

Infection Control

Infection control is preventing the spread of **germs** that cause illness and infection. Infection control starts with understanding germs and how they are spread.

About Germs

Everyone comes in contact with millions of germs (microorganisms) each day. All germs need warmth, moisture, darkness and oxygen to live and grow. Many germs are harmless and are needed for our bodies to function in a healthy way. For example, certain kinds of germs or bacteria are needed for the digestion of food and for the elimination of waste products (feces and urine) from our bodies. Some germs are very harmful and cause infections, diseases, and illnesses by rapidly multiplying and overwhelming the body's natural defenses. An infection can be local in one spot, like an infected cut, or it can be systemic, throughout the whole body, like food poisoning or pneumonia.

Three Ways Germs Are Spread

Germs are spread in the environment three ways: direct contact, indirect contact, and droplet spread.

1. **Direct Contact** means that germs are spread from one infected person to another person. An example of direct contact is the person infected with a cold putting his hands to his mouth while coughing or sneezing and then touching or contacting another person before he has washed his hands. A similar situation happens when the person has an infected or open sore or wound or body fluids that are full of germs (feces, urine) or blood (HIV, AIDS, Hepatitis A, B, or C) or saliva that is contaminated, and the other person is contacted directly by the germs.

2. **Indirect Contact** means that germs are spread from one infected person to another person through an object. The germ from the person infected contaminates the object, and the person who touches the object is then contaminated. Indirect contact is a common way for germs to spread between people who live, work, and play together. The spread of germs through indirect contact can happen when eating contaminated food (E. coli, salmonella), handling soiled linens, soiled equipment, using soiled utensils and cups, and drinking or using contaminated water. Dysentery, a serious gastrointestinal infection, can be spread indirectly. The hepatitis B virus can live up to 10 days in dried blood and can also be spread indirectly.

3. **Droplet Spread** means that germs are spread through the air from one infected person to another person. The germs are airborne and are carried over short distances. When people talk, cough, or sneeze, they are spreading germs through the air. The germs of the common cold, flu, and even tuberculosis travel from one person to another by droplet spread.

Controlling the Spread of Germs

Knowing how germs are spread is the first step in practicing infection control and preventing illness. Knowing how to control the spread of germs is the second step. You can protect yourself and the individuals with whom you work from germs or contamination by doing the following:

1. Know and practice standard precautions (defined in next section), especially

hand washing and gloving.

2. Keep yourself, the individual, and the environment clean.
3. Be aware of the signs and symptoms of illness and infection, and accurately record and report them to the doctor.

Standard Precautions

Standard precautions, including hand washing and using disposable gloves and the wearing of personal protective equipment, protect both the individual you work for and you from the spread of germs and infection. Standard precautions are a set of infection control safeguards. They are especially important to prevent the spread of blood-borne and other infectious diseases (AIDS, Hepatitis A, B, and C).

You should use these precautions when coming in contact with blood and all body fluids, secretions, and excretions (urine and feces), whether or not they contain visible blood; when touching mucous membranes such as the eyes or nose; and when dealing with skin breakdown such as a cut, abrasion, or wound.

Body fluids include:

- Blood
- Blood products
- Secretions
- Semen
- Vaginal secretions
- Nasal secretions
- Sputum
- Saliva from dental procedures
- Excretions
- Urine
- Feces
- Vomit

Hand Washing

Frequent, thorough, and vigorous hand washing will help in decreasing the spread of infection.

Germs are spread more frequently by hands and fingers than by any other means.

When employee's Should Wash Their Hands

- Employees should always wash their hands when they come to work and before leaving.
- Hands should be washed at work before touching:
 - Food
 - An individual's medicine
 - Kitchen utensils and equipment
 - Someone's skin that has cuts, sores, or wounds
 - Before putting on disposable gloves
 - Before using the bathroom
- Employee's should always wash their hands after:
 - Using the bathroom.

- Sneezing, coughing, or blowing one's nose.
- Touching one's eyes, nose, mouth, or other body parts.
- Touching bodily fluids or excretions.
- Touching someone's soiled clothing or bed linens.

Gloving

Practicing standard precautions also includes the wearing of disposable (single use) latex gloves whenever you come in contact with body fluid. (Non-latex gloves should be purchased for people who are allergic to latex.)

Putting on disposable gloves and taking them off correctly is especially important in preventing the spread of germs and infection. Gloves should be used only one time and changed after each use. New gloves should be put on each time you work with a different individual. Used or contaminated gloves should be thrown away. Gloves become contaminated after each use and can spread germs between individuals if used more than once and if they are not properly disposed.

If bodily fluid or blood touches the skin, wash the area vigorously and thoroughly with soap and warm water. If the gloves tear or break, take them off and vigorously and thoroughly wash your hands. Put on a new pair of gloves and continue assisting the individual.

- Employees should follow the procedure for putting on disposable gloves at the end of this unit.
- Employee's should always use gloves when providing or assisting an individual with:
 - Rectal or genital care.
 - Tooth brushing or flossing
 - Shaving with a blade razor
 - Menstrual care
 - Bathing or Showering
 - Cleaning bathrooms
 - Cleaning up urine, feces, vomit, or blood
 - Cleaning toilets, bed pans, urinals
 - Providing wound care
 - Handling soiled linen or clothing
 - Giving care when the DSP has open cuts or oozing sores on his or her hands
 - Providing first-aid
 - Disposing of waste in leak proof, airtight containers
- ✓ **Always use a new pair of gloves for each activity**
- ✓ **Always use a new pair of gloves for each individual**
- ✓ **Always wash your hands before and after using gloves**
- ✓ **Never wash gloves and use again**

Since hand washing can easily dry out a person's skin, remember to apply hand lotion or cream often throughout the day. It is a best practice to keep natural nails short and avoid the use of artificial nails when providing personal care. Many hospitals have banned artificial nails and natural long nails for employees who provide personal care. Research has shown that healthcare workers who wear artificial nails are more likely to

harbor germs than those who don't. Employees with long nails are at risk of puncturing or tearing disposable gloves.

Alcohol based hand rubs or hand sanitizers may also be used. They provide a great alternative to hand washing for the following reasons:

- Alcohol-based hand rubs (foam or gel) kill more effectively and more quickly than hand washing with soap and water.
- They are less damaging to skin than soap and water, resulting in less dryness and irritation.
- They require less time than hand washing with soap and water.
- Bottles/dispensers can be placed at the point of care so they are more accessible.

Other Protective Equipment

Depending on your job, you may be expected to wear other **Personal Protective Equipment (PPE)**, such as a face mask or eye shields.

The type of PPE used will vary based on the level of precautions required; e.g., Standard and Contact, Droplet or Airborne Infection Isolation. Employees should always remember to:

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene

If you must use PPE you should put the equipment on in the following order:

1. Gown - Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back. Fasten in back of neck and waist. Wear a gown during procedures that are likely to generate splashes or sprays of blood, bodily fluids, secretions, or excretions. Remove a soiled gown as soon as possible, and wash hands after removing the gown.

2. Mask or Respirator - Secure ties or elastic bands at middle of head and neck. Fit flexible band to nose bridge. Fit snug to face and below chin. Fit-check respirator.

3. Goggles or Face Shield - Place over face and eyes and adjust to fit. Wear a mask and eye protection, or a face shield, during procedures that are likely to generate splashes or sprays of blood, bodily fluids, secretions, and excretions.

4. Gloves - Extend to cover wrist of isolation gown. You should use gloves when hands may become contaminated with blood, body fluids, excretions, or secretions **or** when touching mucous membranes or non-intact skin, **or** contaminated surfaces or objects.

If this equipment is required in your work setting you should receive training on the location, proper use and disposal of the PPE.

Cleaning and Disinfecting

The second way for employee's to prevent the spread of germs is through cleaning and disinfecting the environment. Employees should be careful not to transfer infection to others and equally important, the employee should be careful not to be infected by

others. This can be done by being clean themselves, keeping the home clean and germ free, and assisting the individuals in the home to maintain good personal hygiene. Routine, daily cleaning of household surfaces and other items with soap and water is the most effective method for removing germs. Sometimes, an additional cleaning is needed to be germ free. This extra step is called disinfection.

Disinfection is the process of killing germs after cleaning with soap and water, then rinsing with clear water. Disinfecting usually requires soaking or drenching the surface or item for several minutes with a special cleaning solution. This soaking allows the cleaning solution to kill the remaining germs. One of the most common cleaning solutions is household bleach and water. Two recipes for a disinfectant cleaning solution can be found at the end of this unit.

The recipes are easy to mix, safe if handled properly (as a toxic substance), and kill most infectious agents. Remember, this solution will discolor fabric and carpeting. The solutions lose effect very quickly and must be made fresh every 24 hours or daily.

Household Hints for Reducing the Spread of Infection

- Clean most surfaces with soap and water to remove germs.
- Always clean up spills from the less soiled to the most soiled to limit the spread of germs.
- Handle soiled laundry as little as possible.
- Wash soiled clothing and linens separately from other clothes.
- Use paper towels throughout the house.
- Make sure everyone follows good hand-washing practices (for example, before touching food, after using the bathroom).
- Keep clean hands away from the face and other areas of the body.
- Make sure individuals use their own toiletries and equipment (for example, combs, brushes, razors, etc.)

I have read and understand the training regarding Infection Control and Blood Borne Pathogens.

Signed: _____

Date: _____

My employer is: _____