



Objectives:

- Define infection and infection control terms
- Identify common infections
- Describe how infections are spread
- List the In-Home Aide's role in infection control

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Resources:

OSHA.gov; World Health Organization (WHO); Mosby's Textbook for the Home Care Aide- third edition; CDC- handwashing: clean hands save lives, show me the science; AHHC the Caring Connection Aide teleconference, July 2014, the Aide's role in infection control.

Infection Control and the In-home Aide's Role

Infectious diseases are caused by pathogenic microorganisms, such as bacteria, viruses, parasites or fungi; the diseases can be spread, directly or indirectly, from one person to another. Zoonotic diseases are infectious diseases of animals that can cause disease when transmitted to humans.

Healthcare workers in all settings, including In-Home Aides, play a role in preventing the spread of infection either directly or indirectly. The practice of medical asepsis is the use of techniques and practices to prevent the spread of pathogenic organisms from one person or place to another person or place. Medical asepsis is also known as clean technique.

Handwashing is a key component in the practice of medical asepsis. Experts on infection control often say that handwashing is one of the most effective ways of preventing the spread of infection. Alcohol based handrubs are another way to accomplish hand hygiene (Alcohol-based hand sanitizers can quickly reduce the number of microbes on hands in some situations, but sanitizers do not eliminate all types of germs; If hands are not visibly dirty or soiled, it is ok to use an alcohol-based hand rub for routinely cleaning hands in other situations as allowed by your agency policies and procedures). Alcohol based gels are flammable; keep them away from heat and flame. Review your agency policies related to hand hygiene and infection control and ask questions as needed related to hand washing versus hand sanitizers.

Sterile technique is a specialized skill used during surgical procedures, injections, and other invasive (entering the body) procedures.

The most common groups of pathogenic microorganisms include the following:

- Bacteria- one celled microscopic plants that multiply very quickly. There are many types of bacteria (examples include streptococci and staphylococci). Streptococcus may cause wound, heart, respiratory, and other infections. Staphylococcus may cause wound and soft-tissue infections. The term *strep* infection is used when the streptococcal organism is the cause of the disease. Likewise, the term *staph* infection refers to a disease resulting from an invasion of one of the staphylococcal organisms.
- Viruses- The smallest known living disease producing organisms. They cause many illnesses, ranging from the common cold and influenza to AIDS, hepatitis B, and hepatitis C.
- Fungi- Tiny plants that live on other plants or animals and can cause disease. Fungi (fungus is the singular form of the word) are very plentiful in the environment; they can be seen growing on old bread or oranges. We might describe that food as being moldy. Among the diseases caused by fungi are athlete's foot and vaginal yeast infections.
- Protozoa- One-celled microscopic organisms that usually live in water and can cause disease. Infectious diseases caused by protozoa include malaria and a type of pneumonia associated with AIDS.

The Reservoir of Infection:

- The place where the pathogen is stored, lives, and grows is called a reservoir. Examples of reservoirs are *persons with infectious diseases, soiled tissues and linens, client supplies, and equipment such as thermometers, bedpans, and commodes.* Another reservoir may be a carrier, a person or animal that does not become ill but spreads the disease to others.

Exit from the Reservoir of Infection:

- **The pathogen must escape from the original host to cause disease in another host.** Pathogens can be found in body fluids, such as blood, urine, semen, saliva, sputum, and vomitus, and in mucous membranes, tissues, and organs of the body. Secretions from the eyes, ears, nose, vagina, or penis may also contain pathogens. Draining sores and infected wounds are excellent sources of pathogens.

Method of Transmission:

- Organisms are **transmitted** by means of many routes; *through direct (your hands) or indirect contact (contact with items used by the infected person), in the air, by animals and insects, and by food and water (drinking unsafe water, eating contaminated food or undercooked meat or poultry).*



Entrance Into a New Host:

The pathogen must find a way to enter the body of the new host. The first line of defense is the skin. When skin is broken from a cut or a surgical wound, by injection, or from a bedsore, there is the opportunity for infection. Drainage tubes and catheters are often the route by which pathogens invade the body.

We must provide care using infection control guidelines in a consistent manner!

Host

Microorganisms are all around us, but most of us do not have an infection because we have resistance to many microorganisms. But when pathogens increase in numbers and strength and body defenses cannot destroy them, an infection may occur. *(Some signs and symptoms of infection are redness of tissue, swelling of area, pain in the area, warmth in area (warm to touch), fever, chills and headache, nausea, vomiting, diarrhea, coughing, skin rash, pus or foul smelling drainage from a wound or body opening, fatigue).* Be alert for these symptoms in your client, and report them to your supervisor immediately.

Breaking the cycle of infection through medical asepsis:

Step in Cycle	In-Home Aide Activity (check the plan of care for specific activities to complete)
Pathogenic organism	Keep the environment clean, practice disinfection
Reservoir of infection	Eliminate reservoir when possible, use gloves to handle contaminated material (tissues, sanitary napkins). Double bag and discard into covered trash container to keep animals out of trash. Empty bedpan, urinal and commode promptly, disinfect properly. Remove and treat soiled lines promptly. Keep client clean, bathe when necessary. Clean refrigerator, discard leftovers.
Exit from reservoir of infection	Block exit. Do not cough or sneeze on client or permit anyone to sneeze or cough on you. Teach client to cough into tissue and to discard in plastic bag. Do not go to work if you have an open, draining sore anywhere on your body. Notify your supervisor if you have an infection and ask about caring for clients when you have an infection. Wear gloves when handling body fluids, wear other personal protective equipment as needed such as gowns, masks, etc. (your employer is required to provide this for you). Place soiled lines in plastic bags. Wear gloves when doing laundry contaminated with body fluids.
Method of transmission	WASH HANDS, clients should have their own personal care items (linens, razors, and toothbrush), there should be no sharing. Do not let client care items touch the floor (discard or disinfect any items that touch the floor). Do not let soiled linens touch your uniform, keep drainage bags and tubes off the floor, do not shake linens when changing the bed. Discourage people with infections, especially colds and flu from visiting the client. Cover nose and mouth when sneezing. Drink safe water only. Prepare and store food properly.
Entrance into a new host	Protect client's skin. Keep clean, dry and prevent breakdown. Wear gloves if there is a risk of exposure to blood or other body fluids. Do not handle "sharps"- have client discard into a puncture proof container (the nurse supervisor can talk to the client about the proper procedures for discarding sharps such as insulin syringes, notify your supervisor if your client uses syringes and needs education on how to discard according to agency and or local community policy)
Host	Maintain and encourage healthy practices, good nutrition, sufficient rest. Avoid people with infections.

- Be sure to ask your supervisor any questions you may have related to infection control in order to protect yourself and your clients! **Be sure to know your agency policies and procedures related to infection control and in reporting if you have come in direct contact with the client's blood or other potentially infectious material!**
- Protecting the client from becoming a new host is an important role for every In-home aide. The *cycle of infection* must be broken to prevent the transmission of a pathogen from one host to another. The organism can be removed, destroyed, or blocked in its progress through the cycle. Keep clean things "clean" and dispose of contaminated materials promptly. Follow all practices of good housekeeping and other measures to prevent the spread of disease.
- You cannot always tell if someone has an infection, they may be a *carrier* that is able to spread disease to others but may not be ill themselves, therefore, practicing infection control techniques for all clients is necessary.

Your 10 fingers are the 10 greatest carriers of disease

Long artificial nails acts as excellent hiding places for bacteria to live and grow; your best bet is to keep nails natural, unpolished and short.

Wash your hands frequently and thoroughly- it is the best defense against spreading disease

Personal Protective Equipment (PPE) for Bloodborne disease (bloodborne pathogens are pathogenic microorganisms that are present in human blood and can cause disease in humans) - disposable gloves, plastic aprons or moisture resistant gowns, mask, protective eyewear. Review your agency policies and procedures regarding when to use personal protective equipment.

● Examples of how to prevent the transmission of disease:

- wash your hands after using the bathroom
- wash your hands before and after handling or preparing food and before and after eating
- cover your nose and mouth when coughing, sneezing, and blowing
- wash your hands after coughing, sneezing, or blowing your nose
- do not use another person's soiled drinking or eating utensils
- do not use another person's personal items, such as toothbrushes, razor, washcloth, or towels
- practice good personal hygiene, and maintain good grooming habits
- wash raw fruits and vegetables before eating or serving
- prepare and store food properly
- use good housekeeping practices to eliminate household pests and maintain a clean environment



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Individuals have different responses to infection. Not all symptoms will be experienced by all people. Learn the usual health status of each person you are caring for so you will know when there is a change in their typical health status.



Report any signs or symptoms immediately to the nurse. The earlier an infection is found, the easier it may be to treat.

Standard (Universal) Precautions:

- A method of infection control by which all human blood and body fluids are treated as though they are infected with pathogens. In other words, every client is treated as if he or she has a potentially infectious disease.
- Handwashing is a vital part of the practice of standard (universal) precautions, along with the proper use of gloves.
- Gloves are always worn when there is a risk of direct contact with body fluids or moist body surfaces. They are used to protect you from infectious disease and the client from you (sometimes health care workers bring infection to the clients).
- Handwashing is always done before and after using gloves. Be sure to follow your agency policy and procedures related to handwashing.

Using proper techniques of housekeeping, including food preparation and storage, also helps to prevent the spread of disease.



TIP: There are also certain factors which contribute to increased illness susceptibility in clients, including poor nutrition, advanced age, mental status, inactivity and other factors such as catheters and feeding tubes.