Hand Hygiene for Healthcare Workers

**Important Hand Hygiene Tips**

- When washing hands, repeated use of HOT (vs warm) water may increase the risk of dermatitis.
- Liquid, bar leaflet or powdered soap is acceptable for handwashing with non-antimicrobial soap and water.
- Handwashing, NOT alcohol-based handrubs, should be used to clean hands contaminated by bacterial spores such as *Clostridium difficile* or *Bacillus anthracis* (Anthrax).
- Choose alcohol handrubs containing 60-95% isopropanol, ethanol or n-propanol per CDC Hand Hygiene Guidelines.
- Choose alcohol handrubs with 1-3% glycerol or other emollients.
- Alcohol-based handrubs, rinses or gels containing emollients cause LESS skin irritation and dryness than soaps OR antimicrobial detergents tested.
- Alcohol-based handrubs, etc., should be stored away from high temperatures, flames, electrical outlets or oxygen receptacles, according to recommendations from the National Fire Protection Agency (NFPA).
- It is NOT necessary, or recommended, to routinely WASH hands after application of alcohol-based handrubs.
- Provide moisturizing skin care products or barrier creams for employee use. Ensure these products will not compromise glove barrier.
- Use of antimicrobial-impregnated wipes is considered equivalent to handwashing, but they are not considered a substitute for alcohol handrubs or antimicrobial soap.

---

**Terms**

**Alcohol Based Handrub**
Alcohol-containing preparations designed for hand application to reduce the numbers of viable microorganisms on the hands

**Antimicrobial Soap**
Soap (i.e. detergent) containing an antiseptic agent

**Decontaminate Hands**
To reduce bacterial counts on hands by performing antiseptic handrub or antiseptic handwash

**Hand Hygiene**
A general term that applies to handwashing, antiseptic handwash, antiseptic handrub, or surgical hand antisepsis

**Persistent Activity**
Refers to the prolonged or extended antimicrobial activity that prevents or inhibits the growth or survival of microorganisms following application of the product

**Plain soap**
Detergents that do NOT contain antimicrobial agents or contain low concentrations of antimicrobial agents that are effective solely as preservatives

**Proteinaceous**
Any substance composed of proteins

**Surgical Hand Antisepsis**
Antiseptic handwash or antiseptic handrub performed preoperatively by surgical personnel to eliminate transient and reduce resident flora. Antiseptic detergent preparations often have persistent antimicrobial activity

**Visibly Soiled Hands**
Hands showing visible dirt or that are visibly contaminated with proteinaceous material, blood, or other body fluids (e.g. fecal material or urine)

---

*This brochure was originally developed for Infection Control Week 2003, sponsored by Kimberly-Clark.*

*Special thanks to Jolynn Zeller, RN, CIC for developing the pamphlet, and to Mishga Moinuddin, MPH, CIC, Kathy Brooks, RN, PhD, CIC, Kathy Stoessel, RN, BSN, MS, and Wava Truscott, PhD, for reviewing and revising the pamphlet. Copyright © 2005, by the Association of Professionals in Infection Control and Epidemiology, Inc. (APIC) www.apic.org*
Background
For over 150 years, scientists have associated decreased morbidity and mortality rates with the practice of cleaning one's hands. Studies show that hand hygiene contributes to reductions in healthcare-associated infections. Studies also reveal that the greater the need to clean hands, the LESS the adherence to proper hand hygiene.

Healthcare workers report various factors that contribute to poor compliance with hand hygiene, including, but not limited to:
• Working in an intensive care unit
• Wearing of gloves/belief that gloves eliminate the need
• Hand dryness or irritation
• Inconvenient sink location
• Lack of soap/paper towels

If hand hygiene is to improve, it is essential to eliminate the barriers associated with these factors. Barriers include:
• Lack of knowledge that guidelines for hand hygiene exist
• Failure to recognize hand hygiene opportunities during the performance of one's duties
• Lack of awareness for the risk for cross-transmission of organisms

On the average, studies reveal that it takes about 62 seconds to complete the cycle from finishing a patient task, to washing hands, to returning to patient care activities. Removing barriers requires efforts to make hand hygiene easily accessible, time saving, and contribute to improved skin condition. Use of the recommended 1:3 ml alcohol handrub solution takes about 25-30 seconds. You will save time using alcohol handrubs!

Hand Hygiene Recommendations

Wash Hands with Plain or Antimicrobial Soap:
• When visibly dirty
• When contaminated with proteinaceous material
• When contaminated with blood or body fluids
• Before eating or handling food
• After using the restroom

Decontaminate Hands with Alcohol Handrubs:
• When NOT visibly soiled
• Before direct patient contact
• Before donning sterile gloves to insert central intravascular lines
• Before inserting urinary catheters, other IV catheters, OR invasive devices that do not require surgical placement
• After contact with patients' intact skin
• After contact with mucous membranes or non-intact skin if hands are not visibly soiled
• After removing gloves
• If moving from a contaminated body site to a clean body site during cares
• After contact with objects (including equipment) located in the patient's environment

A Note About Fingernails
Thousands of pathogenic organisms can survive under and around fingernails. Clean areas under fingernails if they are visibly dirty, and pay special attention to these areas when you wash OR use alcohol handrubs for cleaning hands. Freshly applied nail polish does not increase the numbers of germs present, but chipped nail polish may harbor bacteria. Persons with artificial nails are more likely to harbor higher bacterial counts than those who do not wear them. For this reason, healthcare personnel who work in high risk areas should not wear artificial nails.

Hand Hygiene Techniques

Handwashing with Plain or Antimicrobial Soap
Purpose: Physical removal of soil and transient microorganisms, including bacterial spores
• Wet hands with water.
• Apply soap to hands, according to manufacturer’s directions.
• Rub hands vigorously together for at least 15 seconds.
• Cover all surfaces of hands and fingers.
• Rinse hands well to remove soap residue.
• Dry with paper towel.
• Use towel to turn off faucet.

Hand Hygiene with Alcohol-Based Handrub
Purpose: Reduction of bacterial counts on hands when hands are NOT visibly soiled
• Apply product to palm of one hand.
• Rub hands together.
• Cover all surfaces of hands and fingers.
• Rub until hands are dry.

Surgical Hand Antisepsis with Antimicrobial Soap or Alcohol-Based Handrub
Purpose: Elimination of transient microorganisms and reduction of resident hand flora, performed prior to surgical procedures, before donning sterile gloves
• Remove rings, watches, bracelets before beginning surgical hand scrub.
• Use a nail cleaner and running water to remove debris from under fingernails.
• When using antimicrobial soap, scrub for at least 2-6 minutes, or as recommended by the manufacturer.
• When using an alcohol-based surgical hand scrub product with persistent activity, prewash hands and forearms with a non-antimicrobial soap:
  1. Dry hands and forearms completely.
  2. Apply alcohol-based product as recommended.
  3. Allow hands and forearms to dry completely.
  4. Don sterile gloves.