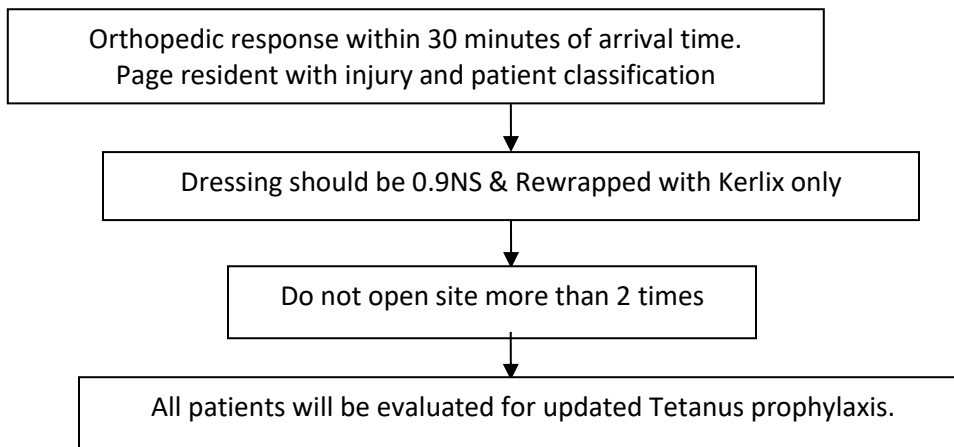




INITIAL EVALUATION OF THE ADULT TRAUMA PATIENT WITH OPEN EXTREMITY FRACTURES

ED Guideline 02-12-099



Open fracture type	Characteristics of Gustilo Grade Open Fracture	Infection Rate	Amputation Rate
Grade I	Clean wound smaller than 1 cm in diameter, simple fracture pattern, no skin crushing.	0-2%	0%
Grade II	A laceration larger than 1 cm but without significant soft tissue crushing, including no flaps, degloving, or contusion. Fracture pattern may be more complex.	2-7%	0%
Grade III	An open segmental fracture or a single fracture with extensive soft tissue injury. Also included are injuries older than 8 hours. Type III injuries are subdivided into three types:		
Grade III A	Adequate soft tissue coverage of the fracture despite high energy trauma or extensive laceration or skin flaps.	5-10%	2.5%
Grade III B	Inadequate soft tissue coverage with periosteal stripping. Soft tissue reconstruction is necessary.	10-50%	5.6%
Grade III C	Any open fracture that is associated with an arterial injury that requires repair.	25-50%	25%
Grade of Open Fx	Recommended Antibiotic	Alternate if PCN Allergy	
I or II	Cefazolin * 2 g IV q8h** for 24 hrs [#]	Clindamycin 900 mg IV q8h for 24 hrs [#]	
III	Ceftriaxone * 2 g IV q24h for 48 hrs [#]	Clindamycin 900 mg IV q8h + Aztreonam 2 g IV q8h** for 48 hrs [#]	

* For extensive soil exposure (e.g., farming accident), add **metronidazole** 500 mg PO/IV q8h

**[Dose adjust based on renal function](#)

[#]Duration may need to be extended if surgery is delayed due to patient instability

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Author: Chris Wagner

Revised: Tejal N. Gandhi & David A. Machado-Aranda

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The recommendations in this guide are meant to serve as treatment guidelines for use at Michigan Medicine facilities. If you are an individual experiencing a medical emergency, call 911 immediately. These guidelines should not replace a provider's professional medical advice based on clinical judgment, or be used in lieu of an Infectious Diseases consultation when necessary. As a result of ongoing research, practice guidelines may from time to time change. The authors of these guidelines have made all attempts to ensure the accuracy based on current information, however, due to ongoing research, users of these guidelines are strongly encouraged to confirm the information contained within them through an independent source.

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