



## Surgical Site Infection

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SSIs are the 2<sup>nd</sup> leading cause of nosocomial infections. SSIs lead to prolonged length of stay, increased readmission rate, higher morbidity and mortality, increased healthcare costs, and an increased necessity to revascularize a second time. Among vascular surgery procedures, the lower extremity bypass has the highest incidence of surgical site infections, with the rate varying from 5% to 32%.

### Clear benefit:

Administer prophylactic antibiotics within one hour of surgery (vancomycin and fluoroquinolones should be administered 2 hours prior to surgery). Adjust dose of prophylactic antibiotics for morbid obesity.

Re-dose prophylactic antibiotics, if indicated, so that bactericidal concentration is maintained throughout the operation.

- Cefazolin is a guideline-recommended antibiotic for all vascular surgery procedures
  - Redose every 4 hours
- Give clindamycin or vancomycin for contraindicated patients
  - Redose clindamycin every 6 hours
  - Discontinue the prophylactic antimicrobial agent within 24 hours after surgery
  - Discontinue within 48 hours for cardiothoracic procedures

Preoperatively, use solutions that contain Chlorhexidine plus Alcohol as skin antiseptic preparations and allow appropriate drying time per product guidelines.

Monitor and maintain glucose levels (<200 mg/dL) in cardiothoracic and vascular patients, including non-diabetic patients.

Instruct the patient to perform a full-body wash with an antiseptic agent on at least the night before surgery.



Best Practice Protocol for the Blue Cross Blue Shield of Michigan Cardiovascular Consortium

**Might be beneficial:**

Use of negative pressure wound vacuum therapy in wound closure.

Consider patient-related factors, pre-operatively.

Advanced age	Alcoholism
Obesity	Transfusion
Hyperglycemia/Diabetes	Hypothermia
Dyspnea	Tobacco Use
Hypoxia	Steroid use
ASA Class >2	Recent radiotherapy
Recent radiotherapy	Trauma/shock
Pre-operative albumin < 3.5 mg/dL	Total bilirubin > 1.0 mg/dL

Administer dual antibiotics pre-operatively for patients who test positive for MRSA. For example, cefazolin plus daptomycin or cefazolin plus vancomycin.

For wound vac closure, consider closing with good surgical technique in several layers, leaving the last 1-1.5 cm exposed with a wound vac assist device.

**Not beneficial:**

Delay surgery to provide parenteral nutrition as a means to prevent SSI

Avoid transfusion, pre-operatively, of medically necessary blood products to prevent SSIs

Continue prophylactic antibiotics because drains are in place

Administering prophylactic antibiotics for more than 24 hours post-operatively



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BMC2 Best Practice Protocols are based on consortium-wide consensus at the time of publication. Protocols will be updated regularly, and should not be considered formal guidance, and do not replace the professional opinion of the treating physician.

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