

BC Provincial Antimicrobial Clinical Expert Committee (PACE)

Surgical Antibiotic Prophylaxis – Adults (Orthopedic & Spinal)

The PACE Committee has undertaken a series of reviews of surgical antibiotic prophylaxis (for adults) in all clinical settings. This series, which begins with the General Principles section, will also be accompanied by an FAQ document, to assist and provide rationale for practitioners on the latest evidence-based guidance.

ORTHOPEDIC & SPINAL	
1. <i>Staphylococcus aureus</i> nasal decontamination (e.g. mupirocin 2% Ointment BID x 5 days pre-op) ± pre-op chlorhexidine gluconate body wash recommended. 2. Insufficient evidence to routinely recommend use of antibiotic impregnated bone cement in <u>primary</u> arthroplasties. 3. Insufficient evidence to routinely recommend intrawound application of sterile vancomycin powder. Note: Vancomycin alone should be restricted to true cefazolin allergy as it is associated with higher frequency of postoperative infections (including Gram positive infections).	
ORTHOPEDIC	
PROCEDURE	RECOMMENDED PROPHYLAXIS
Arthroscopy: • Diagnostic • Operative • Removal of orthopedic implants used for internal fixation: foot/ankle/lower leg fractures	Prophylaxis not routinely indicated
Joint replacement Joint revision surgery • hip • knee • ankle • elbow • shoulder Note: withholding prophylactic antibiotic prior to revision arthroplasty is not recommended unless there is very high suspicion of infection and pre-op cultures negative/not obtained.	cefazolin 2 g IV x 1 dose <i>If MRSA colonization / past infection, ADD:</i> vancomycin 15 mg/kg IV x 1 dose
Rotator cuff repair • surgical / arthroscopic	cefazolin 2 g IV x 1 dose <i>If MRSA colonization / past infection, ADD:</i> vancomycin 15 mg/kg IV x 1 dose

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ORTHOPEDIC	
PROCEDURE	RECOMMENDED PROPHYLAXIS
Fractures with internal fixation: nails / screws / plates / wires Fractures inflicted by a gunshot wound(s) Fractures, facial	cefazolin 2 g IV x 1 dose <i>If MRSA colonization / past infection, ADD:</i> vancomycin 15 mg/kg IV x 1 dose
Fractures, complex (open): - Gustilo Type I –skin wound ≤ 1 cm, clean - Gustilo Type II –wound 1-10 cm, without extensive soft tissue damage, flaps or avulsions	cefazolin 2 g IV x 1 dose <i>If MRSA colonization / past infection, ADD:</i> vancomycin 15 mg/kg IV x 1 dose
Gustilo Type III - wound >10 cm with extensive soft tissue injury or amputation	[cefazolin 2 g IV x 1 dose + gentamicin or tobramycin 4.5 mg/kg IV x 1 dose] OR ceftriaxone 1 g IV x 1 dose OR piperacillin-tazobactam 3.375 g IV x 1 dose <i>If MRSA colonization / past infection, ADD:</i> vancomycin 15 mg/kg IV x 1 dose Note: <i>If significant contamination with soil, farm or fecal matter, salt or freshwater, institute treatment instead of prophylaxis</i>
Amputation of limb	cefazolin 2 g IV x 1 dose <i>if ischemic limb, ADD:</i> metronidazole 500 mg PO/IV x 1 dose
Fasciotomy	cefazolin 2 g IV x 1 dose
SPINAL	
Laminectomy Microdiscectomy Percutaneous vertebral body augmentation	cefazolin 2 g IV x 1 dose
Spinal fusion Insertion of foreign material	cefazolin 2 g IV x 1 dose <i>If MRSA colonization / past infection, ADD:</i> vancomycin 15 mg/kg IV x 1 dose

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