

## IRRIGATION OF WAR WOUNDS:

### Wound Debridement, Washout and Irrigation

Original Release/Approval	2 Oct 2006	Note: This CPG requires an annual review.		
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Supersedes:	Irrigation of War Wounds, updated Apr 2008			

**1. Goal:** To review indications for and the procedures associated with battle related wound debridement, washout and irrigation.

**2. Background.** Wound debridement, washout and irrigation are the surgical procedures most performed in the combat theater. Given the power of today's munitions, prompt removal of devitalized tissue, debris, blood and bacteria is imperative not only to prevent local wound complications, but also may decrease the incidence of systemic effects associated with such wounds. **While the degree of initial debridement is left to the operating surgeon, care must be given to ensuring all devitalized tissue is removed while at the same time attempting to preserve as much soft tissue as possible for reconstructive surgery at higher echelons of care. This is best accomplished via serial debridement and washouts.** Though high pressure pulsatile lavage devices (HPPL) are used extensively in civilian institutions, they should not be used in the combat theater as they may contribute to increased tissue damage and result in a rebound increase in bacterial load, as opposed to that seen with the simple bulb syringe method of washout and irrigation.

### 3. Evaluation and Treatment.

- a. **Devices:** **Simple bulb irrigation or gravity irrigation is the preferred method for wound washout and irrigation.** In addition, the bulb and syringe method is more widely available and is significantly less expensive. Large bore gravity-run tubing is the suggested choice for a quick method of irrigation, since it accepts two bags at once, yet still gentle in nature. Example of the large bore tubing is Baxter's Y-Type TUR Irrigation Set, used for urologic cystoscopy, 2C4005, Deerfield, IL: NSN 3218654401; UI 20/case.
- b. **Fluids:** Current research demonstrates that normal saline, sterile water and potable tap water have similar usefulness, efficacy and safety. Sterile isotonic solutions are readily available and remain the fluid of choice for washout and irrigation. If unavailable, sterile water or potable tap water can be used.
- c. **Volume:** Bacterial loads drop logarithmically with increasing volumes of 1, 3, 6, and 9 liters of irrigation. The current recommendations are as follows: 1-3 liters for small volume wounds, 4-8 liters for moderate wounds, and 9 or more liters for large wounds or wounds with evidence of heavy contamination.
- d. **Frequency:** **Depending on the nature of the wound and the degree of contamination, all battle-related wounds will be washed out at least once every 48 hours.** Obviously, those wounds with more significant contamination will require more frequent washouts and consideration should be given to performing one final washout prior to aeromedical evacuation.

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- e. Closure: **Though no hard and fast rules exist for the closure of battle injuries, experience over the last seven years indicates that if the wound was caused by some form of munitions or battle-related trauma, it should be left open and allowed to heal by secondary intention or delayed primary closure.**

**4. Responsibilities:** It is the trauma team leader's responsibility to ensure compliance with CPG adherence.

**5. References:**

<sup>1</sup> *Emergency War Surgery Handbook*

Approved by CENTCOM JTTS Director, JTS Director  
and Deputy Director and CENTCOM SG

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