

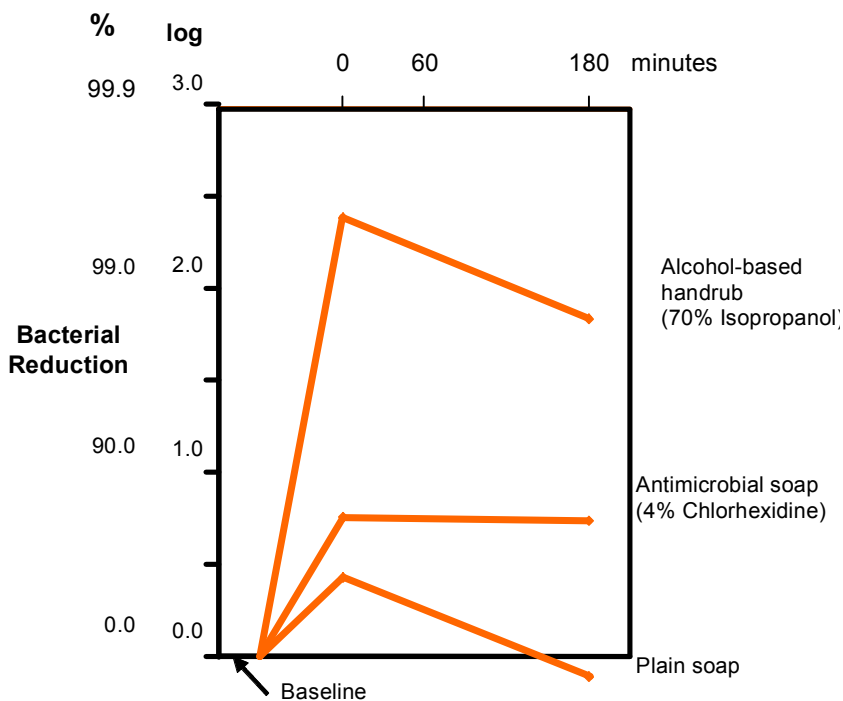
# Alcohol Hand Rub & Hand Hygiene

## Efficacy of Hand Hygiene Preparations in Killing Bacteria

The table below demonstrates the efficacy of hand hygiene preparations. Evidence shows that alcohol-based handrub is better than handwashing with soap at killing bacteria. Over time alcohol hand rub shows to have better disinfection than antimicrobial soap and plain soap.

**Alcohol-based handrubs provide several advantages compared with handwashing with soap and water.**

### Time After Disinfection

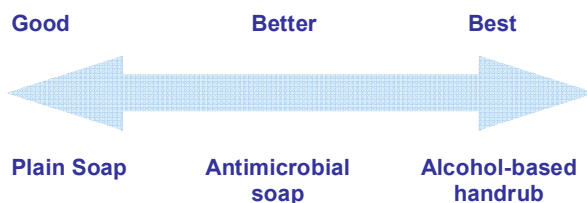


### What are the benefits to using Alcohol Hand Rub?

- Requires less time
- Acts faster
- More effective for standard handwashing than soap
- More accessible than sinks
- Most efficacious agents for reducing the number of bacteria on the hands of healthcare workers
- Can improve the skins condition
- Allergic dermatitis found to be less common side effect of alcohol based handrubs in comparison to soap and water techniques.

Source: CDC website

[http://www.cdc.gov/handhygiene/download/hand\\_hygiene\\_core.ppt#338,12,Slide 12](http://www.cdc.gov/handhygiene/download/hand_hygiene_core.ppt#338,12,Slide 12) (Adapted from *Hosp Epidemiol Infect Control*, 2<sup>nd</sup> Edition, 1999.)



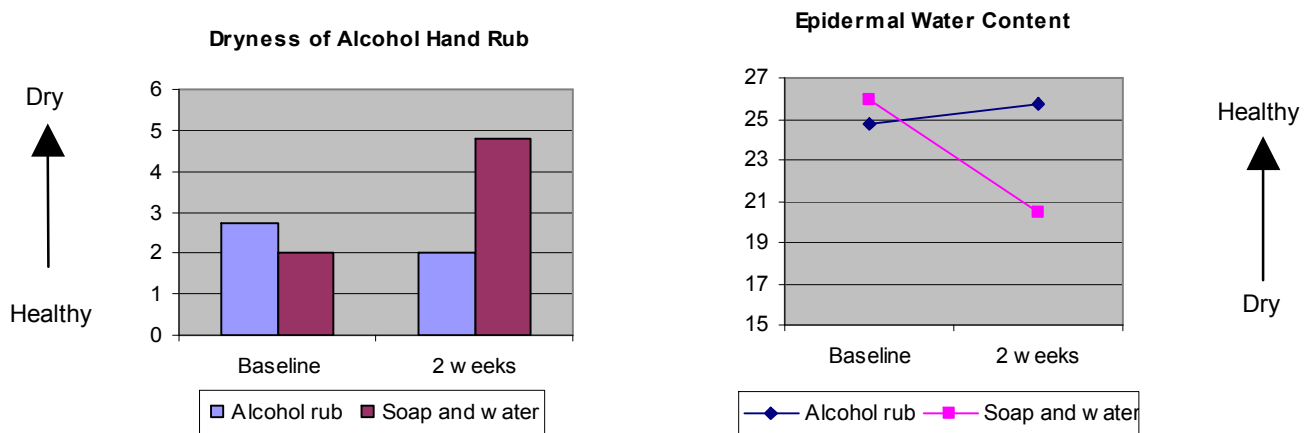
Plain soap is good at reducing bacterial counts but antimicrobial soap is better, and alcohol based handrubs are best.



## Dispel the myth: Effect of Alcohol-Based Handrubs on Skin Condition

Self-reported studies indicate participants using soap and water reported a significant increase in dryness, cracking, and irritation after 2 weeks, whereas those that used the alcohol-based handrub reported significant improvement in skin condition and dryness.

Epidermal water content shows the same results as the self reported scores, after 2 weeks of use, the skin water content decreased for those that used soap and water (resulting in dryer skin) as compared with those who used an alcohol-based handrub.



Source: Boyce J, *Infect Control Hosp Epidemiol* 2000;21(7):438-441.

Evidence shows that alcohol-based handrubs are less damaging to the skin than soap and water.

### The Truth about alcohol based hand rubs

- Frequent use of alcohol-based formulations for hand antisepsis can cause dry skin unless emollients and/or skin moisturizers are added to the formula.
- The drying effect of alcohol can be reduced or eliminated by adding glycerin and/or other emollients to the formula.
- In several prospective clinical trials, alcohol based hand sanitizers containing emollients caused substantially less skin irritation and dryness than soaps or antimicrobial detergents.
- Allergic contact dermatitis or contact urticaria syndrome or hypersensitivity to alcohol or additives present in alcohol hand rubs rarely occurs

Source: Learnwell Resources, available online: [www.learnwell.org/handhygiene.htm](http://www.learnwell.org/handhygiene.htm)



## It is Important to remember...

- The efficacy of alcohol-based hand rub is affected by the type of alcohol used, the alcohol concentration and volume, the contact time and whether the hands are wet when it is applied.
- In general, if the hands feel dry after rubbing for 10-15 seconds then it is likely that not enough was applied.
- Handrubs have been found to be less irritating to the skin than many soaps although will cause some stinging to areas of broken skin and abrasions.

### Alcohol-based handrubs reduce time needed for hand disinfection

The time required for nurses to leave a patient's bedside, go to a sink, and wash and dry their hands before attending the next patient is a deterrent to frequent handwashing or hand antisepsis.

Easy access to hand hygiene materials could help improve adherence.

Alcohol-based handrubs may be a better option than traditional handwashing with plain soap and water or antiseptic handwash because they require less time, act faster, and have a lower rate of skin irritations.

### How much time spent cleansing hands?

One nurse in an average 8 hour shift

#### Hand washing with soap and water:

- 56 minutes (based on seven 60 second handwashing episodes per hour)

#### Alcohol-based handrub:

- 18 minutes (based on seven 20 second handrub episodes per hour)

*Voss A and Widmer AF, Infect Control Hosp Epidemiol 1997;18;205-208.*

## Storage of Alcohol-Based Hand Rubs

Alcohols are flammable so it is important to adhere to Occupational Health & Safety standards when handling and storing alcohol-based handrubs. Be aware;

- Containers must be stored and disposed of in a safe manner, and
- Stored in a cool dry area, away from smoking areas and exposure to flames.
- Further information is available from Area Occupational Health and Safety Coordinators

**Clean hands save lives**

