

Evidence Update

Trauma Series

How effective is tap water for wound cleansing?

No harms have been demonstrated with using tap water instead of sterile water or saline, but data are limited.

Inclusion criteria

Studies:

Randomized and quasi-randomized trials.

Participants:

People of all ages with a wound of any cause, in any health facility. Solutions for dental procedures or patients with burns were excluded.

Intervention:

Intervention: wound cleansing with tap water, cool boiled water or distilled water.

Control: no cleansing or cleansing with alternate solution.

Outcomes:

Primary: wound infection.

Secondary: proportion of wounds that healed; rate of wound healing; costs; pain and discomfort; patient and staff satisfaction.

Results

- 9 trials including 2640 participants met the inclusion criteria. Allocation concealment was adequate in 1 trial.
- In one quasi-randomised trial in adults (n=627), cleansing acute wounds with tap water reduced the risk of infection compared with saline (relative risk 0.55, 95% confidence interval 0.31 to 0.97), but two trials in children (n=535) did not demonstrate a difference (relative risk 1.07, 95% confidence interval 0.43 to 2.64).
- Other trials compared tap water with normal saline, distilled water, and no cleansing but were insufficiently powered to reach a conclusion.

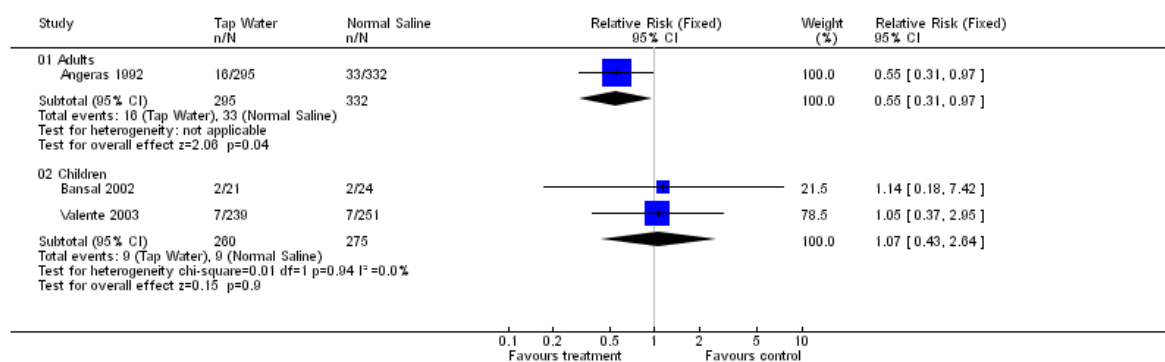


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Adapted from Fernandez R, Griffiths R, Ussia C. Water for wound cleansing. *Cochrane Database of Systematic Reviews* 2002, Issue 4. Art. No.: CD003861. DOI: 10.1002/14651858.CD003861. *Evidence Update* published in November 2006.

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Tap water versus saline: infection in acute wounds



Authors' conclusions

Implications for practice:

There is insufficient evidence to support or refute the routine use of tap water for wound cleansing in adults, and the use of tap water to clean wounds in children is not warranted.

Implications for research:

Properly designed multi-centre trials are needed to evaluate the clinical benefits and cost effectiveness of different solutions for wound cleansing in different groups of patients.