
SAFETY PRECAUTIONS
& INFECTION CONTROL

SAFETY PRECAUTIONS…

The Occupational Safety and Health Administration (OSHA), a division of the U.S. Department of Labor, establishes and enforces workplace safety standards in order to prevent accidents and injury. Health care providers must comply with all OSHA regulations.

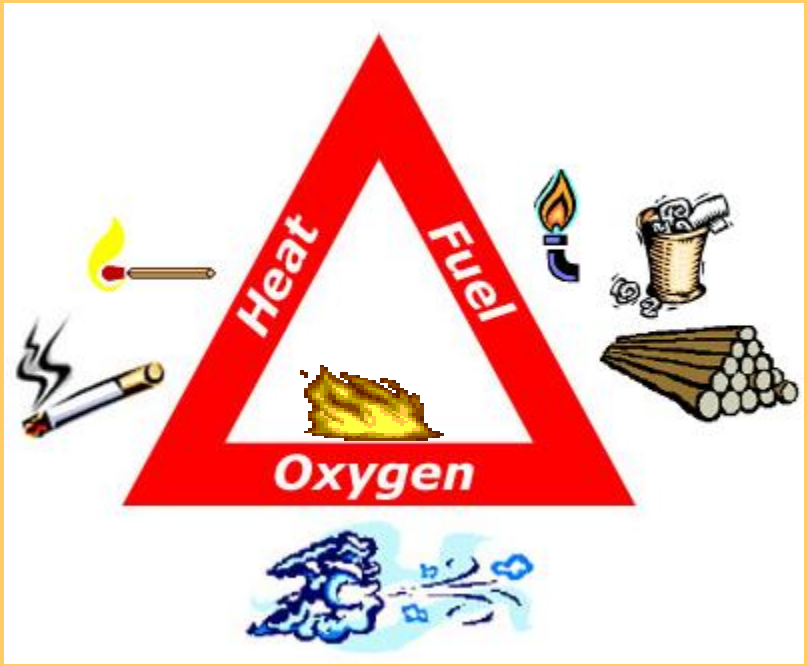
OSHA's Hazard Communication Program requires that employees are aware of what chemicals or hazards are in the environment, where and how they are stored, how to read and understand the labels, how to clean up spills of these materials, and what personal protective equipment is required.

SAFETY PRECAUTIONS…

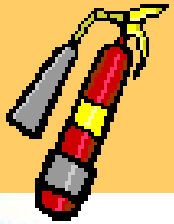
The Hazard Communication Program requires the facility to maintain a <u>Material Safety Data Sheet (MSDS)</u> on each chemical stored or used on the premises. The MSDS includes a hazard rating on each chemical based on a scale of 0-4 with 0 indicating no hazard and 4 indicating extreme hazard.

<u>Biohazards</u> are included in this program. A biohazard is some type of biological material or infectious agent that may cause harm to human, animal, or environmental health… and requires special disposal methods.

SAFETY PRECAUTIONS…



Fire in a health care facility constitutes a disaster, as many people within a structure may not be able to evacuate on their own. When 3 elements exist, fire is possible: heat, fuel (a flammable or combustible material) and air.



Know where the fire extinguishers are, and how to use them. Remember the acronym PASS: <u>pull</u> the pin, <u>aim</u> at the base of the flames, <u>squeeze</u> the handle, <u>sweep</u> nozzle from side to side.

SAFETY PRECAUTIONS…

If an evacuation is necessary, evacuate ambulatory patients first, wheelchair-bound second, and finally the bed-bound.

Know where the exits are; do not use elevators; never open windows or feed oxygen to the fire; never open a door that is hot to the touch. Act quickly and efficiently, but calmly. Smoke and panic kill as many people as the fire itself.

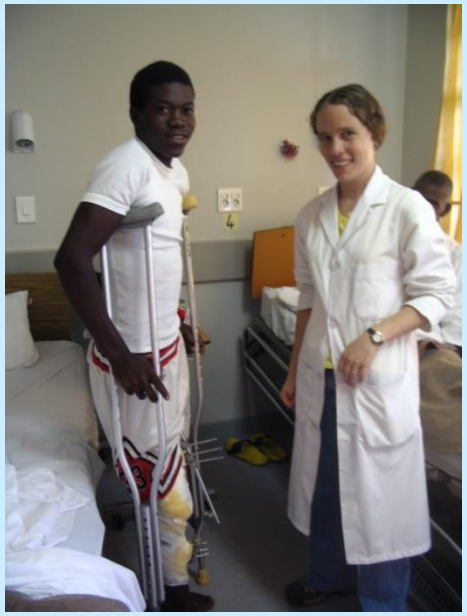
PATIENT SAFETY…

Correct <u>patient identification</u> is critical. Lost, damaged, or illegible wristbands should be replaced immediately.

Follow facility policy for identifying patients by name, room number, birthdates, etc. before administering medications or performing procedures.

PATIENT SAFETY…

Canes, crutches, and walkers are examples of <u>ambulation devices</u> that assist the patient in walking. They must be clean and structurally safe, and areas touching the floor must be covered in rubber tips to prevent slipping.

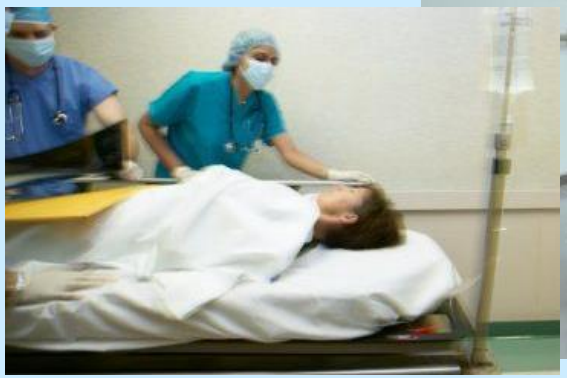


<u>Side rails or half-side rails</u> on beds can be used by patients for support or by staff during transport. When used, they should be locked in place securely. They are not to be used as a restraint, as they may lead to injury in a confused patient.

PATIENT SAFETY…

<u>Use wheelchairs and gurneys correctly</u> when transporting patients. Lock brakes except when you are moving, especially when a patient is sitting or standing up from a wheelchair or being moved from a gurney. Always back the patient down a steep incline or over raised doorways. Use foot supports correctly and seatbelts as needed.

The patient on a gurney is pushed head first into an elevator.

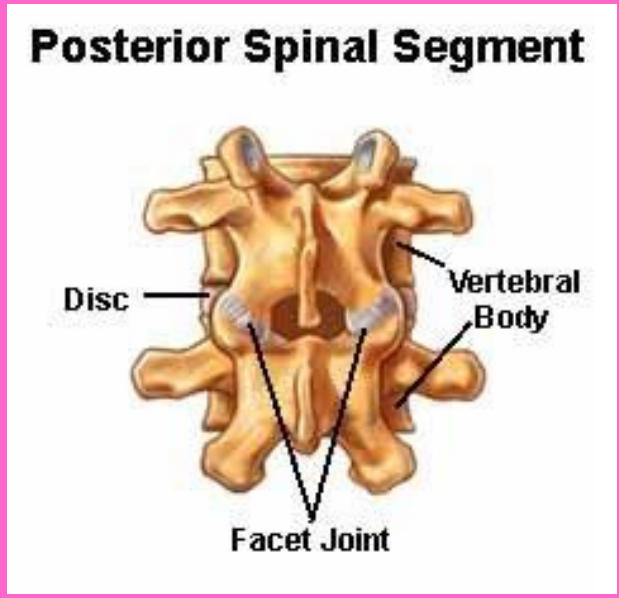


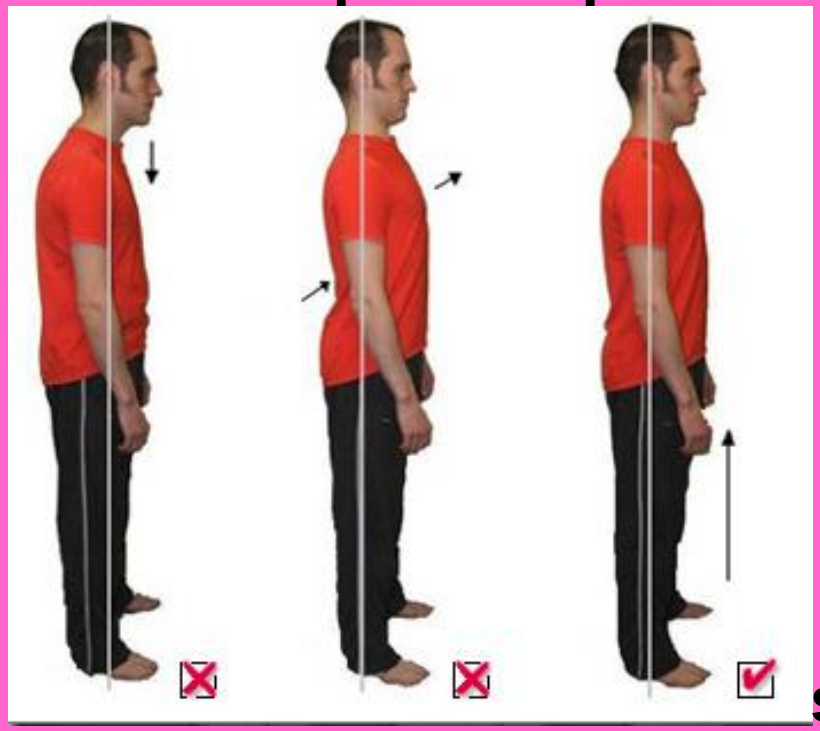
PATIENT SAFETY…

<u>Restraints or postural supports</u> **restrict a patient's movement for their own safety or to immobilize the patient during procedures requiring precision, *but can only be used when ordered by a physician*. Facility policies and procedures must be followed carefully.**

BODY MECHANICS…

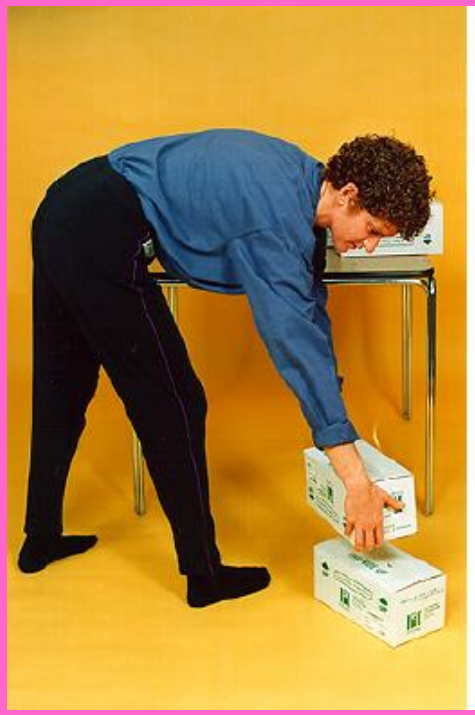
Health care providers often need to lift and carry objects, and sometimes lift, transfer, and position clients. Back injury is the number one injury incurred by health care workers on the job. Proper body mechanics can prevent problems.





<u>Ergonomics</u> is an object or practice designed to prevent injury. Maintaining correct body alignment of the head, back, and limbs while standing or during activities can prevent strains, sprains, disc injury, and fatigue. Stand with your feet 6-10 inches apart, feet flat on the floor, back straight, and knees flexed slightly.

BODY MECHANICS…



Correct lifting:

1. Keep feet shoulder-width apart
2. Use two hands
3. Do not twist
4. Avoid reaching
5. Keep chin up; look straight ahead
6. Keep shoulders back
7. Bend at the hips/knees
8. Exhale when lifting or exerting force
9. Tighten your abdominal muscles
10. Lift with your legs, not your back
11. Push, pull, or slide instead of lifting when possible
12. Use the weight of your body to help push or pull
13. Ask for help when needed.

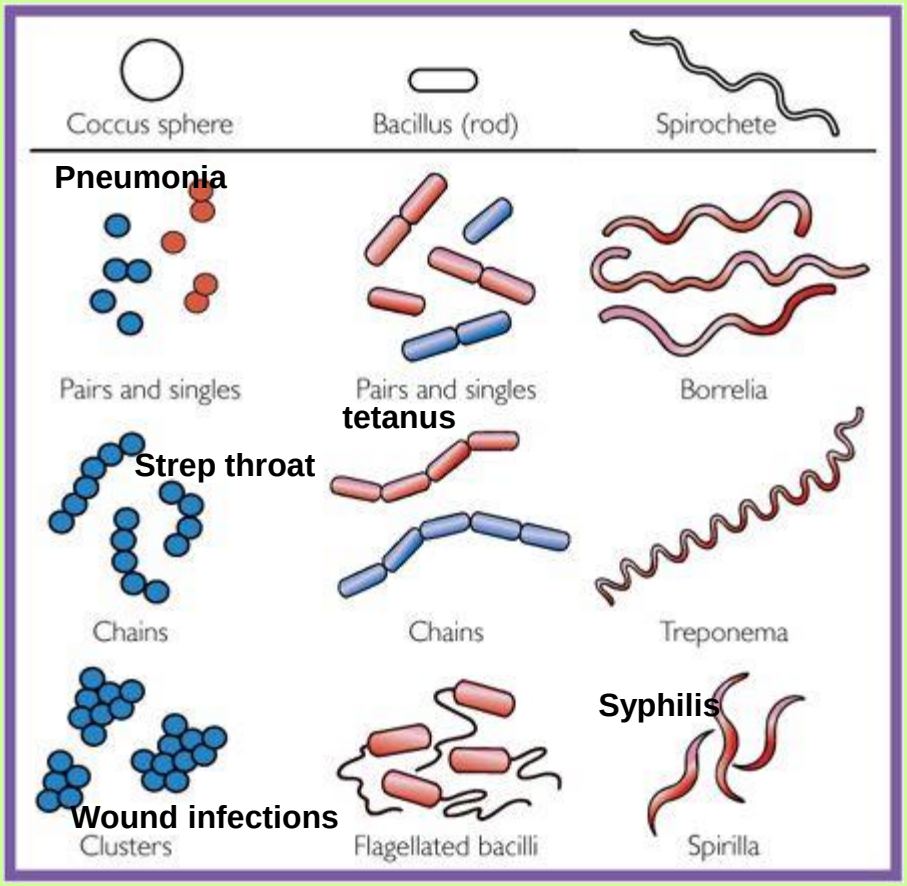
Back support devices may be helpful

MICROBIOLOGY…

Microbiology is the name of the science that studies organisms too small to be seen without a microscope. While most microorganisms are beneficial, some cause disease. These are called pathogens (germs).

There are 5 types of microorganisms.

One is bacteria. Round-shaped bacteria are called cocci (KŎ-kī); rod-shaped bacteria are called bacilli (buh-SILL-ī); spiral or corkscrew shapes are called spirilla (spy-RILL-ī). The disease each causes is linked to the way it is organized into pairs, chains, etc.



MICROBIOLOGY…

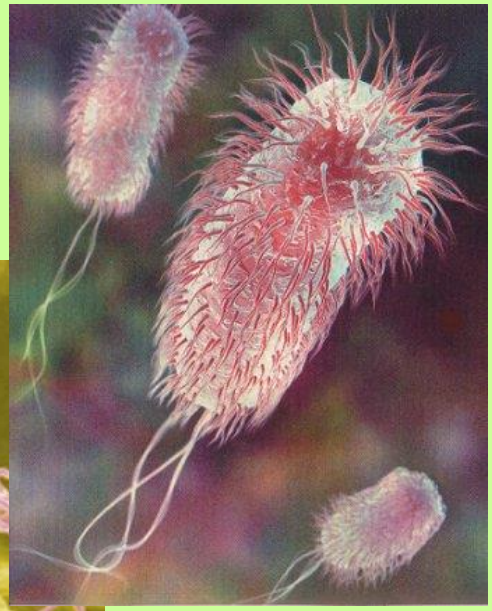
The second type of microorganism is called <u>fungi</u> (FUN-jī or FUN-gī), which live on dead matter and cause ringworm, thrush, athletes foot, and yeast infections.

The 3rd type of microorganism is <u>rickettsiae</u> (rĭ-KETT-see-ă), a parasite. Humans bitten by an infected flea, lice, or tick may contract a disease such as Rocky Mountain Spotted Fever.

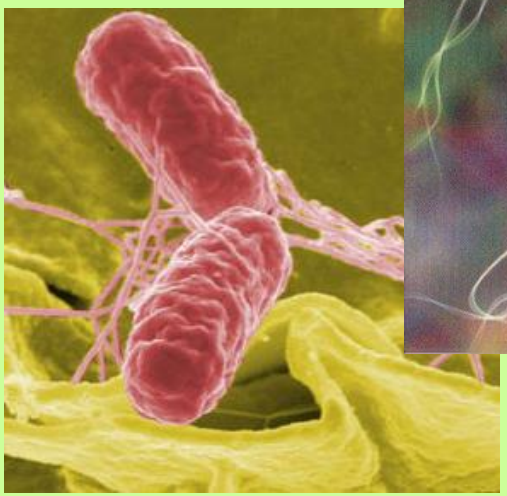
A 4th type of microorganism is <u>protozoa</u>, found in contaminated water supplies. They are sometimes carried by insects such as the mosquito, and cause diseases such as malaria and amebic dysentery.

MICROBIOLOGY…

The 5th and smallest type of microorganism is a virus. A virus is very difficult to destroy, and is spread by contact with blood or body fluids. A sneeze spread the common cold virus. Medication only relieves some of the symptoms, but doesn't kill the virus.



Pathogens need favorable conditions to grow: the right temperature, pH (alkalinity or acidity), food, moisture, and oxygen for aerobic microbes or no oxygen for anaerobic microbes.



MICROBIOLOGY…

There are 3 methods to prevent the growth of pathogens:

<u>Antiseptics</u> such as alcohol or the iodine-based betadine (bay-ta-dine) can be applied to the skin.

Rarely used on the skin because they can cause irritation, strong <u>chemical disinfectants</u> such as bleach kills pathogens on objects.

<u>Sterilization</u> kills microbes when objects are placed in an autoclave and subjected to steam under pressure.

INFECTION CONTROL…

When pathogens increase in number enough to alter the functioning of normal tissues, and infection results. Some infections are contagious… and can be spread to others.

Common symptoms of infection are redness, swelling, tenderness, warmth, and drainage.

INFECTION CONTROL…

There are 2 types of infections: endogenous and exogenous.

<u>Endogenous infections</u> develop within the patient who is in a weakened state. The infectious agent was already present in the body, but not apparent.

<u>Exogenous infections</u> originate outside the body, such as from that mosquito-transmitted malaria protozoa or the pathogens emitted from a sneeze.

When patients treated in a health care facility get an infection unrelated to their current illness, it is known as a <u>nosocomial</u> (nō-sō-KŌ-mē-ul) <u>infection</u>.

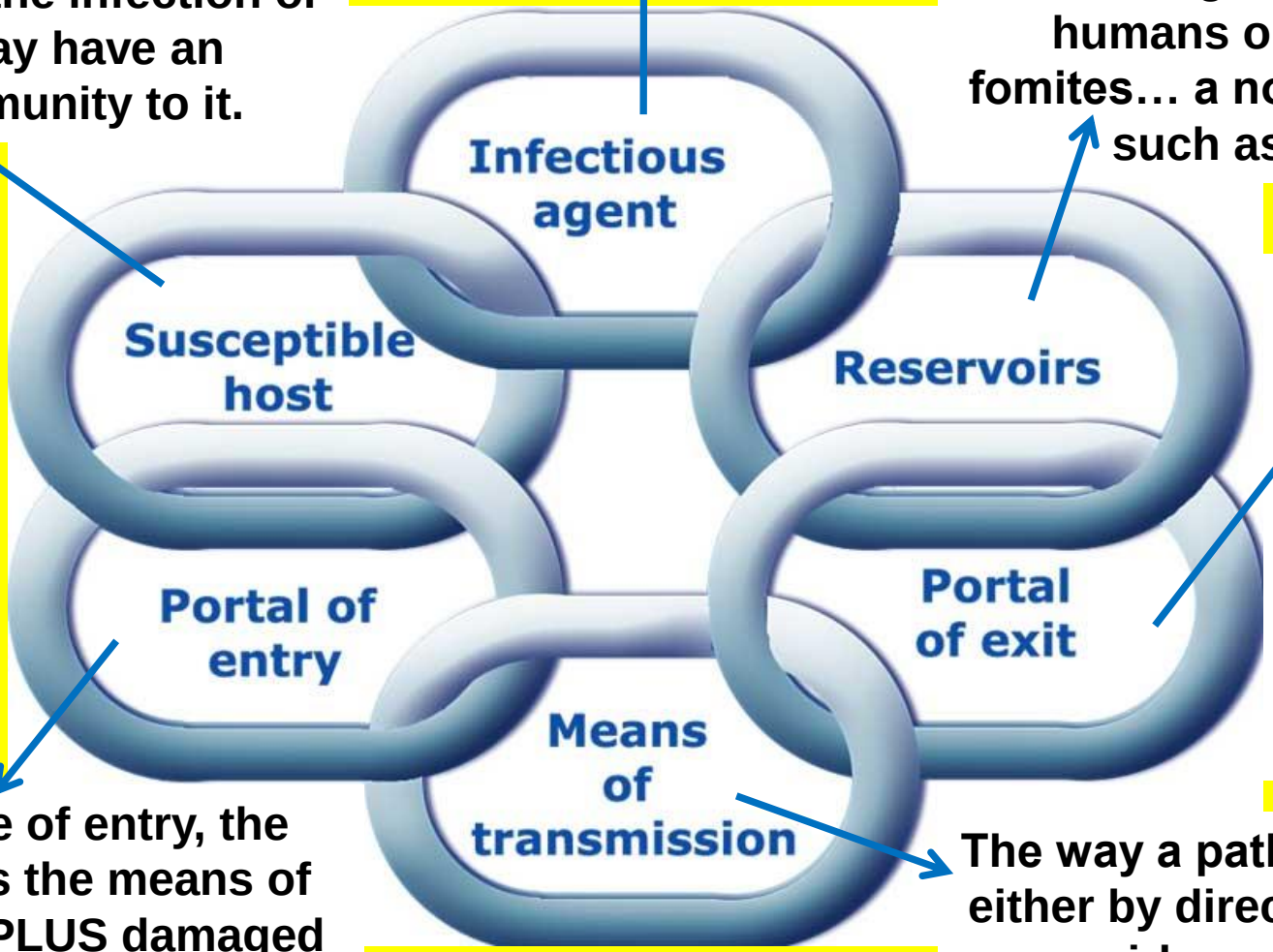
INFECTION CONTROL…

6 links in a chain must be present for an infection to occur:

Pathogen

A host that does not resist the infection or may have an immunity to it.

A place where pathogens can live. Living objects such as humans or insects or fomites… a non-living object such as a book.

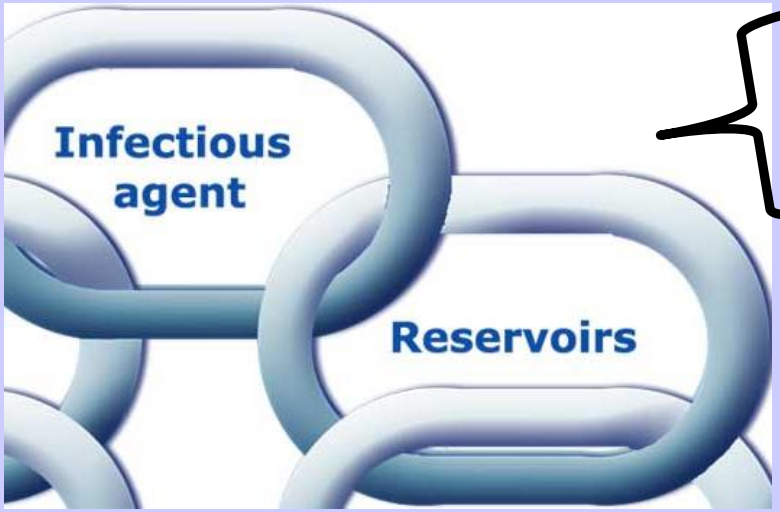


A means of escape, such as the respiratory tract, skin, blood, gastro-intestinal tract, and mucous membranes.

A place of entry, the same as the means of escape PLUS damaged or injured skin.

The way a pathogen travels… either by direct contact or by airborne droplet.

STANDARD PRECAUTIONS…



Standard Precautions were developed by the CDC, and updated in 2007.

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

Aseptic techniques target the pathogens and the place where pathogens live. They are methods used to make the environment, the health care worker, and the patient as pathogen-free as possible. Surgical asepsis involves sterilization and avoiding the contamination of the sterile field or equipment. Medical asepsis is achieved by handwashing, the good hygiene practices of the worker, proper handling of equipment, proper cleaning solutions and procedures, and following standard precautions.

STANDARD PRECAUTIONS…

To follow standard precautions means to assume that all blood and bodily fluids are contaminated with an infectious agent and to prevent exposure to them. Body fluids include:

1. **Blood**
2. **Vaginal secretions**
3. **Semen**
4. **Tissue specimens**
5. **Amniotic fluid around a fetus**
6. **Peritoneal fluid in the abdomen**
7. **Pleural fluid around the lungs**
8. **Pericardial fluid around the heart**
9. **Cerebrospinal fluid in and around the brain**
10. **Interstitial fluid in and around the cells**
11. **Body fluids containing visible blood**

Sweat, saliva, and tears are NOT a source of transmission.

STANDARD PRECAUTIONS…

Good handwashing is the most important of the standard precautions. Wash immediately after gloves are removed and between patients.

Put on clean gloves before touching mucous membranes, non-intact skin, blood, body fluids, secretions, excretions, and contaminated items. Remove gloves between tasks and procedures on the same patient, and between patients.

STANDARD PRECAUTIONS…

Protect mucous membranes of your eyes, nose, and mouth during procedures that may produce splashes or sprays of body fluids, secretions, or excretions by wearing a <u>mask or face shield.</u>

Wear a <u>non-permeable gown</u> or even hair and shoe covers to protect yourself and your clothing during procedures that may produce splashes or sprays or body fluids, secretions, or excretions. Remove and dispose of promptly and wash hands. The hair cover/hat is also a hygienic measure during surgical procedures.

STANDARD PRECAUTIONS…

Make sure reusable <u>patient care equipment</u> exposed to patient body fluids, secretions, or excretions are not used for the care of another patient until it has been properly cleaned

Follow routine cleaning and disinfection procedures for all surfaces that are frequently touched. This is an <u>environmental control measure</u> .

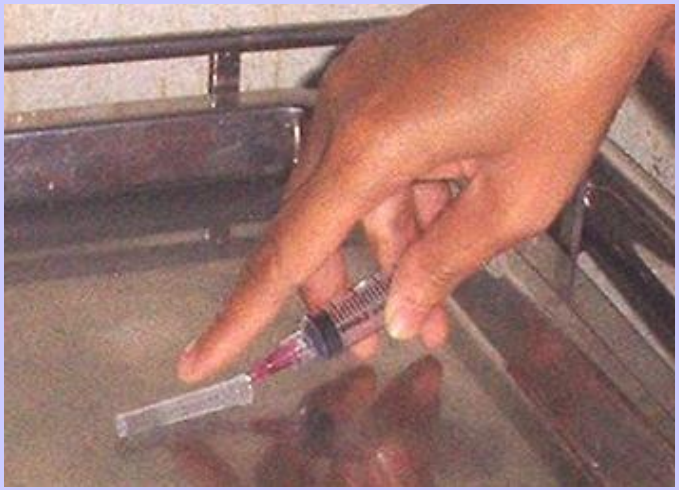
STANDARD PRECAUTIONS…

Patient placement is important in the event that a patient has a contagious disease or is unable to assist in maintaining appropriate hygiene or environmental control. These patients must have private rooms.

Handle, transport, and launder linens that may be soiled with body fluids, secretions, or excretions in a way that prevents contamination of clothing or surfaces and does not transfer pathogens to other patients or environments.

STANDARD PRECAUTIONS…

<u>Occupational health and bloodborne pathogens</u> are a concern when using needles, scalpels, and other sharp instruments. If you have to recap a needle, use one hand and *scoop* the cap back on. Dispose of sharps in biohazard containers.



Use resuscitation devices instead of mouth-to-mouth method.

TRANSMISSION-BASED PRECAUTIONS…

Some diseases are so infectious that extra precautions are needed, or even isolation rooms.

<u>Airborne precautions</u> must be taken for diseases like tuberculosis or SARS.

<u>Droplet precautions</u> must be taken for whooping cough. <u>Contact precautions</u> must be taken for Hepatitis B &C, HIV, handling biohazards or wound infections.

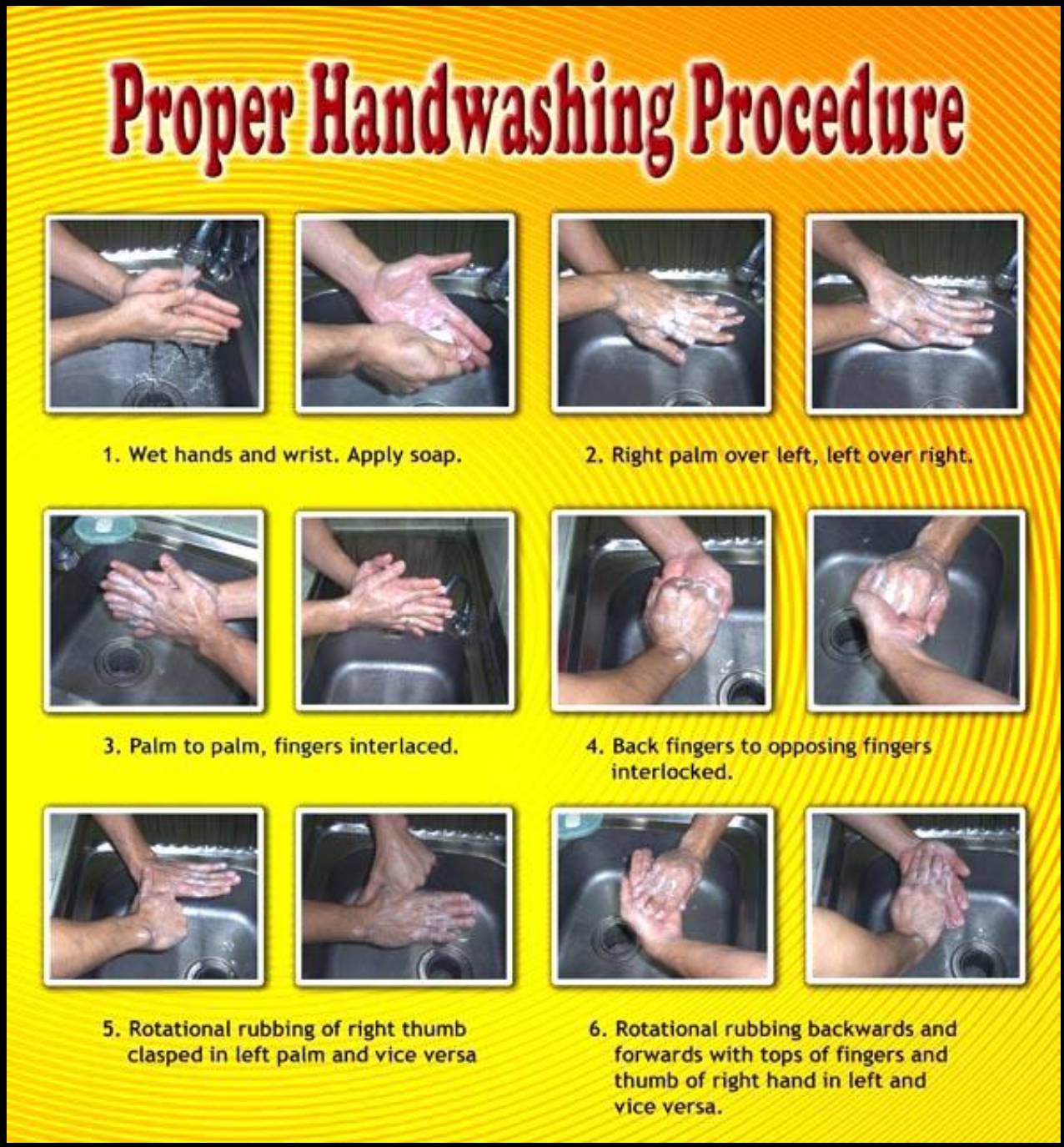

SAFETY PRECAUTIONS
& INFECTION CONTROL
THE END

How to put on personal protective equipment…

1. **Don shoe covers**
2. **Put on hair cover (including beard cover if needed)**
3. **Remove rings, bracelets, and watch OR push watch up on your arm**

How to put on personal protective equipment

4. **Wash your hands**



How to put on personal protective equipment…

5. Put on facemask and goggles OR mask with face shield

A. Position the mask so the nose and mouth are covered; place small bendable strip on mask over the nose

B. Tie the upper strings first and then the lower strings; make sure mask is under the chip OR pull the elastic band (s) in place

How to put on personal protective equipment…

5. **Put on the gown.**
   - **A. Unfold the gown; pull the sleeves up the arms with the opening in the back**
   - **B. Tie the gown at the neck**
   - **C. Overlap the gown at the back to close it**
   - **D. Tie the gown at the waist**

How to put on personal protective equipment…

6. **Put on the gloves**
7. **Pull the glove cuffs up over the sleeves**
8. **Provide client care**

How to take off personal protective equipment…

9. **Remove the gown**
   - A. **Untie the gown**
   - B. **Pull it off, inside out**
   - C. **Hold it away from the body and keep it inside out while folding or rolling it**
   - D. **Dispose in biohazardous waste container**

How to take off personal protective equipment…

10. Remove the gloves

A. **Remove the first glove by grasping it just below the cuff**
B. **Pull the glove down over the hand so it is inside out; hold the removed glove with the gloved hand**

How to take off personal protective equipment…

C. **Reach inside the other glove with the first two fingers of your ungloved hand**

D. **Pull the glove down, inside out, over the other glove in your hand**

E. **Wash your hands**

11. **Remove the mask, touching only the strings; do not the touch the outside of the mask and dispose of it in a biohazardous waste container**

12. **Remove hair, beard, and shoe covers**

13. **Wash your hands.**