

Bleach and Vinegar Baths

Why use Bleach or Vinegar?

- Colonization with bacteria can delay wound healing even if an infection is not present
 - Bacterial burden in the wound
 - Presence of 4 or more bacterial groups
 - Trengrove et al. J Wound Care 1996;5(6):277-280
- Infection is defined as Microbial load >10⁵ CFUs per gram of tissue
 - Bowler et al. Clin Microbiol Rev 2001;14(2):244-269
 - Gardner et al. Wound Repair Regen 2006;14(5):548-557
 - Can be Localized (Impetigo, Cellulitis) or Systemic (Sepsis)

Most common organisms found in EB: Staphylococcus aureus:

- 23/30 pts had MSSA
 - 2/30 pts had MRSA
 - Streptococcus species
 - Diptheroids
 - Pseudomonas aeruginosa
 - Candida albicans
- Ninety three (48.4%) wound cultures grew more than one type of bacteria
 - Twenty six (13.5%) cultures grew 3 different bacteria
 - 14 (7.3%) cultures grew 4 or more bacteria

Bleach or vinegar may be added to bathwater in order to lower the amount of bacteria on the skin of an EB patient. They may be alternated, but should never be used together in the same bathwater.

Bleach (Sodium hypochlorite) must be diluted:

- Dilute ½ cup bleach in full bathtub of water
- ¼ cup bleach in ½ bathtub of water
- Mix 1-2 teaspoons bleach in 1 gallon of water for compresses
- General recommendations (no established clinical guidelines)
 - Two - four times a week 5-15 minutes
 - Rinse with water after dilute bleach-otherwise itching can worsen
- **Warnings:**
 - **Generally not recommended under age 1 year**
 - **DO NOT SWALLOW, DO NOT SPLASH IN EYES, DO NOT DRINK**
 - **Keep out of reach of children**
 - **Keep in labeled child safety proof bottle**
 - **Dilute prior to contact with skin**
 - **Do not store in beverage containers**
 - **Do not mix with acid or ammonia**
 - **Know your poison control number**

White Vinegar (Acetic acid)

- Comes in both 3% and 5% solutions
- Needs to be diluted further
 - 5% acetic acid: 1 part vinegar to 20 parts bathwater
 - 3% acetic acid: 1 part vinegar to 12 parts bathwater
- Compresses
 - Soak a non-stick gauze in diluted vinegar preparation
 - Apply to skin as a compress or soak 1 to 3 times a day
 - Rinse with water after applying the dilute vinegar preparation
- Useful against gram negative bacteria such as pseudomonas
- Useful against yeast
- Excellent bactericidal activity against: *Pseudomonas aeruginosa* *Pseudomonas vulgaris* *Acinetobacter baumannii*

Excerpt from Wound Antisepsis and Your Grocery List By Kimberly Morel, M.D. (Asst Professor of Clinical Dermatology & Clinical Pediatrics) . This information was presented at the 2010 Patient Care Conference.