

HAND HYGIENE

The hands are the conduits for almost every transfer of potential pathogens from one patient to another, from a contaminated object to the patient, or from a staff member to the patient.

Hand hygiene is the single most important procedure for preventing infection. To protect patients from nosocomial infections, hand hygiene must be performed routinely and thoroughly. In effect, clean and healthy hands with intact skin, short fingernails, and no rings minimize the risk of contamination.

Hand hygiene: is a general term that refers to hand washing, antiseptic hand wash, antiseptic hand rub, or surgical hand antisepsis.

Hand washing refers to washing hands with plain (non-antimicrobial) soap and water. Use of an antiseptic agent (such as chlorhexidine, triclosan, or iodophor) to wash hands is an antiseptic hand wash. Whether a plain or an antiseptic agent is used, hand washing or hand hygiene is still the single most effective method to prevent the spread of infection. Washing with soap (plain or antimicrobial) and water is appropriate when hands are visibly soiled or contaminated with infectious material.

Equipment

Soap or detergent , warm running water , paper towels , optional: antiseptic hand wash , alcohol-based hand rub , fingernail brush, plastic sponge brush, or plastic cuticle stick.

Implementation

- Remove rings as your facility's policy dictates because they harbor dirt and skin microorganisms. Remove your watch or wear it well above the wrist. Note: **Artificial fingernails and nail polish must be kept in good repair to minimize their potential to harbor microorganisms**; refer to your facility's policy pertaining to nail polish and artificial nails. Natural nails should be short (**less than 1/4**). The CDC Hand Hygiene Guideline recommends that artificial

nails or extenders not be worn when having direct contact with patients at high risk such as, those in intensive care units or the operating room areas.

- Wet your hands and wrists with warm water, and apply soap from a dispenser. Don't use bar soap because it allows cross-contamination. Hold your hands below elbow level to prevent water from running up your arms and back down, thus contaminating clean areas.
- Work up a generous lather by rubbing your hands together vigorously for about 10 seconds. Soap and warm water reduce surface tension and this, aided by friction, loosens surface microorganisms, which wash away in the lather.
- Pay special attention to the area under fingernails and around cuticles, and to the thumbs, knuckles, and sides of the fingers and hands because microorganisms thrive in these protected or overlooked areas. If you don't remove your wedding band, move it up and down your finger to clean beneath it.
- Avoid splashing water on yourself or the floor because microorganisms spread more easily on wet surfaces and because slippery floors are dangerous. Avoid touching the sink or faucets because they're considered contaminated.
- Rinse hands and wrists well because running water flushes suds, soil, soap or detergent, and microorganisms away.
- Pat hands and wrists dry with a paper towel. Avoid rubbing, which can cause abrasion and chapping.
- If the sink isn't equipped with knee or foot controls, turn off faucets by gripping them with a dry paper towel to avoid re-contaminating your hands.

Special considerations

- Before participating in any sterile procedure or whenever your hands are grossly contaminated, wash your forearms also, and clean under the fingernails and in and around the cuticles with a fingernail brush, disposable sponge brush, or plastic cuticle stick. Use these softer implements because brushes, metal

files, or other hard objects may injure your skin and, if reused, may be a source of contamination.

- Follow your facility's policy concerning when to wash with soap and when to use an antiseptic cleaning agent. Typically, you'll wash with soap before coming on duty; before and after direct or indirect patient contact; before and after performing any bodily functions, such as blowing your nose or using the bathroom; before preparing or serving food; before preparing or administering medications; after removing gloves or other personal protective equipment; and after completing your shift.
- Use an antiseptic cleaning agent before performing invasive procedures, wound care, and dressing changes and after contamination. Antiseptics are also recommended for hand washing in isolation rooms, neonate and special care nurseries, and before caring for any highly susceptible patient.
- Wash your hands before and after performing patient care or procedures or having contact with contaminated objects, even though you may have worn gloves. Always wash your hands after removing gloves.
- Hand hygiene also includes the use of hand rubs or hand sanitizers. An antiseptic hand-rub involves applying an antiseptic hand-rub product (an alcohol-containing preparation designed for application to the hands for reducing the number of viable microorganisms on the hands) to all surfaces of the hands to reduce the number of microorganisms present. The products are also referred to as waterless antiseptic agents because no water is required. Alcohol hand rubs usually contain emollients to prevent drying and chapping of the skin. Hand rubs and sanitizers are appropriate for decontaminating the hands after minimal contamination. A small amount of the hand rub product is applied to all surfaces of the hands by rubbing until the product has dried (usually within 30 seconds).
- **NURSING ALERT** If you're providing care in the patient's home, bring your own supply of soap and disposable paper towels. If running water isn't available, disinfect your hands with an alcohol-based hand sanitizer.

PROPER HAND WASHING TECHNIQUE

To minimize the spread of infection, follow these basic hand washing instructions. With your hands angled downward under the faucet, adjust the water temperature until it's comfortably warm.

Add soap and work up a generous lather by scrubbing vigorously for 10 seconds. Be sure to clean beneath fingernails, around knuckles, and along the sides of fingers and hands.

Rinse your hands completely to wash away suds and microorganisms. Pat dry with a paper towel. To prevent re-contaminating your hands on the faucet handles, cover each one with a dry paper towel when turning off the water.

Complications

Because it strips natural skin oils, frequent hand washing may result in **dryness, cracking, and irritation**. These effects are probably more common after repeated use of antiseptic cleaning agents, especially in people with sensitive skin. Be sure to rinse off any excess cleaning agents to help minimize irritation.

Alcohol-based hand sanitizers commonly contain emollients to counteract the drying effects of the alcohol. These emollients keep the skin from drying and cracking.

To prevent your hands from becoming dry or chapped, apply an emollient hand cream after each washing or switch to a different cleaning agent. Make sure the hand cream or lotion you use won't cause the material in your gloves to deteriorate. If you develop dermatitis, you may need to be evaluated by your employee health provider to determine whether you should continue to work until the condition resolves.