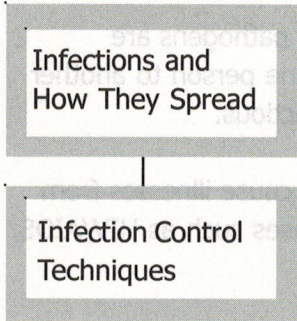


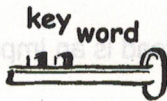
# Module 4 - Lesson 1

## Infection Control



### What you will learn in this lesson:

1. What infections are and how they spread.
2. Four major infection control techniques.
3. Symptoms of infection, what to look for and do.
4. Adult immunizations that help to control the spread of infection.



### Definition

Bacteria	Microscopic organisms (germs) which can cause disease
Contaminated	An area or thing with a lot of germs, dirty
Contagious	Easily spread
Disinfecting	Using a bleach solution or another disinfectant to kill germs
Germ	Tiny, microscopic organism
Immunizations	A medical treatment given to protect against a particular infection or disease
Immune system	A collection of cells, chemical messengers, and proteins that work together to protect the body from pathogens
Infection	Growth of harmful germs in the body
Infectious	Easily spread, capable of causing infection
Infection control	Stopping germs from spreading and causing infection
Pathogen	Any germ causing disease
Virus	The smallest known living disease-producing organism

## Infections and How They Spread



2,000 bacteria will fit on the head of a pin.



### Understanding infections

A germ can be a **bacteria**, **virus**, or fungus. There are millions of germs present all the time in healthy human beings. Many germs are not harmful. Some germs are harmful and cause illness or disease.

Any disease causing germ is called a **pathogen**. Not all pathogens are **infectious**. Only pathogens that can be spread from one person to another or from the environment to a person are considered infectious.

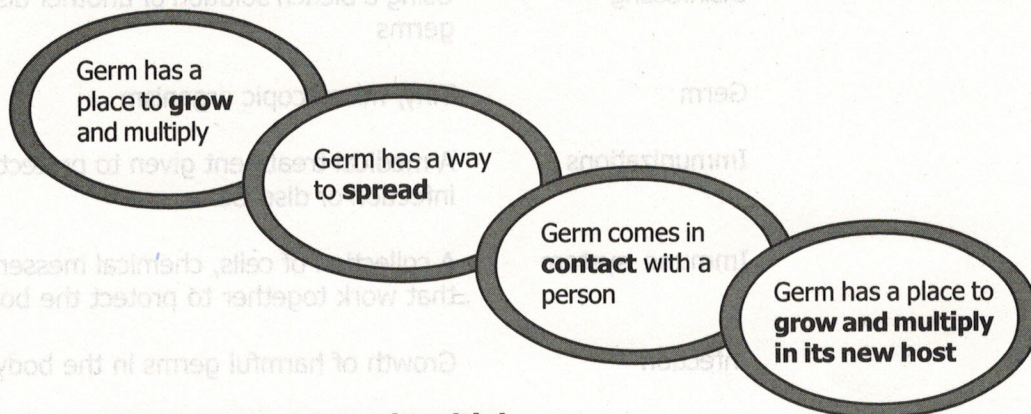
There are hundreds of different kinds of pathogens that cause illnesses from the common cold, flu, pneumonia, and diarrhea to diseases such as HIV/AIDS, TB, and Hepatitis A and B.

### The spread of infection

Understanding how germs grow and spread is an important step in learning to control the spread of **infection**.

For infections to spread, **all** of the following conditions must occur:

- the germ has to be able to **grow** and multiply;
- there has to be a way for the germ to **spread** from one person to another or from the environment to a person;
- the germ has to come in **contact** with a person's body (e.g. a wound);
- the germ has to be able to **grow and multiply in its new host**.



### For germs to grow and multiply

Different types of pathogens grow and multiply in a variety of places including: inside the body or on the skin; in food; or in the environment (e.g. soiled clothing or tissues, sponges, bathroom).

The 5 conditions germs need to grow and multiply include:

1. **Moisture** - germs grow well in moist areas.
2. **Heat** - germs multiply in warm temperatures.
3. **Air** - most germs need oxygen in the air to live.
4. **Food** - germs need food to survive. Food for a germ is protein.
5. **Darkness** - the absence of natural light encourages germ growth.

## How germs spread

Germs must have a way to get out of the place where they have grown and multiplied and a way to infect something or someone else. The four ways infections are spread include:

- 1. Direct contact** -- the spread of an infection through direct body contact of secretions or body fluids from one person to another.
- 2. Indirect contact** -- coming into contact with something an infected person has used or touched (e.g. used tissues, bedding, clothing, or drinking from a glass used by a person with an infection).
- 3. Droplet spread** -- coming into contact with a drop of moisture coming from secretions containing germs (when a person sneezes or coughs). Droplets must have enough force to propel them towards another person.
- 4. Airborne spread** -- coming into contact with a germ traveling on dust particles (e.g. TB. See the Common Diseases and Conditions section page 325 for more information about TB).



## Germs growing and multiplying in a new host

Our **immune systems** are designed to fight off infection. A weak immune system means the body has a harder time killing pathogens - allowing germs to grow and multiply.

A client can be at greater risk of infection when his/her immune system is weakened due to:

- poor nutrition
- chronic disease or certain medications
- dehydration
- thinning of the skin
- stress and fatigue
- poor personal hygiene habits

As a caregiver, encourage a client to do what he/she can to keep his/her immune system as strong as possible. This includes:

- making healthy choices in diet, fluid intake, and exercise;
- getting plenty of rest;
- maintaining good personal hygiene habits - including taking good care of his/her teeth;
- reducing stress;
- getting **immunizations**;
- seeing a doctor regularly.

common  
diseases  
and  
conditions

key word

key word

## Infection Control

Think of all of the conditions required for the growth and spread of infection as a chain. As in any chain, it is only as strong as its weakest link.



As a caregiver, **your job is to break this chain wherever and whenever you can.**



Most infections are spread through direct or indirect contact. **Infection control** techniques focus on killing or blocking direct or indirect contact with germs so they can't cause harm.

There are four important infection control practices for caregivers, including:

1. Hand washing.
2. Wearing gloves.
3. Cleaning and disinfecting the environment.
4. Keeping up with needed immunizations.

## Handwashing



As a caregiver, you have constant direct and indirect contact with the client and things in the environment. With every thing or person you touch, more and more germs build up on your hands. Your hands quickly become a source for the spread of infection.

**Hand washing is the single most important thing you can do to control the spread of infection.**

### When to Wash Your Hands

#### Before

- contact with a client
- starting work
- eating
- preparing food
- putting on gloves

#### After

- contact with a client
- using the restroom
- removing gloves or protective clothing
- contact with body fluids
- contact with **contaminated** items
- blowing nose, sneezing, coughing
- cleaning
- smoking
- handling pets



There are key, important steps to perform when doing any personal care task. Use the word S.W.I.P.E.S. to remember what they are.

- S** Gather **supplies** before starting the task.
- W** **Wash** your hands before contact with a client.
- I** **Identify** yourself by telling the client your name.
- P** **Provide privacy** throughout care with a curtain, screen, or door.
- E** **Explain** what you are doing to the client.
- S** **Scan** the area to be sure everything is back in place after the task is done.

### Skill: Hand Washing



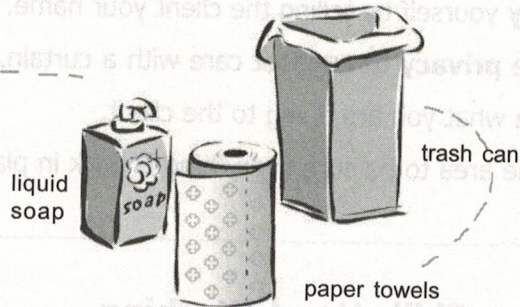
1. S.W.I.P.E.S.
2. Make sure supplies are within easy reach so that no contaminated surface is touched throughout the task.
3. Turn on warm water at sink.
4. Wet hands and wrists thoroughly.
5. Apply skin cleanser or soap to hands.
6. Lather all surfaces of fingers and hands, including above the wrists, producing friction, for at least 20 (twenty) seconds, keep fingers pointing down.
7. Thoroughly rinse all surfaces of hands and wrists.
8. Use clean, dry paper towel to dry all surfaces of hands, wrists, and fingers. \*
9. Use clean, dry paper towel or clean, dry area of paper towel to turn off faucet.
10. Dispose of used paper towel(s) in wastebasket immediately after shutting off the faucet.

\* Germs can grow quickly on cloth towels. If paper towels are not available and you must use cloth towels, launder them frequently.

A waterless hand sanitizer is another alternative that can be used if it is available and the care setting where you work allows its use.

# 6 Steps to Proper Handwashing

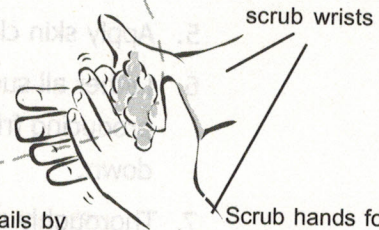
- 1) Make sure you have everything you need at the sink.



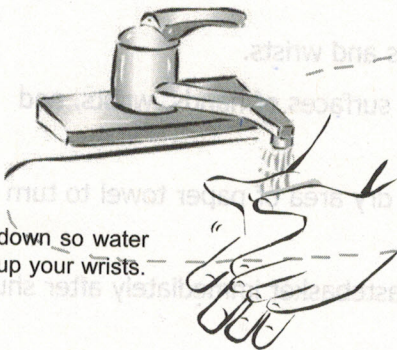
- 2) Turn on warm water. Completely wet hands and wrists.

Keep warm water running while washing your hands.

- 3) Rub palms together to make lather and produce friction. Scrub between fingers and entire surface of hands and wrists.



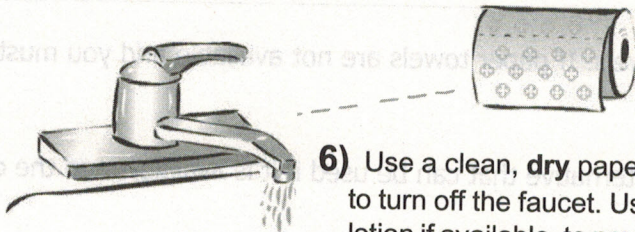
- 4) Rinse hands and wrists.



Clean fingernails by rubbing the tips of your fingers against your palms.

- 5) Dry hands with clean towel.

Avoid touching faucets and sink.



- 6) Use a clean, dry paper towel to turn off the faucet. Use hand lotion if available, to prevent chapping.

Many caregivers do not wash their hands as often as they should.

**"My hands don't look dirty"**

It is impossible for the human eye to see germs. Just looking at your hands will not tell you whether they are really "dirty". You need to know when to wash your hands **based on the activities** you do as a caregiver.

**"I don't have time"**

The few extra minutes it takes is well worth the benefits to you and the client. Make hand washing a part of your regular routine so you automatically build time for it into your schedule.

**"Washing my hands so often dries them out"**

Use moisturizing soap and lotion to prevent chapping and dry hands.

Gloves provide a protective barrier between you and a client. Wearing gloves keeps you from spreading germs from one person to another.

**Household gloves** should be worn when you are doing any general household cleaning.

Wash your hands **based on the activities** you do as a caregiver.

**Wearing gloves**

**Disposable Gloves MUST be Worn, When You:**

- have direct skin contact with blood, body fluids, or mucous membranes;
- handle things contaminated with germs such as tissues, disposable undergarments, or soiled clothing or linens;
- provide first aid;
- have contact with a client that has an open wound;
- clean-up body fluids;
- assist a client with toileting or other personal care tasks;
- have a cut, scrape, chapped hands, or dermatitis.

**Disposable gloves:**

- need to be made of the appropriate material, usually latex or vinyl;
- should not be peeling, cracked, discolored, or have punctures or tears;
- should be thrown away after each use;
- should be changed between tasks if they have become contaminated with germs (e.g. body fluids).

## Skill: Putting On & Taking Off Gloves



### Putting On Gloves

1. S.W.I.P.E.S.
2. Wash hands before contact with gloves.
3. Check each glove for holes or other deterioration before using.
4. Grasp glove at cuff and pull onto other hand.
5. Grasp other glove at cuff and pull onto other hand.
6. Check to make sure glove is snugly fit over each finger.

### Taking Off Gloves

1. With one gloved hand, grasp the other glove just below the cuff.
2. Pull glove down over hand so it is inside out.
3. Keep holding removed glove with gloved hand and crumple it into a ball.
4. With two fingers of bare hand, reach under the cuff of the second glove.
5. Pull the glove down inside out so it covers the first glove.
6. Throw gloves away.
7. Wash hands as final step.

### Latex allergies

Most disposable gloves are made of latex. According to the Centers for Disease Control and Prevention, about 20% of health care workers are allergic to latex.

The best way to prevent a reaction to latex is to switch to non-latex gloves or change to non-powdered latex gloves if the powder is the problem for you.

### Infection control through the eyes of a client

Infection control practices can stop or limit touch and direct contact between a caregiver and a client. As a caregiver, you need to be sensitive to a client's possible reaction to their use. Wearing gloves, using any barrier, and the need to wash your hands before and after contact with a client, can make him/her feel dirty or contaminated, lonely or isolated, and/or can interfere with a client's need for connection and emotional support.

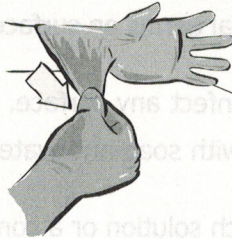
This cannot stop you from using them. It may help to talk with the client about it and let them know why these practices are important to his/her health and well-being.



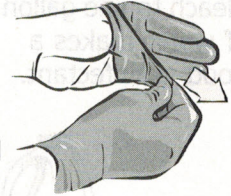
# How to Remove Gloves Safely

**Assume that all used gloves are contaminated. When you remove them, follow these steps so that the outside of the gloves do not touch your bare skin.**

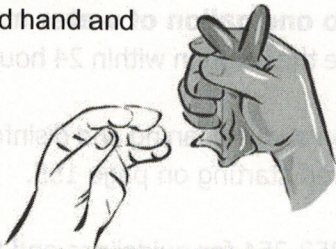
**1)** With one gloved hand, grasp the other glove just below the cuff.



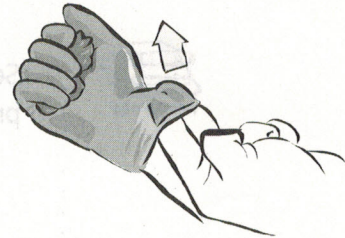
**2)** Pull the glove down over your hand so it is inside out.



**3)** Keep holding the glove with your gloved hand and crumple it into a ball.



**4)** With two fingers of the bare hand, reach under the cuff of the second glove.



Danger: do NOT touch bare hand to dirty glove.

**5)** Pull the glove down inside out so it covers the first glove.



**6)** Both gloves are now inside out. You can throw them away safely.



**7)** Wash your hands.

## Cleaning and Disinfecting

An area or thing is considered "clean" when it has been cleaned and properly disinfected. An area or thing with a lot of germs is considered contaminated or dirty. For example used sheets, dirty dishes, worn clothing, and areas such as bedrooms and bathrooms are considered contaminated. Control germs by keeping your work area "clean".

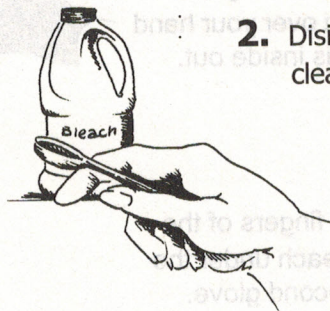
### General cleaning and disinfecting guidelines

Cleaning and disinfecting are not the same. Cleaning with soap, water, and scrubbing removes dirt and some germs. **Disinfecting** with a bleach solution or another disinfectant kills additional germs on surfaces.

There are 2 steps to clean and disinfect any surface.

1. Clean and scrub the surface with soap and water;
2. Disinfect the area with a bleach solution or a commercial, household cleaning solution.

One teaspoon bleach to one gallon of water makes a good disinfectant.



**One teaspoon bleach to one gallon of water** makes a good disinfectant solution. Use the solution within 24 hours.

More detailed information about cleaning and disinfecting a kitchen properly is covered starting on page 155.



See the Resource Directory on pages 252-254 for guidelines and tips for properly cleaning and disinfecting other major areas of a house.

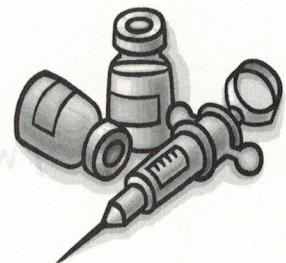
## Immunizations

Another way to keep you and your client healthy is for everyone to keep immunizations up to date.

Check with your employer to see if any immunizations are available through your work. Check with your doctor to make sure you have the immunizations you need. Encourage a client to also follow his/her doctor's recommendations for what immunizations he/she needs.

### Types of common immunizations

- Tetanus/Diphtheria - every ten years or if injured
- Flu shots - yearly
- Pneumonia shot - once (lifetime)
- Hepatitis A - a series of 2 shots, 6 months apart
- Hepatitis B - a series of 3 shots



Even with good infection control practices, you or a client can still get an infection. As a caregiver, staying alert for signs of infection will help you know when to report a change or concern about a client or if **you** may be sick and should not go to work.

## Observing and Reporting if a Client has an Infection

Keep in mind:

- many people with a germ causing illness have no symptoms;
- a person can be highly contagious before symptoms develop;
- symptoms of infection may be specific to just one part of the body (e.g. an infected wound, incision, or a urinary tract infection).

**Stay alert to the following general signs of infection. If you see these symptoms in a client, report it to the appropriate person where you work.**



### General signs of infection

- |  |  |
|--|--|
| <input type="checkbox"/> Fever, chills, sweating       | <input type="checkbox"/> Pain                                    |
| <input type="checkbox"/> Nausea                        | <input type="checkbox"/> Redness and/or swelling                 |
| <input type="checkbox"/> Dizziness                     | <input type="checkbox"/> Areas on the body that are hot to touch |
| <input type="checkbox"/> Headache                      | <input type="checkbox"/> Increased breathing and pulse rates     |
| <input type="checkbox"/> Thirst                        | <input type="checkbox"/> Hot, dry skin, and rash                 |
| <input type="checkbox"/> Feeling lousy, weak           | <input type="checkbox"/> Confusion                               |
| <input type="checkbox"/> Decline in overall well-being | <input type="checkbox"/> Tired                                   |