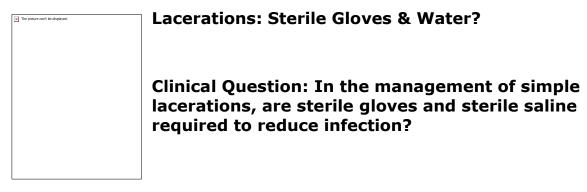
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Reviewed: July 13, 2016 Evidence Updated: No new evidence Bottom Line: No change First Published: June 1, 2009



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)¹ of 816 immunocompetent patients (age ≥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-analysis² of three RCTs (1328 patients) comparing tap water to saline for irrigation of lacerations.
 - o 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.³

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)^{4,5} 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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