeutic Guidelines* for detailed and up-to-date information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.**

Infective endocarditis prophylaxis may be required for patients with specific cardiac conditions who are undergoing a procedure for which surgical antibiotic prophylaxis is not required—see *Therapeutic Guidelines* for indications and regimens.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for the significant majority of procedures. In specific circumstances, a repeat intraoperative dose may also be necessary—see *Therapeutic Guidelines* for discussion.

For a small minority of procedures (see Notes column), there are inadequate data to show that a single dose of surgical antibiotic prophylaxis is as effective as 24 hours of prophylaxis. For these procedures, postoperative doses can be considered but prophylaxis should not continue beyond 24 hours.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is surgical antibiotic prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
all cardiac procedures other than TAVI	YES	**cefazolin** 2 g (child: 30 mg/kg up to 2 g) intravenously, within the 60 minutes before surgical incision PLUS if patient known to be or at increased risk of being colonised or infected with MRSA **vancomycin** (adult and child) 15 mg/kg intravenously, started within the 120 minutes before surgical incision (recommended infusion rate 10 mg/minute)	Cardiac procedures include valve replacement, coronary artery bypass surgery, cardiac transplant, and insertion of a ventricular assist device. Patients undergoing a prosthetic cardiac valve procedure that is a reoperation (return to theatre or early revision) are at increased risk of being colonised or infected with MRSA. For other risk factors for MRSA infection, see *Therapeutic Guidelines*. Repeat intraoperative doses are often necessary because of the long duration of cardiac procedures—see *Therapeutic Guidelines* for discussion. Postoperative prophylactic doses can be considered, but prophylaxis should not continue beyond 24 hours—see *Therapeutic Guidelines* for discussion.
TAVI	YES	Seek expert advice	The optimal prophylactic regimen for TAVI is not known. The prophylactic antibiotic regimens recommended for other cardiac procedures may need to be modified for TAVI according to the organisms causing infection within the institution and their susceptibility patterns.

MRSA = methicillin-resistant *Staphylococcus aureus*; TAVI = transcatheter aortic valve implantation

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