Lesson Plan: Infection and Hygiene

1. Breath of Arrival
2. Howdy Partner
3. Introductions
4. Classroom Rules
5. Attendance
6. Infection and Hygiene
Classroom Rules

Punctuality - everybody's time is precious:

- Be ready to learn by the start of class, we'll have you out of here on time
- Tardiness: arriving late, late return after breaks, leaving early.

Participation without distractions:

- No side talking.
- No laying down.
- No inappropriate clothing.
- No food or drink except water.
- No phones in classrooms, clinic or bathrooms.

You will receive one verbal warning, then you'll have to leave the room.
Assignments Due
Infection and Hygiene

1. Student Handbook Assignment is due soon

2. Business Assignment 1a (V-5) is due soon.
Infection and Hygiene

“First, do no harm.” – Hippocrates, Father of Western Medicine
Introduction

A system of infection control is needed to protect clients and minimize disease transmission. These measures include hand hygiene and sanitary lubricant dispensing. Part of client safety includes good personal hygiene on the part of the therapist.
Disease Awareness

**Autoimmune disease**  Overactive \underline{immune} system attacks the body. Examples: rheumatoid arthritis, lupus, and multiple sclerosis.
Disease Awareness

Cancer Abnormal cells metastasize (grow or spread) into tumors. Examples: lung cancer and malignant melanoma.
Disease Awareness

**Deficiency disease**  Lack of **nutrients** interferes with growth and metabolism. Examples: *scurvy*, rickets, beriberi, and pernicious anemia.
Degenerative disease  Overuse or aging deteriorates ___organ___ function.  
Examples: osteoporosis, Alzheimer, Parkinson, and osteoarthritis.
Disease Awareness

Genetic disease  Caused by abnormalities in **inherited** material.
Examples: Turner syndrome, *Down syndrome*, hemophilia, and *albinism*. 
Disease Awareness

**Metabolic disease**  Abnormal metabolic processes disrupt ___homeostasis___.
Examples: *Cushing disease* and *diabetes mellitus*. 
Disease Awareness

**Infectious disease**  Disease caused by ____pathogens____.
Examples: *impetigo*, malaria, influenza, lice, and mad cow disease.
Disease Awareness

**Pathogen**  Infectious agent capable of causing ___disease___.
Examples: *virus*, *bacteria*, fungi, protozoa, prions, and pathogenic animals.
Response Moment

Autoimmune disease  Immune system.

Cancer  Abnormal cells.

Deficiency disease  Lack of dietary nutrients.

Degenerative disease  Overuse or aging.

Genetic disease  Abnormal genetic material.

Metabolic disease  Abnormal metabolism.

Infectious disease  Infection by pathogen.

Pathogen  Infectious agent.
Disease Causing Agents (Pathogens)

**Virus**  Non-____living____ entities that can only ____replicate____ themselves within the cell of a living host. Examples: common cold, influenza, AIDS, herpes simplex, and viral hepatitis.
Disease Causing Agents (Pathogens)

**Bacteria** ___Unicellular___ microorganisms. Examples: boils, tuberculosis, Lyme disease, and strep throat.
Fungi **Warm**, moist environments promote their growth. Include **molds** and yeasts. Examples: *ringworm*, athlete's foot, jock itch, and thrush.

Fig. 22-11, Ringworm.
Disease Causing Agents (Pathogens)

**Protozoa**  Pathogen that can only survive in a ____host____ organism.

Examples: amoebic dysentry, African sleeping sickness, and malaria.
Disease Causing Agents (Pathogens)

Prions  Rare, currently untreatable, and fatal central nervous system pathogen composed of misfolded proteins. Examples: bovine spongiform encephalitis (mad cow disease), and Creutzfeldt-Jakob disease.
Disease Causing Agents (Pathogens)

Pathogenic animals  Pathogens that live _in_ or _on_ a host organism and rely on that host for nourishment. Examples: worms, worms, lice, and scabies.
Response Moment

**Virus**  Non-living. Replicate in host cells. Cold, influenza, AIDS, herpes.

**Bacteria**  Unicellular microorganisms. Boils, tuberculosis, strep throat.

**Fungi**  Molds/yeast in warm/moist areas. Ringworm, athlete’s foot, jock itch.

**Protozoa**  Can only survive in a host. Trichomoniasis, amoebic dysentry.

**Prions**  Rare, untreatable, and fatal misfolded proteins. Creutzfeldt-Jakob.

**Pathogenic animals**  Rely on a host for nourishment. Worms, lice, and scabies.
Modes of Transmission

1. Direct contact

2. Vehicle transmission

3. Vector transmission

4. Respiratory droplets
Modes of Transmission

1. Direct contact  Most common route of disease transmission. Types:
   a. Person to person
   b. Animal to person
   c. Mother to fetus
Modes of Transmission

1. Direct contact  Most common route of disease transmission. Types:
   a. Person to person  Disease transmission from an infected person to an uninfected person by physical contact, sexual contact, and blood transfusions.
   b. Animal to person
   c. Mother to fetus
Modes of Transmission

1. Direct contact  Most common route of disease transmission. Types:
   
a. Person to person  Disease transmission from an __infected__
person to an uninfected person by physical contact, sexual contact, and
blood transfusions.

b. Animal to person  Disease transmission by __touching__ or
receiving a bite or scratch from an infected animal.

c. Mother to fetus
Modes of Transmission

1. **Direct contact**  Most common route of disease transmission. Types:
   
a. **Person to person**  Disease transmission from an _infected_ person to an uninfected person by physical contact, sexual contact, and blood transfusions.

   b. **Animal to person**  Disease transmission by _touching_ or receiving a bite or scratch from an infected animal.

   c. **Mother to fetus**  Disease transmission in which pathogens cross the _placenta_ and can infect an unborn child.
Modes of Transmission

2. **Vehicle transmission**  Infectious organisms are transmitted by contaminated *food* and water, or objects such as a *keyboard* or *doorknob*. Examples: Salmonella, and gastroenteritis.
Modes of Transmission

3. **Vector transmission** ___Stings_____ or ___bites_____ from insects and/or animals that exchange disease between two or more hosts. Examples: malaria (*mosquitoes*), Lyme disease (*ticks*).
Modes of Transmission

4. **Respiratory droplets**  Disease spread through the _____air_____ propelled _____coughing____ or sneezing. Example: colds.
Modes of Transmission

**Infection**  The period after disease transmission. Pathogens use host resources to ___multiply___ which interrupts normal functioning of the host.
Response Moment

Direct contact  Most common mode of transmission.
   Physical, sexual, and blood contact.
   Bite or scratch of an infected animal.
   Across the placenta.

Vehicle transmission  Object to person.

Vector transmission  Sting or bite transmits infection.

Respiratory droplets  Transmitted by sneezing and coughing.

Infection  The result of successful disease transmission.
Host Defenses

Host defenses

1. Natural defenses

2. Immune response

3. Fever

4. Inflammation
Host Defenses

1. **Natural defenses**
   - Barriers: intact *skin* and mucosa.
   - Chemicals: digestive enzymes and vaginal secretions.
   - Reflexes: coughing and *sneezing*.
Host Defenses

2. Immune response  Infection triggers the white blood cell production.
Host Defenses

Host Defenses

4. Inflammation  Protective mechanism in response to pathogens or tissue damage. Stabilize the injured area. Contains infection. Initiates healing.
   a. Heat
   b. Redness
   c. Swelling
   d. Pain
   e. Loss of function (rarely seen unless inflammation is severe)
Fig. 18-15. Cardinal signs of inflammation.
Host Defenses

Immune system suppressors: Chronic stress, malnutrition, radiation, certain medications, pre-existing conditions (diabetes, AIDS).
Contraindications

**Contraindication**  The presence of a disease or condition that makes it **unsafe** to treat a particular client in the usual manner. Usually determined during the intake. Types:

1. **Local contraindication**

2. **Regional contraindication**

3. **Absolute contraindication**
Contraindications

1. **Local contraindication**  Avoiding an area. Examples: recent *injury*, inflammation, tender with pressure, lump, lesion, suspicious mole, or localized skin rash.
Contraindications

2. Regional contraindication  Avoiding a body region.

Fig. 22-13. Eczema
Contraindications

3. **Absolute contraindication** Massage prohibited. Examples: highly contagious, widespread infection or inflammation, *fever*, exacerbated chronic disease, medical emergency.
Response Moment

1. **Local contraindication**  Recent injury, inflammation, tender with pressure, lump, lesion, suspicious mole, or localized skin rash.

2. **Regional contraindication**  A body region.

3. **Absolute contraindication**  Reported disease that is highly contagious, widespread infection or inflammation, fever, exacerbated chronic disease, medical emergency.
Infection Control for Massage Therapists

Ways that infection can spread in a massage context:

1. Unknowingly massage over an infectious rash.

2. Fluid from a boil may seep and enter broken skin.

3. Client with a cold sore touches their lip. Later you massage their hands. Later by you touch your lip before you have washed you hands.

4. Contact with contaminated linens, massage tools, and open containers of massage lubricant.
Infection Control for Massage Therapists

Using sanitation to break the chain of infection:

1. Remove the infectious agent:
   - Hand washing
   - Laundering linens
   - Disinfecting contaminated surfaces

2. Create a barrier against entry:
   - Gloves

3. Prevent disease transmission:
   - Dispensing uncontaminated massage lubricant
Fig. 9-1. Chain of infection.

Hygiene

Hygiene  Collective principles of health preservation.

1. Keep hair clean and off your face and pulled back.
Hygiene

2. *Fingernails* should be clean, short, and without colored polish.
Hygiene

3. Wear a clean clothes with short sleeves.
Hygiene

4. No wristwatches or ornate jewelry while massaging.
5. Bathe daily. Use an antiperspirant or deodorant if necessary.
Hygiene

6. Brush your teeth at least twice a day, and floss daily.
Hygiene

7. Shave or keep facial hair trimmed and groomed.
Hygiene

8. Control heavy perspiration with sweatbands.
Hand Hygiene

Human hands are the number one source of disease. *Cleaning your hands with soap and water* or hand sanitizer is the best measure to prevent infection.
Hand Hygiene

When to wash hands:
- After using the toilet
- Before, during, and after food preparation
- Before eating
- Before inserting or removing contact lenses
- After touching animals or animal waste
- Before and after caring for or visiting someone who is ill
- Treating wounds
- Handling something that could be contaminated
- After sneezing or coughing
Hand Washing Procedure

Hand washing

1. Wet hands, forearms, and elbows with warm running water.
2. Lather up to the elbows briskly for 15 seconds. Friction is essential.
3. Rinse thoroughly.
4. Use paper towels to dry your hands and forearms.
5. Use a paper towel to turn off the water and to open and close doors.
Hand Hygiene

Hand sanitizer  If hands are visibly soiled, wash them with soap and water before using hand sanitizer.
Standard Precautions for Massage Therapy

1. Use clean linens to cover or drape everything that touches your client.

Fig. 7-19. Client with feet uncovered, turning over to prone while her therapist lifts and holds the sheet in place.
Standard Precautions for Massage Therapy

2. Disinfect contaminated linens:
   - Using gloves, remove the linens from the table.
   - Wash with hot water, detergent, and 1/4 cup of bleach. Dry using hot air.
   - Using a new pair of gloves, clean massage table with soap and water.
   - Disinfect massage table using 1:10 solution of bleach and water.
   - Wash and dry your hands.
Fig. 9-3. **Glove removal.** A, Pulling off one glove. B, Putting the removed glove in the palm of the gloved hand. C, Removing the other glove with the first removed glove inside. D, Disposal of the used gloves.
Standard Precautions for Massage Therapy

3. Disinfect contaminated massage tools:
   - Using gloves, immerse 10 minutes in 1:10 solution of bleach and water or a 1:7 solution of isopropyl alcohol and water.
   - Wash and dry your hands
Standard Precautions for Massage Therapy

4. Use flip-top, *pump mechanism*, or single-use quantities of lubricant to avoid cross-contamination.
Standard Precautions for Massage Therapy

5. Clean hands by washing with soap and water or using hand sanitizer.
Standard Precautions for Massage Therapy

6. Use gloves when therapist has open wound on hands.
Standard Precautions for Massage Therapy

7. Do not massage if ill or symptoms (sneezing, coughing, fever, or runny nose.)
Standard Precautions for Massage Therapy

8. Do not massage clients who are *ill* or experiencing symptoms.
Standard Precautions for Massage Therapy

9. Maintain a *clean and sanitary office* and treatment environment
Standard Precautions for Massage Therapy

10. Do not massage while under the influence of *alcohol or recreational drugs*.
Standard Precautions for Massage Therapy

11. Follow a *personal health plan* and get regular physical examinations.

Fig. 4-4. **A**, Therapist rolling shoulders. **B**, Finger stretch. **C**, Hand swishing. **D**, Rubber band stretch. **E**, Ball squeeze.
Response Moment

Any questions about Standard Precautions for Massage Therapy?
“First, do no harm.” – Hippocrates, Father of Western Medicine