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**Evidence Updated: No new evidence**  
**Bottom Line: No change**  
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## **Lacerations: Sterile Gloves & Water?**

**Clinical Question: In the management of simple lacerations, are sterile gloves and sterile saline required to reduce infection?**

**Bottom-line: The present evidence indicates that simple lacerations can be cleaned with tap water and repaired with clean non-sterile gloves without an increased risk of infection.**

### **Evidence:**

#### Gloves:

- Randomized-controlled trial (RCT)<sup>1</sup> of 816 immunocompetent patients (age  $\geq 1$ ) in Canadian emergency departments compared sterile vs. non-sterile gloves (both latex-free) in suture repair of lacerations.
  - Infection rates by day 23: Sterile gloves 6% vs. non-sterile 4.3% (not statistically different).

#### Irrigation:

- One meta-analysis<sup>2</sup> of three RCTs (1328 patients) comparing tap water to saline for irrigation of lacerations.
  - Infection rates: Tap water 4.4% vs. saline 6.7% (not statistically different,  $p=0.16$ ).
    - Though there is a suggestion that saline increases the risk of infection, this is mainly driven by a small study of non-sterile saline and one study of questionable randomization.
    - If we focus on the best study—a high-quality RCT of 713 patients comparing tap water and sterile saline with no difference in infections—it appears that sterile saline offers no advantage over tap water.<sup>3</sup>

### **Context:**

- The study of non-sterile gloves is the only RCT that we have, but it is of high quality and of reasonable size.

- Two older studies (with 50 and 408 patients)<sup>4,5</sup> with questionable randomization surprisingly compared no gloves at all to sterile gloves, and infections did not differ:
  - These two studies have significant limitations, and suturing without any gloves is clearly not appropriate for a host of reasons including blood-borne infectious diseases.
  - However, these do lend support to the idea that sterile gloves likely offer little advantage in the repair of simple lacerations.

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**References:**

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