

HOME CARE AIDE | INSERVICE TRAINING MODULES

Jackie Nasso

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Home Care Aide: Inservice Training Modules
by Jackie Nasso and Lisa Celia

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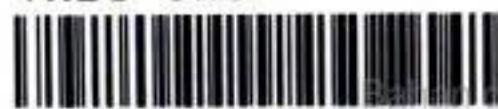
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Introduction

Community-based health care is needed in our society. The twenty-first century brings change to many aspects of our lives, including technology and medical breakthroughs. Despite the advancements, we are now facing more health care challenges than ever before. As health care reimbursement diminishes, many families are forced to care for their loved ones at home, with little or no training. Education is essential for successful health care in the home by family members or formal caregivers.

Home Care Aide: Inservice Training Modules is an all-inclusive set of inservices. Designed to allow the educator to present an inservice with little preparation time, each module includes PowerPoint® transparency masters and research materials for a one-hour presentation. The book presents a broad application for home care agencies and also provides valuable information for informal caregivers and support groups. The presenter should review the material before the inservice. Depending on the topic and the size of the audience, the instructional method may combine lecture, group discussion, demonstration, and group activities. Each module presents options for customizing the various instructional methods. Audience size, diversity, preferred learning style, and the setting for the presentation are important considerations when determining the optimal combination of methods. Using a combination of teaching strategies and tools results in a more effective presentation, which enhances learning and improves teaching-learning efficiency.

The use of visual aids is essential when using *Home Care Aide: Inservice Training Modules*. Visual aids increase information retention. Microsoft PowerPoint® transparency masters are provided for each module to correspond to the slides.

At the end of each module, instructional tools are included to summarize important concepts. Group activities, real-life scenarios including discussion questions and answers, and group demonstrations can be used to follow up the presentation. References and resources are also included with each module for further study.

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Effective Teaching Strategies

A successful presentation includes more than just accurate research material. Success entails the combination of both the material and the ability to keep the audience interested in the topic.

Be Enthusiastic

Present the information so that the audience becomes excited about the subject. Talk to everyone in the group by maintaining eye contact and changing positions and direction. Use body language to emphasize important issues.

Use Humor

The use of humor in any situation reduces anxiety and helps maintain the learners' attention. However, joke telling is not a requirement. Be yourself. Do not try too hard to be funny or something you are not.

Take Risks

The only way to know if a new teaching method is going to work is to try it. Do not get discouraged if the audience does not respond at first. Try a new approach and see what happens. Every audience is unique.

Incorporate Real-Life Examples

Some of the inservice material is technical. The learner wants to know, "Why is this important to me?" Throughout the presentation, mention real-life examples so that the learner will value the information provided.

Be Flexible

Depending on the topic and the audience, the instructional method may need to change. Although the teacher may prefer a specific style, such as group discussion, certain topics and learners may require a different method. Assess the atmosphere and teach accordingly.

Initiate Thought-Provoking Activities

The audience needs to take the information and incorporate it into their everyday thinking. The teacher needs to challenge the audience by having

them develop solutions to problems. Propose questions, brainstorming, or testing to promote problem-solving skills.

Be Prepared

If you are not prepared for the presentation, the class will not value the information. You do not have to be an expert on every subject, but you do have to review the information presented. Be prepared to refer audiences to sources where they can find information, such as organizations, books, and articles. Do not give false information.

Get Feedback

The teacher and the learner need to seek information about the quality of their performance. Feedback should be encouraged during and at the end of each presentation. It can be obtained from verbal and nonverbal responses. The instructor should observe for nonverbal clues, such as lack of eye contact from the audience and restlessness. Teaching strategies may need to be changed accordingly. The teacher may ask questions such as, “Is this clear?” or “Did I answer your question?”

Reinforce Important Items

During a presentation, always reinforce the key points of the session. Emphasize the terms you want the learner to remember. Statements such as, “again we see,” “as mentioned before,” or “remember” are reminders to the audience.

Summarize Key Points

At the end of any teaching session, summarize the important points. This will reinforce the teaching-learning process and provide feedback as to the progress made.

Tips for Using Transparencies and Slides

Visual aids increase the audience’s retention of the material. Combining what we hear with what we see is an effective teaching approach. Visual aids should enhance the presentation and not detract from it. The teacher should do the following:

- Turn off the projector when not in use. The fan noise can be distracting.
- Expand on the information or provide complete handouts.
- Display one point at a time by masking the rest with a piece of paper. The learner can concentrate on that item.
- The screen should be large enough for the audience to read the information.
- Read from the screen that the audience sees, not from your notes.

Source: Bastable, S. B. (1997). *Nurse as educator, principles of teaching and learning*. London: Jones and Bartlett.



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Improper use of body mechanics can lead to multiple injuries. Prolonged activities and fatigue can also contribute to these impairments.

● COMMON BACK INJURIES

- Low-back sprains and strains are the most common causes of back pain. The pain usually occurs after a sudden forceful movement, causing injuries to a ligament.
- Some injuries involve the intervertebral disks. These occur when there is a weakening in the disk, causing compression of the spaces between the vertebrae. Protruding disk, herniated disk, or slipped disk are terms used to describe such injuries.
- Facet-joint osteoarthritis is a degenerative arthritis of the spine. The arthritic changes cause pain and stiffness in the back, which can be exacerbated by improper body mechanics.

● CONSEQUENCES OF BACK INJURY

Loss of Work

- According to the National Council on Compensation Insurance, 25% of worker's compensation claims are attributed to back injuries.
- An average of 555 million days of work are lost per year because of back pain and injuries.

Chronic Back Pain

- It is easier to prevent a back injury than to eliminate the pain of an injury.
- It is difficult to identify the cause of back pain because it can originate in the soft tissue, bones, disks, or nerves.
- No magic remedy or foolproof treatment plan exists for back pain. It can be difficult to treat.
- Back exercises can strengthen muscles and reduce pain.

Inability to Care for Others

- Injured, weak, or tense muscles and ligaments cause pain and limit the ability to care for others.
- Injury can cause financial hardship if the client is unable to work.
- If a caregiver is unable to care for a family member, the caregiver will have the additional burden of finding a replacement or assistance.

● **BODY MECHANICS**

Everyone should apply the principles of body mechanics at all times.

- Proper body mechanics are necessary in all activities, from elevating a client's extremity to cooking, cleaning, and doing laundry.
- Using these principles can keep the expenditure of energy to a minimum when lifting, moving, or carrying a heavy object.
- ✱ • The principles of body mechanics should be taught from a young age.

Lecture Material for
Transparency
Master
1-4

The instructor can teach all the necessary information about proper body mechanics, but if these principles are not followed, back pain may occur.

- As caregivers, we must first take care of ourselves. Without the home care aide (HCA) or caregiver, the client will not get the needed help. This is important to remember.
- Using the principles of body mechanics is another way to "take care of you."

Lecture Material for
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This portion will review the basic elements of the human body as they relate to body mechanics.

● **STRUCTURES INVOLVED IN BODY MECHANICS**

Spinal Cord

- The spinal cord enables movement.
- When properly aligned, the spine curves gently inward at the neck and lower back and outward in the rib area.
- This "S" shape keeps the head, chest, and pelvis centered, balancing the weight of the body.

Intervertebral Disks

- Disks are the pads of soft tissue between the 26 vertebrae.
- This padding allows the bony spine to twist and move easily.

Vertebrae

- Vertebrae are the bones of the spine.
- The spinal cord and nerves run through the vertebrae.
- Vertebrae support the back and protect the spinal cord.



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Incorporating the principles of body mechanics into our daily routines helps prevent back pain. The abdominal (stomach) muscles are the supporting muscles of the back and must be strengthened and stretched. The proper way to bend and move must be relearned to decrease muscle strain on the back. Proper exercising can increase the strength of muscles.

● **PRINCIPLES OF BODY MECHANICS**

Always Have a Stable Base of Support and Maintain the Center of Gravity

- The broader the base, the greater the stability.
- When everything is aligned, the body maintains a proper balance.
- Stability is increased when the base of support is broad and the center of gravity is low.

Get Close to the Load That You Are Lifting

- Bring the work closer to you.
- Bring the object to your center of gravity; if you do not, the weight will pull you out of alignment and you may lose your balance.
- When giving a bed bath, have the client move closer to you.
- Bring the grocery bags closer to you when carrying them.

Use the Larger Muscles or Muscle Groups

- If you reach with your arm to sit a client up in bed, you are using just the biceps muscle.
- If you bend your elbow under a client's underarm and sit him or her up, you are using the muscles in the arm, shoulder, and back.
- Use the larger leg muscles to bend rather than the smaller and weaker muscles of the back.

Use Proper Posture

- Poor posture creates undue pressure on the muscles, ligaments, and vertebrae.
- Proper posture creates good body alignment.
- Good body alignment encourages the correct function of all body systems.

If You Think It Is Too Heavy to Lift Alone, Get Help

- Do not do anything that will cause injury to yourself or others.
- Use common sense.

Use Coordinated Movements

- Jerky movements cause undue strain on the joints.
- Explain what you are doing to your partner or to the client.
- Set up a plan. For example, “On the count of three, you are going to stand. . . 1, 2, 3, stand.”

Plan the Move

- Be prepared.
 - Is there a clear passage to where the object is being moved?
 - Before a transfer, is the client’s wheelchair positioned properly?
 - Are there objects on the floor?
 - Is there enough light in the room where you are going?
- Explain the procedure to the client.

Better to Push, Pull, or Roll an Object Than to Lift and Carry It

- Lifting requires moving the weight of the object against the pull of gravity.
- Pushing or pulling uses less energy than lifting.
- Try to push, pull, or roll rather than lift.

Use Your Leg Muscles to Lift an Object, Not Your Arms or Back

- Your leg muscles are the largest muscle groups in the body.
- Use your arms to anchor the object you are lifting.
- Maintain the natural curve in your back.

Work With the Direction of Your Efforts, Not Against Them

- Your feet should always point toward the direction of the work; this will avoid a twisting motion in the knees.
- When assisting a client to sit up in bed (you can demonstrate this method):
 - Point your feet toward the client.
 - Maintain the wide base and center of gravity.
 - Use your upper arm and shoulder muscles to help the client sit up.

Bring the Work to a Comfortable Position

- If there is a hospital bed, raise it to a level at which you are not bending.
- Lower yourself to the level of the work so you are not bending. For example, sit on a chair when giving a bed bath.



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PRINCIPLES OF BODY MECHANICS

- * Always have a stable base of support.
- * Maintain the center of gravity.
- * Get close to the load that is being lifted.
- * Use the larger muscles or muscle groups.
- * Use proper posture.
- * If you think it is too heavy to lift alone, *get help*.
- * Use coordinated movements.
- * Plan the move.
- * It is better to push, pull, or roll an object than to lift and carry it.
- * Use your leg muscles to lift an object, not your arm or back muscles.
- * Work with the direction of your efforts, not against them.
- * Bring your work to a comfortable position.
- * Avoid twisting motions.

Handout 1-3

BODY MECHANICS

Transparency Master **1-1**

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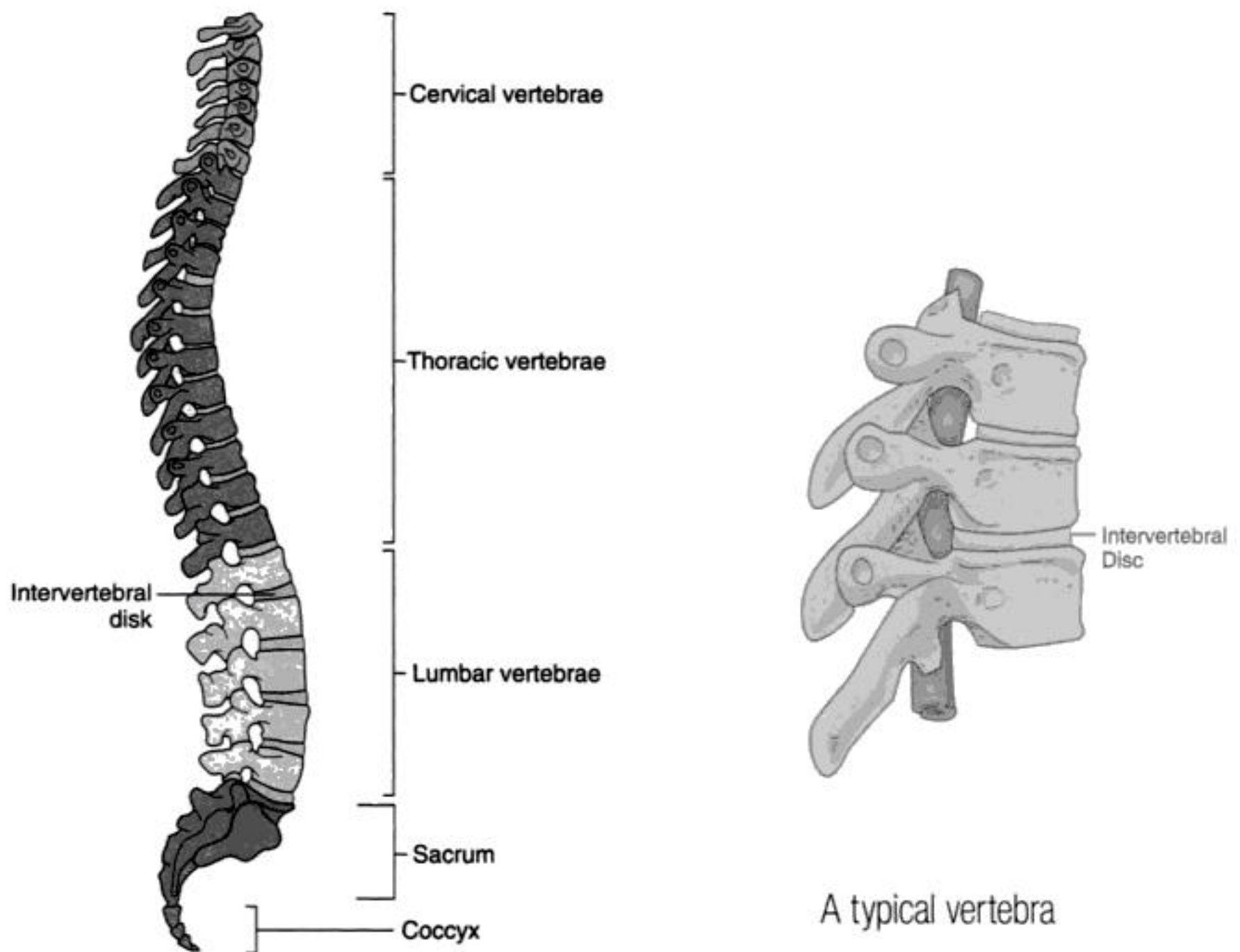


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The responsibility lies with you.



Structures involved in body mechanics



Side view of the spinal cord

Transparency Master **1-5**





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Body mechanics

Narrow base of support



Wide base of support





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- If you were not instructed on how to transfer the client using the Hoyer lift, do not transfer the client even if the client or client's family asks. Call the supervisor.
- Gut feelings and intuition are an important part of our safety defenses. If the voice inside tells you not to walk down that street, do not walk down that street.
- "When in doubt, do without!" If you are unsure whether to do something, wait for additional instructions.
- Notify the supervisor immediately when a safety concern arises.
- Notify the supervisor immediately if you or your client is injured.

✱ (Insert your agency's policy for reporting injuries of HCAs and clients here.)

General Lecture
Material
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Transparency
Master

The following information is repeated in this module to satisfy state and federal requirements. Please check with your state for additional requirements for safety inservice.

● BACK CARE

See Module 1 for more information and overheads.

Back Injuries

Back injuries account for approximately one-half of all reported injuries and illnesses in the health care industry. Following the principles of body mechanics can reduce the HCA's risk of injury.

- Use proper body mechanics to maintain the center of gravity and alignment of the back and body.
- Bring heavy items close to you. This prevents your body from moving out of alignment, while maintaining your center of gravity through the base of support.
- Bring the client closer to you when transferring him or her.
- Remember that when maintaining the center of gravity, the body stays aligned, preventing back injuries.

Body Alignment

- Proper body alignment allows the muscles and joints to function correctly.
- When alignment is maintained, the muscles divide the work, conserving energy and preventing fatigue.

Preventing Back Pain

- The abdominal (stomach) muscles are the supporting muscles for the back and must be strengthened and stretched.
- The proper ways to bend and move must be learned; these techniques will decrease muscle strain on the back.
- Maintain a wide base.

Principles of Body Mechanics

Review Handout 1-3 on the principles of body mechanics located in Module 1.

- Always have a stable base of support.
- Spread your feet about hip-length apart. Have your feet and knees face in the same direction.
- Place one foot in front of you and the other foot behind you (the athletic stance).
- Always maintain the center of gravity.
- Get close to the load you are about to lift.
- Always use proper posture.
- If you think the load is too heavy to lift alone, get help.
- Always use coordinated movements.
- Plan your move.
- It is better to push, pull, or roll the object than to lift and carry it.
- Use your leg muscles to lift the object rather than your arm or back muscles.
- Work with the direction of your effort, not against it.
- Bring your work to a comfortable position.
- Avoid any twisting motions.



Lecture Material for
Transparency
Master
2-2

• FIRE SAFETY

Fire Facts

Fire is the third leading cause of accidental deaths in homes. Most fires occur in the kitchen.

- Cooking is the leading cause of fires, usually because of leaving cooking unattended.
- The leading cause of fire deaths is smoking. The second leading cause of fires and fire deaths is faulty heating systems.
- The risk of fire deaths among seniors and children under the age of five is double that of the average population.
- Working smoke detectors and knowledge of the evacuation route increase the chances of survival.

Tips on Preventing Fires

- Store flammable items (e.g., aerosol cans) away from heat.
- Do not use items with frayed electrical wiring.
- Do not overload electrical outlets.
- Dispose of items properly (e.g., paints, stains, cigarettes).
- Do not leave cooking unattended.



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1. At the first sign of fire, close the door to the room of the fire and exit the building.
2. Do not stop for anything, including gathering money, jewelry, pictures, or getting dressed.
3. Do not use the elevator.
4. If the room is smoky, cover your mouth with a towel or scarf (moistened if possible). This reduces the heat when breathing in the hot air.
5. Crawl or move as close to the floor as possible (where it is easier to breathe). Heat and smoke rise.
6. Feel the door for heat with the back of your hand before opening any doors.
 - If the door is hot to the touch, do not open it. Find an alternate exit.
 - If the door is cool, open it cautiously. Hold on to the door handle with one hand and, with the same-side back shoulder, slowly push the door open. Be prepared to shut the door quickly if you see smoke or flames.
7. When out of the building safely, call for help. Do not re-enter the building.
8. Stay with your client.
9. Keep yourself and your client as warm and comfortable as possible until help arrives.
10. Notify the agency as soon as possible.

Many apartment buildings and high-rises may have their own evacuation plan. Check with the building's superintendent or building manager.

● AUDIENCE INTERACTION FOR TRANSPARENCY MASTER 2-2

Ask the audience to identify two ways of getting out of a building. Discuss scenarios of how to safely exit a building.

● FIRE SAFETY QUESTIONS AND ANSWERS

Question: If I cannot get the client out of the house, what do I do?

Answer: If you cannot remove the client safely, exit the building and call for help. Alert others that the client is still in the building.

Question: If it is an apartment building, am I responsible for getting everyone out?

Answer: You are morally responsible for trying to alert others. Try yelling "fire" or pulling fire alarms.



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Transparency Master
2-4

- Have routine eye exams to detect:
 - glaucoma.
 - cataracts.
 - diabetes.
 - aging eyes.
- Wear properly fitting shoes.
- Encourage the proper use of assistive devices.
- Remove hazards by:
 - securing throw rugs.
 - installing banisters on stairways.
 - lighting all areas of the home.
 - removing clutter in passageways where falls or injuries can occur.
 - using a bathmat and installing a grab bar in the bathroom. Most accidents occur in the bathroom on wet, slippery floors.
 - avoiding unstable step stools. Make sure the step stool is secure. Test it to make sure it is sturdy enough to hold your weight before standing on it.
 - never standing on chairs or boxes. If your inner voice (common sense) tells you not to stand on an item, do not. Chairs are designed to withstand weight over the entire seat. When you stand on a chair, the weight is not evenly distributed and the chair can break or tip. Use step stools with handrails.

Other Risks for Falls

- Remember, standing in the shower can cause weakness, dizziness, or light-headedness.
- Falls can also be a result of nausea, vomiting, and diarrhea, which can cause changes in blood pressure, leading to dizziness or fainting.



Lecture Material for
Transparency
Master
2-5

● CRIME PREVENTION

Crime and violence are very much a part of our lives. For the HCA, the workplace is the community. This leads to an even greater risk for workplace violence. The HCA works alone and often works in high-crime areas. Most HCAs work in environments where they have little or no control.

Workplace Violence

Health care and social service settings have the highest incidence of workplace violence. The Occupational Safety and Health Administration (OSHA) and the National Institute of Occupational Health and Safety (NIOHS) define violence as “any physical assault, threatening behavior, or verbal abuse occurring in the workplace.”



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General Lecture
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● SAFETY IN THE FIELD

Always be aware of your surroundings, especially of what is behind you. Pay attention to people around you.

- High-crime areas are not the only areas where crimes can occur. Always keep up your guard.
- Walk with an attitude.
- Remember that you are more important than any item. If a criminal approaches you and wants your purse or wallet, give it to him.
- Carry only the items you need.
 - Carry only enough money for that day. Do not carry large amounts of money if you do not plan on spending it.
 - Carry only the keys you need. Have your house and other keys on a separate key chain.
 - Your wallet should not have anything in it that cannot be replaced. Any keepsakes should be left at home. Carry only the necessary personal items.
 - Do not carry your social security card with you.

Learn How to Recognize, Avoid, and Defuse Potentially Violent Situations

General Measures

- Always walk in areas that are open and public; do not take shortcuts through alleys or behind buildings.
- Know where you are going. Call ahead to get directions.
- Walk with an attitude. If the criminal believes you are weak, you are going to be an easier target than someone who is walking proud.
- Get someone's attention if you feel threatened; yell "fire" or "money."
- Have your key ready when entering your home or car. The time it takes to find a key is enough time for a criminal to attack you.
- If you feel uncomfortable in an area, get out of there.
- Make others aware of where and when you are going, so they can keep an eye out for you.

Carrying Handbags

- Carry your belongings close to you. Do not swing your bag or dangle it from your shoulders. The criminal can run behind you and pull it off.
- Avoid wearing your bag sideways around your neck and shoulder. If a criminal tries to grab it, you will be pulled with it.
- The best way to carry a handbag is under your coat or jacket, and keep money in your pocket.
- If possible, do not carry a bag; keep all items in your pocket.



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● FRAUD

Be on the lookout for other types of criminals. The ill and elderly are common targets of fraud. Keep your clients aware of fraudulent acts.

- Be aware of any offers that are too good to be true.
- Do not let anyone into the home unless without proper identification. If unsure, call the company and verify his or her employment. This includes:
 - meter readers.
 - public utilities (gas, electric, oil, phone, cable).
 - other HCAs, nurses, and social workers.
- When approached by a tradesperson, ask for references and proof of insurance. Never pay in full before the job is complete. Get more than one quote for a job.
- If you receive a bill in the mail and you are not familiar with the company, investigate before paying.
- Telemarketing fraud is especially common among elderly or home-bound clients because clients:
 - may be lonely and enjoy talking to others.
 - may believe that the caller is just trying to make a living.
 - may not believe it is a crime, just a pushy salesperson.
 - have little money and want to believe that the deal is legitimate.

Signs that a solicitation could be telemarketing fraud include the following examples:

- Companies demand an immediate decision. Lawful businesses will always send more information about their company.
- Contests or sweepstakes promise elaborate gifts and then ask for money. True contests or sweepstakes do not ask for money because it is against the law.
- Investments are said to be risk-free. All investments have some risk and should be explained to the buyer carefully.
- Companies request cash only or payments wired directly to them.
- Companies ask for your social security number. Only if you are applying for credit should anyone ask you for your social security number. Be very careful to whom you give your social security number. A criminal can obtain credit cards by using your name and social security number, then steal your credit and identification. You may be responsible for some of the fraudulent bills or have to pay for a lawyer to represent you.
- Someone asks for your home address. Do not give it unless the caller is verified. Ask for a number where you can call him or her back.
- Be wary of charities requesting donations. Know the specific organization you are pledging. Many criminals pose as representatives



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HOME-SAFETY CHECKLIST

- ☐ 1. Are lamps, extension cords, and telephone cords placed out of the flow of traffic?
- ☐ 2. Are emergency numbers posted on or near the telephone?
- ☐ 3. Are electrical cords in good condition and not frayed or cracked? Are they overloaded?
- ☐ 4. Are the small rugs and runners slip-resistant?
- ☐ 5. Is there access to a telephone near the sleeping area? Is the telephone easily accessible?
- ☐ 6. Do you have an escape plan in effect? Are there two ways to exit?
- ☐ 7. Is there at least one smoke detector on each floor? Are they tested regularly?
- ☐ 8. Is there any exposed wiring? Do the outlets and switches have cover plates?
- ☐ 9. Are the light bulbs the appropriate size and shape for the lamps or fixtures?
- ☐ 10. Are small stoves, space heaters, and other heating sources away from flammable material?
- ☐ 11. Are towels, curtains, and other flammable materials located away from the range?
- ☐ 12. Are hallways, stairs, passageways between rooms, and other heavy-traffic areas well lighted? Are exits and passageways kept clear?
- ☐ 13. Are showers and bathtubs equipped with non-skid surfaces?
- ☐ 14. Do bathtubs and showers have at least one grab bar?
- ☐ 15. Are all medicines stored in proper containers and out of reach of children?
- ☐ 16. Are there banisters in the stairway? Are they secure?

Handout **2-4**



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Fall Prevention Checklist

(continued)

- ✓ Have routine eye exams**
- ✓ Wear proper shoes**
- ✓ Use a cane/walker**
- ✓ Remove hazards**



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Potential Warning Signs of Violence (continued)

- **Was recently hospitalized for mental illness**
- **Reports suicidal or homicidal thoughts**
- **Exhibits violent behaviors**
- **Undergoes changes in personality**



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Each section of this module can be presented individually.

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CHILD ABUSE

Abuse is more common than we are aware of and occurs in all walks of life.

● **GENERAL INFORMATION/OVERVIEW**

- In 1999, the United States Department of Health and Human Services estimated that 2.9 million cases of child maltreatment were investigated.
 - 58.4% were victims of neglect.
 - 21.3% were physically abused.
 - 11.3% were sexually abused.
 - 35% were either abandoned or had threats of harm.
- The actual incidence of child abuse is likely to be higher than reported.
- Two-thirds of abused children are school aged, eight years old or older.
- 10% of emergency room visits account for injuries due to abuse of children under the age of 7.
- Children with disabilities are abused more frequently.
- Child abuse causes an estimated 2,000 deaths each year, or 5 children every day. The death rate actually may be higher because many of the deaths due to abuse or neglect are listed as accidents or homicides.
- A common precipitating event to abuse is a crying baby. Death occurs most often in children under the age of three.
- 57% of children murdered before age 12 are killed by a parent.

● **HISTORY**

- Child abuse emerged as a topic of major medical concern in the early 1960s.
- Health professionals can detect signs of chronic and traumatic abuse in young children by documenting previous fractures, burns, and bruises in the form of healed injuries that are no longer visible.
- With this knowledge, the federal government has developed a national child-abuse reporting system. Mandatory reporting is the first component of the child protection policy.
- In 1976, the Child Abuse Prevention and Treatment Act (CAPTA) was signed. CAPTA defines child abuse and neglect with the following criteria:
 - The victim must be less than 18 years of age.
 - Abuse is any recent act or failure to act on the part of a parent or caretaker that results in death, serious physical or emotional harm, sexual abuse, or exploitation.



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Fractures and Head Injuries

- Fractures in young children often include spiral fractures of the arms or legs, facial fractures, and rib fractures.
- Abuse may involve head injuries in children under two years of age that cannot be explained by trauma (such as motor vehicle accidents).
- Physicians should order a skeletal survey to look for old fractures if abuse is suspected.

Human Bites

- A human bite can occur on any area of the body.
- Human bites crush the tissues and cause tissue bruising, whereas animal bites tear the tissue.



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Emotional Abuse in Children**General Information**

Emotional abuse includes psychological, verbal, and mental abuse. It is difficult to prove because there is no physical evidence of harm to the child. Emotional abuse consistently occurs with other types of child maltreatment.

- Emotional abuse consists of acts by parents or caregivers including unreasonable demands, verbal attacks, and constant belittling of the child.
- Abuse includes extreme punishment such as confinement; belittling; constant teasing; rejection; and lack of love, support, or guidance.

Signs of Emotional Abuse

The child may:

- Be extremely demanding or obedient.
- Be very aggressive or very passive.
- Portray adult behaviors (e.g., parenting other children) or infantile behaviors.
- Be overly friendly to strangers.
- Show a delay in physical or emotional development (e.g., difficulty learning to talk).
- Have difficulty with close relationships.
- Have low self-esteem.
- Have problems in school.





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- Isolation.
- Substance abuse.
- Domestic violence.

Recognizing an Abuser

- The parent may show little concern or interest in the child's school performance or sports activities. Conversely, the parent may demand perfection from the child with regard to schooling, extracurricular activities, and household chores.
- The abuser blames the child for his or her problems and expresses dissatisfaction or disappointment in the child to others.
- The abuser looks to the child for support, attention, and emotional needs or may be indifferent about the child.

● EFFECTS OF CHILD ABUSE AND NEGLECT

The effects of abuse vary among victims of child maltreatment. Abused children often bring the trauma into adolescence, adulthood, and parenthood. On the other hand, some abused children show few consequences in adulthood.

Several factors may influence the effects of the abuse:

- Intensity of the abuse
- Type of abuse
- Duration of the abuse
- The child's age at the time of the abuse
- The child's support systems

Some effects of the abuse are seen in the child's personality and behavioral development. Abused children are less likely to trust others and may have difficulty with interpersonal relationships, such as the parent/child relationship, relationships with peers, and intimate relationships, and may be prone to abusive relationships. Victims of abuse are more likely to be arrested and commit violent crimes.

Victims of sexual abuse have a higher risk for:

- Depression.
- Anxiety.
- Eating disorders.
- Addictions.
- Problems with sexual relations.

The following are possible behaviors of abused children:

- Feeling helpless, hopeless, and ashamed
- Depression
- Substance abuse



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Psychological Abuse/Emotional Abuse

Psychological and emotional abuse controls the victim's behavior and it damages self-esteem. It includes verbal abuse, interrogation, intimidation, and isolation.

Verbal Abuse

Verbal abuse includes verbal attacks, insults, or degrading remarks. This behavior is always present with other forms of abuse.

Threats of Abuse/Intimidation

The abuser threatens the victim in various ways. Most of the intimidating threats occur behind closed doors. The victim's fear is real even if others feel there is no threat. Examples of threats or acts of intimidation include:

- Threatening to hit, harm, or use a weapon on another person.
- Threatening to tell secrets or confidential information.
- Intimidating the victim with looks, actions, gestures, yelling, or smashing objects.
- Threatening to kill the victim's family or children. ("I will kill your sister if I find out you were with her.")
- Threatening to take away the children. ("If you go, you cannot take the children.")
- Threatening to commit suicide. ("I cannot live without you.")

Isolation

The abuser keeps his partner from people who are important to her, restricts her social events, or forbids her from leaving the home. Controlling all of the finances and preventing the partner from getting a job worsen the isolation.

● CHARACTERISTICS OF A BATTERED WOMAN

- Battered women come from all walks of life, including every social, economic, religious, and racial group.
- Battered women often feel degraded and worthless and may feel that they deserve the mistreatment. Lack of positive self-esteem may keep her from telling anyone about the abuse or make her believe she is a failure as a wife and/or mother.
- The victim feels a duty to keep the family together, no matter what the cost. She may submit to the abuse for the sake of the children, and often leaves the relationship only when the violence becomes directed at the children.
- The victim keeps the abuse a secret and believes that society ignores domestic violence. She feels she will be blamed for provoking or accepting the violence.



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Talk to the Victim

Let the victim know:

- There is no excuse for domestic violence.
- No one deserves abuse.
- It is not your fault.
- Help is available (e.g., support groups, shelters, and legal advice).

The National Domestic Violence Hotline provides information on how to find help in your community: 800-799-SAFE (7233), or 800-787-3224 (TDD) 24 hours a day.



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ELDER ABUSE

More elderly people are living longer and are dependent on others for their care. Even if they are not in a high-risk group, the elderly can find themselves in abusive situations.

● GENERAL INFORMATION/OVERVIEW

- For every case of elder abuse and neglect that is reported, experts believe there may be five cases that have not been reported.
- Elders who are ill, frail, disabled, mentally impaired, or depressed are at greater risk for abuse.
- Men and women over the age of 80 are two to three times more likely to be abused or neglected than the remaining elderly population.
- Older adults who have been abused tend to die sooner than those who are not abused, even in the absence of disease.

Elder abuse is more difficult to detect than child abuse because:

- Children over the age of 5 years go to school and have contact with other adults. The elderly do not.
- Approximately one-quarter of older adults live alone. Children do not live alone.
- Interaction is primarily with family members and very few outsiders. Children have outside interaction.
- Social isolation may increase the risk of maltreatment. Children live with their families and are not socially isolated.

● HISTORY

Federal definitions of elder abuse, neglect, and exploitation appeared for the first time in the 1987 Amendments to the Older Americans Act (42 U.S.C. 3001 et seq., as amended). This amendment provides guidelines for identifying problems of elder abuse; it does not have any enforcement purposes.



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- Misusing money or possessions.
- Coercing or deceiving an older person into signing a document (such as contracts or a will).
- Misusing guardianship or power of attorney.

Signs of financial abuse include:

- Changes in the elder person's bank account.
- Unexplained transfers of assets to a family member or someone outside the family.
- Unexplained withdrawal of large sums of money.
- Additional names on bank accounts.
- Unauthorized withdrawal of funds using the client's ATM card.
- Forged signatures for financial transactions or for the titles of possessions.
- Changes in the client's will.
- Bills unpaid despite ample financial resources.
- Payment for services that are not necessary (e.g., lawn service for a client living in an apartment).
- Valuables disappearing from the client's home.
- Uninvolved relatives claiming rights to the client's possessions.



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Neglect

Neglect is the most common form of elder maltreatment. It is defined as the refusal or failure of a caregiver to provide basic needs for the elder, including food, clothing, shelter, and medical care. Neglect may also include:

- Failure to provide services necessary to avoid physical harm and mental anguish and ensure home safety.
- Failure of the person with fiduciary responsibilities to provide care for the older client. For example, the person with power of attorney refuses to pay for the necessary home care services.
- Failure of a paid in-home service provider to arrange necessary care. An example is when a home care aide (HCA) does not go to the scheduled case.

Signs of neglect include:

- Dehydration.
- Malnutrition.
- Inappropriate dress for weather conditions.
- Caregiver's refusal of visitors.
- Untreated pressure sores.
- Poor personal hygiene.
- Untreated health problems.

- Hazardous or unsafe living conditions or arrangements.
- Improper electrical wiring; no heat or running water.
- An unsanitary living condition, such as dirt, fleas, or soiled bedding.

Self-Neglect

Self-neglect includes any behavior or action that threatens an older person's health or safety because of his or her own physical or psychological limitations. It remains a serious problem because many elderly people are isolated.

- The client may be confused or physically debilitated.
- The client may refuse or fail to provide herself with adequate food, water, clothing, shelter, personal hygiene, medication, and safety precautions.
- Most cases of self-neglect involve women.
- 45% of self-neglect cases involve people over the age of 80 years.

The definition of self-neglect excludes a client who is mentally competent and understands the consequences of his or her decisions. No one can force competent adults to change the way they live, even if the acts can threaten their health or safety. The elderly have the right to determine their affairs to the full extent of their ability as long as they are deemed competent.

Signs of self-neglect include:

- The inability to manage personal finances by failure to pay bills, stashing money, or giving money away.
- The inability to maintain activities of daily living, including personal care, food shopping, meal preparation, housekeeping, and appropriate dress.
- The inability to maintain safety by wandering, refusing medical attention, leaving the stove on, and/or lack of security.
- An unsafe living environment, without utilities or working toilets or with faulty wiring.
- Homelessness.
- A declining health status with dehydration, malnutrition, and untreated illnesses.
- Changes in mental status with confusion, inappropriate responses, disorientation, and memory loss.
- Lack of medical interventions, such as eyeglasses; hearing aids; dentures; decayed, missing, and filled teeth; and regular doctor's appointments.

Abandonment

Abandonment is a form of neglect in which the caregiver leaves the elderly person with no intention of resuming the caregiver role.



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Educating People About Elder Abuse

People need to understand the:

- Signs of abuse.
- Causes of abuse.
- Stress of being a caregiver.

Respite Care

- Respite care is having someone else take care of the elderly person temporarily, which gives the caregiver a break from caring for the family member. The break can alleviate stress, which is a major risk factor for abuse.
- Respite can range from a few hours (the caregiver can go to the movies or have a date with spouse or children) to a few weeks (the caregiver can take a family vacation or a business trip).
- Caregivers of complete-care clients, such as those with Alzheimer's disease or other forms of dementia and the severely disabled, should use respite care as often as possible.

Assistive Programs and Support Services

Home Care Services

- Assist with activities of daily living.
- Perform nursing assessment.

Adult Day Care Programs

- Care for the elder during the day.
- Provide social outlets and respite for the caregiver.

Support Groups

- Help the caregiver by giving him or her a place to discuss problems.
- Provide a social forum for caregivers, in which families in similar circumstances can band together to share solutions and provide informal respite for each other.

Counseling

- Provides treatment to help cope with personal and family problems.
- Helps caregivers to find ways to solve problems and cope with stress.

Placement

- Includes long-term care facilities or adult foster-care programs, which may be the best option for the aging client.
- Helps to relieve stress, which may lead to abuse.





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The National Council on Child Abuse and Family Violence
<http://www.nccafv.org>

National Domestic Violence Hotline
 800-799-SAFE (7233), or 800-787-3224 (TDD)
 24 hours a day

Nationwide Eldercare Locator toll-free number
 1-800-677-1116

U.S. Department of Health and Human Services
<http://www.acf.dhhs.gov/>

U.S. Department of Justice, Office of Justice Programs Web site
<http://www.ojp.usdoj.gov/vawo/welcome.htm>

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ABUSE**Pre/Post Test**

1. According to CAPTA, child abuse is defined as:
 - a. failure to act on the part of the caretaker resulting in death, serious physical or emotional harm, or sexual exploitation.
 - b. the victim must be less than 18 years old.
 - c. an act or failure to act that causes imminent risk of serious harm.
 - d. all of the above.
2. Signs of physical abuse include:
 - a. bruises in various stages of healing.
 - b. malnourishment.
 - c. inappropriate clothing.
 - d. missed doctor's appointments.
3. Which of the following is an example of financial abuse?
 - a. inability to manage personal finances
 - b. deceiving an older person into signing documents
 - c. failing to pay bills
 - d. all of the above
4. Define self-neglect.
 - a. any refusal or failure of a caregiver to provide basic needs to an older person
 - b. any refusal or failure of a caregiver to provide basic needs to an older person, excluding those who are mentally competent
 - c. any behavior that threatens an older person's health or safety because of his or her own limitations
 - d. any behavior that threatens an older person's health or safety because of his or her own limitations, excluding clients who are mentally competent
5. Intimidation is a form of domestic violence. Which of the following is an example of intimidation?
 - a. repeatedly insulting the partner
 - b. using physical harm as a method of control
 - c. using looks, actions, or gestures to control the partner's behavior
 - d. controlling all finances and preventing the partner from getting a job

Handout 3-1



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ABUSE

Transparency Master **3-1**



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Signs of emotional abuse

- **Extreme behaviors/low self-esteem**
- **Overly friendly to strangers**
- **Delays in physical/emotional development**
- **Difficulty with close relationships**
- **Problems in school**



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Types of domestic violence

- **Physical abuse**
- **Sexual abuse**
- **Psychological abuse**
 - **Verbal abuse**
 - **Intimidation/isolation**



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Signs of sexual abuse of the elderly

- **Injuries around the breasts or genital area**
- **STDs without explanation**
- **Vaginal or anal bleeding**
- **Torn garments**
- **Pain when walking or sitting**



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Section Two

Infection Control

This section is designed to educate the student on infection control and stress the importance of safe practices. Understanding the modes of transmission can protect the home care aide (HCA) and the client from disease. The evolution of blood-borne pathogens, such as human immunodeficiency virus and hepatitis, and the reemergence of tuberculosis demand that health care workers be aware of the latest trends and treatments.

Module 4

Basic Infection- Control Practices: Understanding Multidrug Resistant Bacteria

GOAL

To understand and demonstrate proper infection-control practices

OBJECTIVES

After completion of the presentation, students will be able to:

- Define the following terms:
 - *Microorganism*
 - *Pathogen*
 - *Cross-infection*
 - *Blood-borne pathogen*
 - *Transient pathogen*
 - *Resident pathogen*
- Describe the chain of infection.
- List the five modes of transmission.
- Demonstrate proper handwashing techniques.
- Describe the two-tier patient-isolation guidelines (standard precautions and transmission-based precautions) developed by the Centers for Disease Control and Prevention (CDC).
- Describe ways to prevent exposure to blood-borne pathogens in the workplace.
- Define *multidrug resistant organisms*.



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- The respiratory tract, by inhaling the pathogen.
- The urinary tract, by cross-contamination and poor hygiene.
- The gastrointestinal tract, by ingesting the microorganism; the pathogen can be transferred through the saliva.
- The reproductive tract, in semen or vaginal discharge.
- The blood, by exposure to a foreign body; this can lead to a local infection that can invade the circulatory system.

Susceptible Host

The host is the location where the pathogen will begin to multiply. Susceptibility is the degree of vulnerability an individual has to a pathogen. An infection will not develop until a person becomes susceptible to the strength and numbers of the germs. The stronger or more harmful the pathogen, the greater the likelihood of infection.

Several factors affect a person's susceptibility to infection.

- The strength and number of microorganisms
- Advanced age
- Nutritional status
- Hereditary conditions
- Stress
- Health status:
 - chronic illnesses
 - severity of illness
 - medical treatments
- Reduced function of the immune system (e.g., from chemotherapy or radiation)

Breaking the Chain of Infection With Infection-Control Practices

Eliminate the Infectious Agents

- Cleaning inhibits the growth of microorganisms.
- Disinfecting destroys the germs by using specific concentrations of chemicals. For example, bleach solution (one part bleach to nine parts water) should be prepared daily and stored in a safe, dark place.
- Sterilization occurs when heat reaches a level sufficient to destroy organisms. Methods include:
 - boiling water.
 - autoclave.
 - radiation.

Control or Eliminate the Source of Infection

- Eliminate the sources of body fluids, drainage, or solutions that harbor the pathogens by cleaning wounds and performing proper dressing changes.
- Bathing the client with soap removes organisms on the skin and removes drainage and dried secretions. Changing dressings will also decrease the source of infection because wounds are an ideal breeding site for germs.

Control Exposure to Pathogens

- Carefully handle body fluids, using gloves and personal protective equipment (PPE). Cover the mouth when sneezing or coughing and use care when disposing of tissues.
- Maintain the integrity of skin and mucous membranes. Cuts, sores, or breaks on both the caregiver's and client's exposed skin should be covered with bandages.
- When performing personal hygiene, do not cross-contaminate. Females should wipe from front to back (from urinary meatus toward the rectum) so as to clean from a clean to a dirty area and not vice versa.
- Avoid sharps (needle sticks).
- Properly handle catheters and drainage sets. Dispose of soiled and used items.

Control Transmission

- Wash hands often.
- Protect the susceptible host.
- Provide a well-balanced diet, ample rest, and prevent skin breakdown.
- Protect against unnecessary exposure to pathogens.
- Get immunizations.
 - Flu vaccine (influenza)
 - Pneumococcal vaccine
- Educate the client about ICPs.



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Handwashing/Hand Disinfection/Hand Decontamination/Hand Hygiene

The most important and most basic technique for preventing and controlling the transmission of pathogens is handwashing. Contaminated hands are the primary source of cross-infection.

- Handwashing removes two major groups of microorganisms found on the skin. *Resident flora* are organisms that normally reside on the skin, and *transient flora* are contaminants.
- Proper handwashing uses friction and requires 30 to 60 seconds of washing. Thirty seconds is equivalent to two verses of "Happy Birthday." Most people wash their hands for less than 10 seconds.

- Barriers to traditional handwashing include limited access to a sink, dry hands, and inconvenience of repeated washings.

Areas of the hands commonly missed include:

- Thumbs.
- Fingernails.
- Fingertips.
- Palms.
- Backs of hands.
- Wrists.

Hand-Hygiene Agents

- Plain soap with water physically removes certain levels of microbes.
- Antiseptic agents are necessary to kill microorganisms.
- Hand antiseptic agents are designed to rapidly eliminate most transient flora with a mechanical detergent effect. This provides an additional sustained antimicrobial activity on the remaining flora.

Alcohol-Based Hand Rubs

- Alcohol-based hand rubs have the most rapid bactericidal action of all antiseptics. They are the preferred agents for hygienic hand rubs (waterless hand disinfection).
- Alcohol-based hand rubs are active against all bacteria and are clinically proven against viruses, yeasts, and fungi. The bacterial action continues to work on resident skin flora after application.
- The CDC recommends alcohol-based hand rubs for health care personnel in all health care settings (i.e., hospitals and long-term care facilities).
- Research suggests that the use of alcohol-based hand rubs may improve adherence to proper hand hygiene practices. They are easily accessible at the bedside and do not require a sink or wash basin.

● AUDIENCE INTERACTION FOR TRANSPARENCY MASTER 4-3

Ask the audience when handwashing/disinfection should be performed.

Answer: Handwashing should be done:

- When arriving at a client's home and before leaving.
- Before and after providing personal care (bathing, assisting with toileting, changing a bedpan, changing dressings, emptying drainage bags, making bed or changing linens).
- Before handling food.
- When hands are soiled.



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Transmission-Based Precautions

Transmission-based precautions are designed to interrupt the mode of transmission by eliminating the spread of the disease to others. These are guidelines for additional infection-control measures for airborne, droplet, and contact transmission. These precautions are used in conjunction with standard precautions for highly communicable diseases.

Airborne Precautions

Pathogens can travel long distances through the air and in ventilation systems. Airborne precautions are used for diseases that are transmitted by air currents. A mask should be worn when in contact with the client. Examples of airborne transmitted diseases include:

- Tuberculosis.
- Pneumococcus.

Droplet Precautions

These precautions are used to prevent exposure to large droplets in the air. Droplets generally do not travel more than three feet. They can be spread when sneezing, coughing, or talking. A mask should be worn when in close contact with the client, especially when suctioning. Examples of these pathogens include:

- German measles.
- Mumps.

Contact Precautions

Gloves and gowns are used if the HCA comes in contact with the client or other personal items in the room and when the pathogen is spread by direct or indirect contact. Remember to remove the gloves and gown at the door. Disposable equipment and supplies should be used when possible.

Cleaning and Disinfecting

Cleaning and disinfecting are part of infection-control practices and standard precautions. Gloves must be worn when disinfecting.

- Clean all client-care equipment if it is soiled with blood or body fluids to prevent the transfer of germs to others and the environment.
- Dishes must be washed thoroughly with hot, soapy water and rinsed under hot, running water.
- Floors, countertops, toilets, tubs, and sinks should be disinfected with a bleach solution.
- Never place soiled linen or equipment on clean surfaces.

Laundry

Use PPE when handling soiled linen or clothing to prevent skin or mucous membrane exposure, contamination of clothing, and the transfer of microorganisms to others and the environment.

- Never place soiled linen on the floor or on any clean surfaces. Microorganisms can be transferred to other areas of the home.
- Normal washing will kill most microorganisms. Follow the manufacturer's directions for laundry detergents. Wash soiled items separately and each day.

Disposal of Hazardous Waste

Contact your local health department regarding safe disposal regulations.

Disposable Items or Equipment

- Double-bag all disposable items (gloves, gowns, diapers, underpads, dressings) by placing items in a plastic garbage bag and then in another plastic bag.
- Place in a covered trash container.

Sharps

- Place used needles and razors in a puncture-resistant container, such as an empty liquid laundry detergent bottle or coffee can.
- Properly seal the container for disposal as trash by attaching the lid of the container and taping it closed.

Studies have shown that needlestick injuries are often associated with:

- Recapping needles.
- Transferring body fluids between containers via sharps.
- Failing to dispose of used needles properly in puncture-resistant sharps containers.

Protect yourself from needlestick injuries by:

- Not recapping needles.
- Using needleless systems when available.
- Planning for safe handling and disposal of needles before using them.
- Promptly disposing of used needles in appropriate sharps disposal containers.
- Never opening a used sharps container.
- Reporting all needlestick- and sharps-related injuries promptly.
- Discussing any hazards with the supervisor.
- Attending scheduled inservices on ICPs.
- Getting a hepatitis B vaccination.

Prevention of Exposure to Blood-Borne Pathogens

- Educate staff on the importance of basic ICPs, including standard precautions, transmission-based precautions, and PPE.



- Follow the state and federal regulations, including The Needlestick Safety and Prevention Act (HR 5178, November 6, 2000). This act obligates employers to select safer needle devices and to involve employees in identifying and choosing the devices.
- Treat all occupational exposures appropriately.

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● **INFECTIOUS DISEASES**

Infectious diseases have increased over the last two decades. Factors causing the heightened emergence of infectious diseases include:

- Changes in health care, including:
 - increased use of antibiotics.
 - inappropriate use of antibiotics.
 - advanced technology.
- Increased longevity.
- Changes in lifestyle, including increases in:
 - dining out.
 - travel.
 - recreational drug use.
 - child care.
- Environmental changes.
- Changes in the ecosystem.
- Expansion into the rain forest and jungles.

● **MULTIDRUG RESISTANT ORGANISMS**

Multidrug resistant organisms are bacteria and other microorganisms that have developed resistance to antimicrobial drugs. Antibiotics are used to kill susceptible bacteria, but the resistant organisms survive. They quickly adapt to the new environment by replicating with mutated, resistant genes.

According to the CDC, antimicrobial resistance is one of the most critical infectious disease threats in the country. Additional problems with drug resistance beyond the illness include:

- Cost of the drug therapy.
- Need for alternative drug research.
- Longer hospital stays.
- Lost wages.

The misuse of antimicrobial agents has caused multidrug resistant organisms by:

- Noncompliance with drug therapy.
- Inadequate infection control.



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Enterococci

- *Enterococcus* is any *Streptococcus* that inhabits the gastrointestinal tract. Enterococci are gram-positive cocci.
- The bacteria may cause sepsis, endocarditis, urinary tract infection, and wound infection.
- Strains resistant to cephalosporins, clindamycin, tetracycline, erythromycin, and vancomycin have been found.

Vancomycin-Resistant Enterococci (VRE)

- These bacteria are resistant to the antibiotic vancomycin. The bacteria are usually found in the stool.
- Healthy people are at low risk of getting infected with VRE.
- VRE was first discovered in the United States in the 1980s. Areas now reporting VRE are Europe, Australia, United States, and Japan.

Risk Factors for VRE

- Prolonged hospital stays, especially in intensive care units
- Clients with hematologic malignancies or after transplantation
- Use of multiple antibiotics

CDC Guidelines for Preventing the Spread of VRE

- People with a healthy immune system have a very small risk of becoming infected with VRE. Those with a weakened immune system should only have casual contact with individuals infected with VRE.
- Follow standard precautions and use PPE if there is contact with body fluids. Barrier precautions are used when linen or clothes are soiled.
- Inform health care personnel about the client's multidrug resistant bacteria status.

Other Multidrug Resistant Organisms

- Extended-spectrum beta-lactamases, resistant to cephalosporins and monobactams
- Multidrug resistant *Streptococcus pneumoniae*, resistant to multiple drugs including penicillin and erythromycin
- Multidrug resistant tuberculosis
- Multidrug resistant HIV
- Multidrug resistant hepatitis B and hepatitis C.





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RESOURCES

Centers for Disease Control and Prevention

<http://www.cdc.gov>

Occupational Safety and Health Administration

<http://www.osha.gov>

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Name _____ Date _____

Program/Course _____ Instructor's Name _____

REAL-LIFE SCENARIO

Juan, an HCA, is caring for a client with end-stage renal disease. The client goes for dialysis three times a week, and Juan helps the client get ready for her treatments. Juan assists the client in the shower, prepares a meal for her, and helps the client dress. Juan also maintains the client's home by cleaning the kitchen, bathroom, and bedroom; washing the client's clothes; and removing the trash.

Question 1. What basic infection-control practices does Juan use with his client?

Question 2. When should Juan use personal protective equipment with his client?

Question 3. Handwashing is the most important technique for preventing and controlling the transmission of pathogens. When should Juan wash his hands?

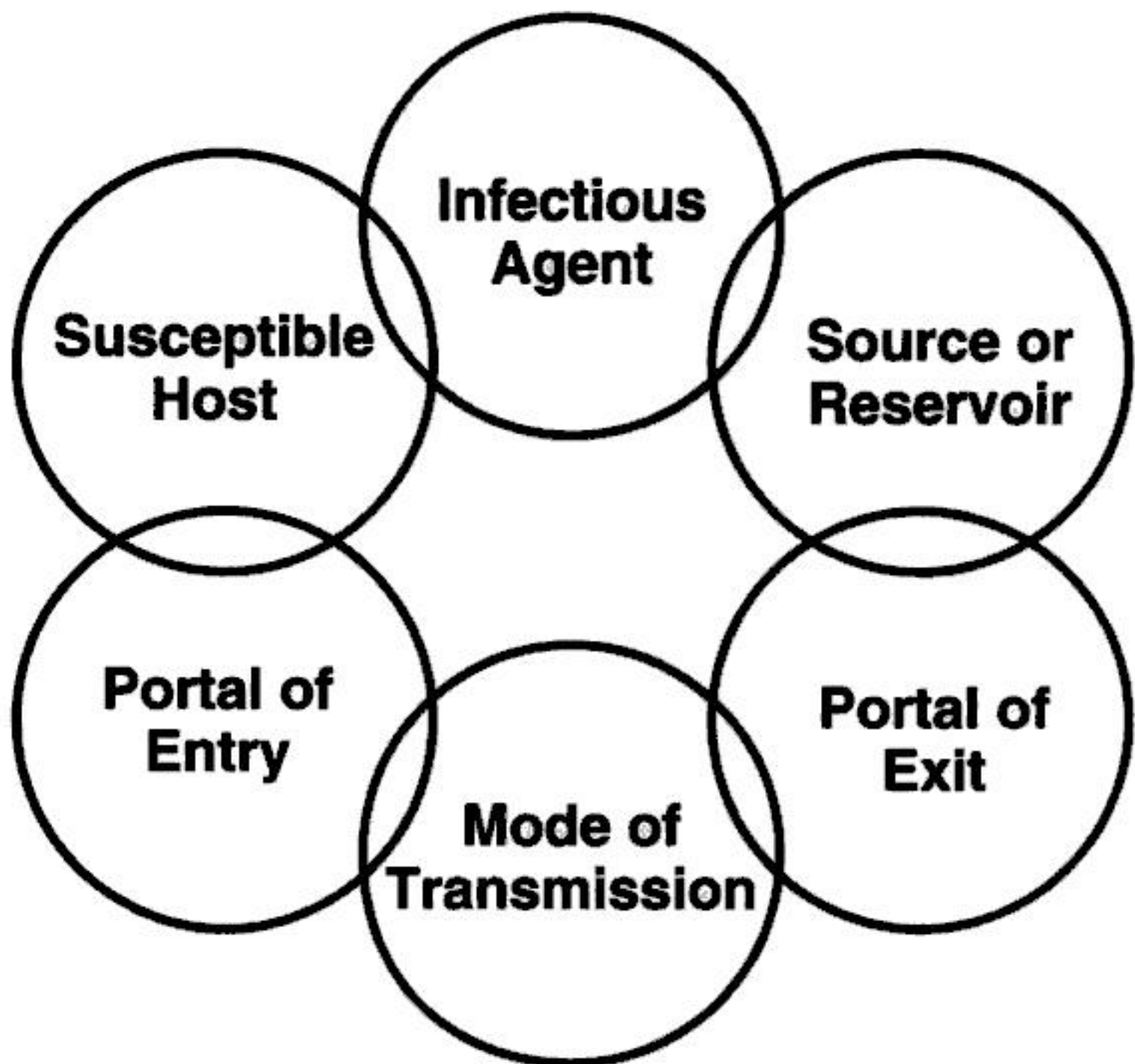
Question 4. In addition to handwashing, how can the HCA prevent cross-infection?

Handout 4-2



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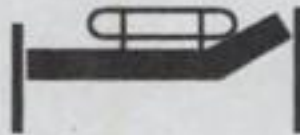



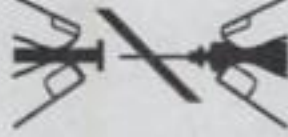




Chain of infection





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Standard precautions for effective infection control

 <p>Wash Hands (Plain soap)</p>	 <p>Environmental Control</p>
 <p>Wear Gloves</p>	 <p>Linen</p>
 <p>Wear Mask and Eye Protection or Face Shield</p>	 <p>Occupational Health and Bloodborne Pathogens</p>
 <p>Wear Gown</p>	
 <p>Patient-Care Equipment</p>	 <p>Patient Placement</p>



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Multidrug resistant organisms

- **MRSA**
- **VISA**
- **VRE**
- **Multidrug resistant TB, HIV, hepatitis B and C**





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Not everyone who is exposed to an infectious TB carrier will become ill. The probability of transmission of TB to another person depends on several factors.

- The severity of the TB illness in the infectious person
- Whether the TB disease is active in the lungs
- Whether the individual with TB is actively coughing, and if the cough is productive
- The force of the cough and how far the droplets have spread
- Whether the infectious person covered his mouth when coughing or sneezing
- The ventilation of the room in which the infected person lives
- The amount of time spent with the infected client (minutes, days, hours)

● PATHOGENESIS OF TB

Pathogenesis is how TB develops in the body. It explains the pathway the bacteria take through the body.

- A person with active TB disease coughs or sneezes. The water nuclei with the TB enter the air.
- Normal airflow will keep the droplet nuclei airborne. The droplet nuclei can spread throughout a room or building.
- Another person breathes the air containing the infected TB droplet. The TB bacteria are carried through the respiratory system.
- Large droplets become lodged in the upper respiratory tract (the nose and throat). Infection is unlikely to develop when the bacteria travel only to the upper respiratory tract.
- Smaller droplet nuclei may reach the alveoli in the base of the lungs. Infection is likely to develop at this time.
- The tubercle bacilli begin to multiply in the alveoli, and small amounts enter the bloodstream and spread throughout the body. The bacilli may reach any part of the body. TB disease is more likely to develop in the upper portions of the lungs. Extrapulmonary TB occurs in areas other than the lungs. This is not considered infectious.

The TB bacteria can settle in the following areas:

- Larynx
- Lymph nodes
- Pleura
- Kidneys
- Stomach and intestines
- Bones and joints
- Brain



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Fibrosis

- The formation of thread-like fibers in the lungs makes the expansion and contraction of the lungs difficult. Fibrosis prevents proper air exchange, decreasing oxygenation to the cells of the body.
- The fibrosis and the lesions caused by the mycobacteria cause the classic coughing and productive cough (coughing up sputum) seen in clients with TB.
- When the fibrosis and/or tubercles (lesions) destroy blood vessels, bloody sputum occurs.
- As the disease progresses, the tubercles release bacilli, which cause additional lesions in the lungs.
- The bacteria continue to multiply and spread, increasing the numbers of TB bacteria entering the bloodstream and traveling to other parts of the body.
- Extrapulmonary TB (TB in other parts of the body) may develop. The symptoms will reflect the particular site of involvement.
- The person will have a positive Mantoux skin test (the screening test for TB).
- TB disease and symptoms can develop soon after infection or after many years. The development of the disease is dependent on the status of the person's immune system at the time of exposure.



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TB Infection Versus TB Disease

There is a difference between being infected with TB bacteria and having TB disease. The home care aide (HCA) should understand the difference in order to prevent transmission of the bacteria.

TB Infection

Someone who has been infected with TB:

- Has been exposed to the TB bacteria.
- Has a positive skin test (Mantoux test).
- Has an immune response that prevents progression of the disease.
- Is not contagious.
- May need short-term medication to reduce the risk of developing TB disease.

TB Disease

Someone who has TB disease:

- Has a positive skin test.
- Has a positive chest x-ray.
- Has a positive AFS sputum culture.



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measured and does not indicate infection. The diameter of the induration (swelling that can be felt) is measured by a classification system. The system determines a positive skin test by the size of the induration and the risk factors for TB.

Positive Results

A positive skin test indicates that a person has been exposed to the disease or infected with TB. The person is not contagious and cannot spread the disease.

An induration of 5 mm or more is considered positive for people with:

- HIV/AIDS.
- Close contact with others with infectious TB.
- A positive chest x-ray showing signs of previous TB disease.
- Known intravenous (IV) drug abuse without known HIV status.

An induration of 10 mm or more is considered a positive reaction for:

- People born in areas of the world where there is a high rate of TB.
- IV drug abusers with negative HIV status.
- People with low income and poor access to health care.
- People who live in residential facilities (e.g., nursing homes or correctional facilities).
- People with underlying medical conditions.
- Children under the age of four.
- High-risk groups (e.g., occupational risk).

An induration of 15 mm or more is considered a positive reaction for:

- People with no risk factors for TB.
- The general population.

False-Negative Results

Anyone with symptoms of TB should be evaluated regardless of the skin test result. Three possible causes of false-negative results exist.

Anergy

Anergy is the inability to react to the skin test because of a weakened immune system. HIV infection, certain forms of cancer, and severe TB can cause such a result.

Recent TB Infection

If performed less than ten weeks after exposure to TB bacteria, the test can lead to false-negative results. In such cases, the test must be repeated ten weeks after TB exposure.

Very Young Age

In children less than six months of age, false-negative results may occur. The immune system is not fully developed, and the child is unable to produce antibodies for the reaction.



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- The client remains hospitalized until he is no longer contagious.
- The client is generally not contagious after 14 days of drug treatment.
- Confirmation is determined by three negative AFB cultures.
- TB disease must be treated for at least six months because the *M. tuberculosis* bacteria has the ability to become dormant.

Phases of TB Disease

Initial Phase

- The drugs are most effective during the first eight weeks of treatment.
- This is when most of the TB bacteria are killed.

Inactive Phase

- Some of the TB bacteria become dormant.
- The drugs are not as effective during this phase.

Continuation Phase

- Treatment is continued to destroy the remaining TB bacteria.
- The treatment must be continued to avoid a relapse.

Relapse

- A relapse occurs if treatment is discontinued before all of the dormant TB is destroyed. Some bacilli may survive and cause TB disease at a later time.
- If a relapse occurs, the bacteria are usually harder to treat.

Medications Used for TB Disease

The initial regimen for treating TB disease includes a combination of:

- Isoniazid (INH).
- Rifampin (RIF).
- Pyrazinamide (PZA).
- Either ethambutol (EMB) or streptomycin (SM).



● WHO IS AT RISK FOR CONTRACTING TB DISEASE?

Risk factors for contracting TB disease are directly related to the person's health at the time of exposure and the amount and duration of exposure. A strong immune system has the ability to fight off the TB bacteria.

General Risks

Individuals at risk for contracting TB include:

- Clients with HIV or AIDS.
 - According to the AIDS Foundation, the client with HIV/AIDS has a one in ten chance *per year* of contracting TB compared to uninfected people who have a one in ten chance *per lifetime* of getting TB.
 - The client with HIV/AIDS has a 100 times greater risk of developing TB disease than someone without HIV/AIDS. Having HIV/AIDS is the strongest risk factor for developing TB disease after being exposed to the TB bacteria.
 - A client with HIV/AIDS may have a negative chest x-ray even with active TB disease because of his compromised immune system.
- Anyone who is in close contact with people who have TB disease.
- Anyone who was previously exposed to TB disease.
- Anyone who is immune compromised.
 - People who have certain types of cancers
 - People over the age of 65
- People who may have been exposed and infected with TB when young.
- People who live in countries that have a high incidence of TB.
- IV drug users and alcoholics.
- People with low income and poor access to health care.
- Anyone who is severely malnourished, impoverished, or homeless.
- Employees in high-risk jobs.

Occupational Risks

The risk of TB exposure has been documented among doctors and nurses since the turn of the century. Working closely with persons having active TB or low socio-economic status has been the known cause. The increased risk to TB exposure has grown beyond the health care profession, and now includes the following occupations:

- Hospital workers.
- Correctional facility workers.
- Workers in homeless shelters.
- Workers in emergency and home care services.
- Workers in drug and alcohol treatment centers.



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● THE IMPORTANCE OF MEDICATION COMPLIANCE

The goal of medication compliance is to prevent TB from becoming resistant to the medication. If medications are started and stopped prematurely, the bacteria that remain will become resistant to the treatment. Curing multidrug resistant TB is very difficult.

- To prevent drug resistance, the client must take the medications for at least six months.
- The client must take the medications as prescribed, with no missed doses.
- TB can be treated if caught early and if the client is compliant with the medical regimen.
- Regular checkups with the health care provider are essential to:
 - monitor drug compliance.
 - make sure there are no complications.
 - renew drug prescriptions.

● REPORTING TB

Work with your local health department to report suspected or confirmed TB cases. If a suspected or confirmed case of TB is reported to the health department, a contact investigation occurs. This is a process of identifying people exposed to someone with infectious TB disease. Each person is screened for TB infection and disease. Treatment and preventive therapy are provided.

(Insert your state's regulations regarding the reporting of TB here.)
Contact your local health department for information.

Direct Observed Therapy

If a client is nonadherent with the treatment regimen, it is necessary to provide direct observed therapy (DOT).

- A designated person watches the client take each dose of the prescribed drugs. The designated person could be a state employee, health care worker, community member, or, in some cases, a family member.
- Direct observed therapy is used for both preventive and active TB care.
- Twenty-nine states have the statutory authority to impose a penalty on a person who is required to report TB cases and fails to do so, based on the TB control laws of 1993.
- Forty-three states provide for the quarantine of TB patients within their own homes (ACET, 1993).

(Insert your state's regulations for drug noncompliance here.)



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Follow infection-control practices. For more information on basic infection-control practices, review Module 4.

Educate the client about disease prevention techniques, such as:

- Handwashing to prevent the spread of germs and to decrease the risk of getting other infections.
- Covering the mouth with a tissue when coughing and sneezing.
- Taking medication as ordered (frequency and duration).
- Keeping scheduled doctor appointments.
- Notifying the supervisor about any concerns the client may have about the treatment.
- Maintaining a well-ventilated area when possible.
- Using a respirator mask.

Always observe and report on the client's:

- Adherence to drug therapy.
- Adverse reactions to drug therapy.
- Side effects of the medication.
- Signs and symptoms of TB disease.

Be supportive and encourage the client to discuss his concerns regarding:

- Feelings of loneliness and depression.
- Drug treatment and side effects.
- The duration of the treatment regimen.
- Society's perception of the disease.

✱ Treat the client with respect and maintain confidentiality.



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Comparison of TB infection vs. disease

	TB infection	TB disease
Positive skin test	✓	✓
Progression of disease		✓
Contagious		✓
Medications	Short-term	Long-term
+Chest x-ray		✓
+Sputum culture		✓
Very ill		✓



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Who is at risk for TB?

(continued)

- **Substance abusers**
- **People with poor access to health care**
- **Malnourished, impoverished, or homeless individuals**
- **Employees in high-risk jobs**



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Hepatitis C Virus (HCV)

- HCV was formerly called non-A, non-B hepatitis.
- The virus is found in the blood.
- HCV is the most common blood-borne infection in the U.S., according to the American Liver Foundation.

Hepatitis D Virus (HDV)

- HDV is known as delta hepatitis.
- It is a fragile virus that needs hepatitis B to survive.

Hepatitis E Virus (HEV)

- HEV is transmitted through fecal-oral contamination.
- This form of hepatitis is not found in the United States.

● PATHOGENESIS OF HEPATITIS

Pathogenesis refers to how the hepatitis virus develops in the body.

- The pathogenesis of the virus differs among the types of hepatitis.
- With hepatitis A and E, the virus first enters the gut (intestines) and begins to reproduce. The virus spreads to the liver and begins to multiply in the liver cells.
- In hepatitis B, C, and D, the virus first enters the bloodstream. Then it passes through the liver, where the virus enters the liver cells and begins to multiply. The body attacks the infected cells, and this causes the liver to become inflamed.



Lecture Material for
Handout
6-3

● HEPATITIS A

General Information

- HAV is the most prevalent type of hepatitis. The incubation period is 15–50 days from exposure to the virus. The incubation time is shorter with increasing age.
- According to the Centers for Disease Control and Prevention (CDC), one-third of all Americans have evidence of HAV infection.
- According to the Hepatitis Foundation International, 180,000 Americans become infected with HAV annually. The highest incidence of hepatitis A is in children.
- HAV is transmitted through the fecal-oral route. *Fecal-oral* means putting something in the mouth that has been contaminated with the stool of the infected person.
- HAV is found in the stool of persons with hepatitis A.

- HAV-infected persons are infectious from the latter half of the incubation period until one to two weeks after the symptoms start. Infectious individuals, such as food handlers or children, can spread the disease before they are even aware that they have it.
- Most individuals begin recovery within three weeks. According to the CDC, 15% of people infected with HAV will have prolonged or relapsing symptoms for six to nine months.
- After exposure to HAV, immune globulin is given to prevent infection.

Transmission of Hepatitis A

Transmission can occur through:

- Close personal contact with someone infected with HAV, including sexual contact with infected persons.
- Ingesting contaminated food, water, or milk.
- Ingesting contaminated food or water during travel to underdeveloped areas.
- Eating shellfish from contaminated waters.
- Eating foods contaminated by infected food handlers.

Signs and Symptoms of Hepatitis A

Jaundice

- Jaundice is an abnormal accumulation of bilirubin in the blood. The dysfunctioning liver causes a yellow discoloration of the skin and deep tissues.
- Jaundice is first observed in the sclera of the eyes.
- Jaundice can be difficult to assess in dark-skinned people.

Fatigue

- The client may become unusually tired.
- The client may attribute fatigue to physical exhaustion or just working too hard.

Abdominal Pain

- The liver becomes enlarged.
- The enlarged liver can press on other organs or on the abdominal cavity.

Loss of Appetite

- The client usually has a loss of appetite.
- Loss of appetite causes unwanted weight loss.



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- According to the Hepatitis Foundation International, 200,000 Americans are infected with HBV annually. Of the 200,000 people infected with HBV:
 - 120,000 were infected through sexual contact.
 - 5,000 deaths each year in the United States are due to cirrhosis.
 - 1,000 deaths are caused by liver cancer.

Transmission of Hepatitis B

HBV is transmitted through blood and body fluids of infected persons by the following means:

- Unprotected sexual contact
- Infected needles
- Needlesticks or sharps exposure on the job
- Childbirth—passing the virus in the blood from mother to infant

Acute and Chronic Disease

Acute Hepatitis

- Acute hepatitis is a rapid, severe progression of liver disease.
- Two percent of those infected with HBV develop liver failure.
- Many acutely infected individuals develop symptoms.
- There is no treatment for acute hepatitis.

Chronic Hepatitis

- Chronic hepatitis is a slow progression of liver disease.
- Chronic hepatitis can produce varying degrees of the disease. Some people may have insignificant or minimal liver disease while others have severe liver damage.

Possible Outcomes of HBV Infection

Immunity to HBV

- Most people develop immunity to HBV; 95% of infected adults develop antibodies and recover spontaneously within six months.
- After recovery, persons are no longer infectious.

Chronic Carrier State

- These people are potentially infectious and unwittingly can expose others to the disease.
- They have no symptoms and normal laboratory findings.

Chronic Infection

- If the HBV is not cleared from the body within six months, the person has a chronic infection.



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Chronic HCV infection affects people differently.

- It is difficult to predict who will develop cirrhosis or cancer and who will have no long-term complications.
- One factor that causes progression to cirrhosis is alcohol abuse.
- In rare cases, HCV infection causes clinically acute disease and even liver failure.
- Infected individuals will remain carriers even if they presented with no symptoms or complications.
- About 85% will become chronically infected. In these cases, the virus is rarely cleared without treatment. The disease may gradually progress over 10–40 years.
- People with chronic HCV run the risk of developing cirrhosis. About 20% of these individuals will develop end-stage liver disease. HCV is the leading indication for liver transplantation in the United States. There is also an increased risk of developing primary liver cancer (hepatocellular carcinoma).

Signs and Symptoms of Hepatitis C

- Most individuals experience mild flulike symptoms:
 - Nausea
 - Fatigue
 - Loss of appetite
 - Fever
 - Headaches
 - Abdominal pain
- Most people do not have jaundice.
- Most individuals experience fatigue.
- Disease progression leads to the same symptoms as in HBV infection.

Diagnosing Hepatitis C

- The diagnosis of chronic hepatitis C is made by history, serologic testing, and liver biopsy.
- Most clients are free of symptoms or have nonspecific complaints, such as fatigue. In many cases, the diagnosis is made when testing for other reasons.
- HCV testing should be done if the client has symptoms of chronic liver disease, is in a high-risk group, or has abnormal laboratory tests suggesting liver disease.
- Liver biopsy is performed to determine the degree of liver damage. The biopsy will detect inflammation, fibrosis, and the presence or absence of cirrhosis.



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Abdominal Pain

- Pain is the result of an inflamed liver.
- The abdomen may be distended.
- Encourage the client to wear loose-fitting clothes.
- Pain may travel to the back and shoulders.
- Assist with position changes to decrease discomfort.

Ascites

- Ascites is a collection of fluid in the abdominal cavity.
- Ascites occurs in liver cirrhosis. Cirrhosis is responsible for approximately 80% of all ascites. The amount of fluid can reach 10–12 liters.
- Fluid can also collect in the scrotum and chest cavity.
- The fluid accumulation can affect breathing because the fluid puts pressure on the diaphragm.
- Ascites can affect the client's appetite because of the abdominal distention.
- Fluid can be removed by draining it from the abdomen through a catheter (paracentesis). Internal drains can be placed surgically to drain fluid continuously.

Management of the client with ascites includes:

- Decreasing sodium intake.
- Use of diuretics.
- Measurement of abdominal girth daily.
- Daily weighing.
- Monitoring of fluid intake and output.

Jaundice

- Deposits of bile pigment resulting from too much bilirubin in the blood cause jaundice. This disorder sometimes causes itching.
- Changes in skin texture can be associated with the disease process.
- Avoid using harsh soaps on the skin while bathing. They can dry the skin and increase the itching.
- Encourage the application of non-alcohol lotion. Apply frequently to prevent drying and itching.
- Monitor the skin for possible breakdown.

Nausea/Vomiting/Loss of Appetite

- Loss of appetite is common because of the disease and the medications used to treat it.
- Monitor calorie intake daily.



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Instructor's
version with
answers for
Handout
6-2

● REAL-LIFE SCENARIO

Lucy has been a home care aide (HCA) for 15 years. She has recently been diagnosed with hepatitis C.

Question 1. List the possible ways that Lucy could have become infected with HCV.

Answer: Possible ways to become infected with HCV include:

- Past needlestick exposure.
- Blood transfusion before 1992.
- Contact with infected blood.
- IV and intranasal drug use.
- Hemodialysis.

Question 2. Should Lucy continue to work as an HCA?

Answer: As long as Lucy uses correct and consistent infection-control practices, clients are not at risk of contracting the virus from her.

Question 3. List four possible symptoms of HCV.

Answer: Common symptoms of HCV include:

- Mild flulike symptoms.
- Nausea.
- Fatigue.
- Loss of appetite.
- Fever.
- Headaches.
- Abdominal pain.



GROUP ACTIVITY

1. Refer back to the section describing the different types of hepatitis. As the instructor names specific characteristics of each type of hepatitis, ask the group to identify which form is being described.
2. Discuss the impact HCV has on the health care profession.

● RESOURCES

American Liver Foundation

<http://www.liverfoundation.org>

Centers for Disease Control and Prevention

<http://www.cdc.gov>

Hepatitis Foundation

<http://www.liverfoundation.org>

Hepatitis Foundation International

<http://www.hepfi.org>

Liver Disease

<http://www.lef.org>

National Foundation for Infectious Disease

<http://www.nfid.org>

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HEPATITIS





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Symptoms of chronic hepatitis

- **Fatigue**
- **Abdominal pain**
- **Ascites**
- **Jaundice**

(continues)



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infection and the onset of serious symptoms. A person can become infected with the virus and not develop any symptoms for years. This is why the disease has spread so quickly; people are unaware that they are infected.

HIV Disease

HIV disease is characterized by a gradual deterioration of the immune system.

- The virus attacks the CD4⁺ T cells (T-helper cells) and directly interferes with the normal function of those cells.
- Cell-mediated immunity is compromised by HIV, which in turn affects humoral immunity. The entire specific (acquired) immunity is diminished as a result. Remember that specific immunity reacts to exposure to foreign substances or antigens. Research indicates that HIV impairs the antigen-to-antibody capacity.
- HIV also triggers other events to weaken the person's immune function. HIV invades any cell with HIV receptors. HIV receptors are also found on monocytes, macrophages, and other cells of nonspecific immunity. CD8 cells are affected as well.
- Eventually, all types of antigens will lead to life-threatening infections because the entire immune system is diminished.

There are two major strains of HIV.

HIV-1

- HIV-1 can be found worldwide.
- It is the most prevalent type found in the United States and Europe.

HIV-2

- HIV-2 is prevalent in West Africa.
- There are a limited number of cases in the United States.

Mode of Transmission

This discussion will describe HIV-1. Transmission refers to how the virus is spread. HIV transmission occurs when significant amounts of the live virus enter a person's body by an effective route, where cells with HIV receptors are abundant. HIV searches for cells that have CD4 surface receptors and co-receptor sites. These particular proteins enable the virus to bind to the cell. Although HIV infects a variety of cells, its main target is the T4 lymphocyte, which has many CD4 receptors.

Unprotected Sexual Activity

HIV receptors can be found in the mucous membranes of the vagina and rectum. Trauma to the tissue is not necessary for infection to occur, although tissue damage can increase the risk. Sexually transmitted diseases also increase the risk by impairing mucous membranes and skin, and increasing



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in three weeks to three months. Most infected persons will develop detectable HIV antibodies by three months after exposure.

- HIV tests are considered positive only after both screening and confirming tests are positive. A positive test result indicates that a person has been infected with HIV. False-positive results under these testing circumstances are extremely rare.

● PROGRESSION OF THE DISEASE (PHASES OF HIV-1)

Acute Phase

- The acute phase occurs three to six weeks after the initial infection and is characterized by rapid viral production, lymphoid organ infections, and a decline in the CD4⁺ T-cell count.
- The symptoms resemble those of mononucleosis or flu. Symptoms include fever, sweats, myalgia, neuralgia, headaches, gastrointestinal (GI) distress, sore throat, rash, and photophobia. These symptoms usually resolve within seven to ten days but can last up to five weeks.

Chronic Phase

- The chronic or asymptomatic phase is characterized primarily by an intact immune system and HIV replication within the lymphoid tissues.
- Clients can remain in the chronic phase for seven to ten years.

Crisis Phase

- The crisis phase is characterized by a return of clinical symptoms and CD4⁺ T-cell counts of less than 200 cells/mm³. Symptoms include persistent fever, fatigue, weight loss, and chronic diarrhea.
- All organ systems become affected as the T-cell counts drop.

● THE DIFFERENCE BETWEEN HIV AND AIDS

- HIV-infected individuals have been infected with the retrovirus. In 2001, according to the CDC, the term *AIDS* refers to the most advanced stages of HIV infection. The definition includes all HIV-infected individuals with the following characteristics:
 - a T-cell count of less than 200/mm³ (CD4⁺ cell count of less than 14%)
 - a diagnosis of an opportunistic infection regardless of the T-cell count
- Most HIV-infected individuals will develop AIDS within eight to ten years of the initial infection. It is not understood why certain individuals develop AIDS sooner than others. Rapid progressors develop



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The following information is based on recommendations from *Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents*, February 2002, from the Department of Health and Human Services.

Goals of Treatment

- Maximize lasting suppression of the viral load.
- Restore and/or preserve immune function.
- Improve the quality of life.
- Reduce HIV-related morbidity and mortality.

Starting Treatment

The first regimen provides the best opportunity for achieving immunologic success and suppression of viral disease. Adherence to the drug regimen can affect the potential use of other drugs. Careful consideration should be taken when choosing the drug regimen and the consequences of resistance should be considered before therapy begins. Get all the information and determine which regimen would work best with the client's lifestyle.

Treatment consists of taking a combination of antiretroviral drugs. The drugs are designed to suppress HIV replication. This, in turn, increases the T-cell count, improves immune function, delays clinical progression, and increases the survival rate. The medications can be difficult to tolerate. Sometimes the side effects and long-term complications are worse than the actual symptoms. Recommendations for starting the initial therapy have changed to reduce the side effects and extend the benefits of the treatment.

Guidelines for initiating treatment are:

- CD4⁺ counts less than 350 cells/mm³ in asymptomatic clients and viral loads of any value.
- A viral load exceeding 55,000 copies/ml (by Rt-PCR or bDNA assay).

Adhering to the Treatment

Before starting a treatment, the client's readiness to begin therapy must be addressed. Consider all aspects of the client, including lifestyle, knowledge of HIV, the treatment regimen, side effects of the medications, and factors affecting nonadherence to the prescribed regimen. Drug regimens should be practiced before actually taking the drugs to spot potential problems and find solutions before starting the medications. Keep a diary or log book and use placebos or candy to practice the regimen.

The Client's Lifestyle

- Past experiences
- Stresses in the client's life
- Cultural and health beliefs

- Medical compliance
 - Does the client attend all scheduled appointments?
 - Does the client trust the health care system?
 - Does the client have access to health care?
- Financial considerations (cost of medications)

The Client's Knowledge About HIV

- How the disease affects a person
- Opportunistic infections
- Viral markers

The Client's Knowledge About the Treatment

- Adverse drug reactions, side effects, and drug resistance
- Dosing frequency and pill schedule
- Food requirements, dietary needs, and meal schedules

Side Effects of HIV Drugs

- Nausea, vomiting, and diarrhea
- Loss of appetite
- Headache
- Rash
- Insomnia
- Neuropathy
- Anemia
- Fatigue

Factors Affecting Nonadherence

- Lifestyle changes and inconvenience of taking medications
- Adverse drug reactions, toxicity, drug interactions, side effects
- Depression
- Cost of the medications
- Number of medications or pill burden
- Dosing frequency
- Dietary requirements; with or without meals and types of foods allowed
- Storage requirements for the drugs

Drug Regimens

Guidelines include the recommended medications with attention to pill burden, dosing frequency, and food requirements. The antiretroviral agents are divided into three main classes. Combinations of the drugs have been shown to reduce the incidence of opportunistic infections and hospitalization. Newer medications provide a simpler regimen, consisting of single pills with combined drugs. Some regimens combine three drugs, reducing the number of pills to three or four instead of 30 to 50 pills per day.



Antiretroviral Drug Classes

The drug regimens consist of three main drug classes to date. A general description of each follows.

Protease Inhibitors (PIs)

Protease inhibitors prevent T cells infected with HIV from producing new copies of the virus. These drugs affect the viral-assembly phase of replication. Protease inhibitors block the enzyme protease and prevent the cell from producing new viruses. Underdosing can lead to drug resistance. Adverse drug interactions with certain drugs are noted.

Protease inhibitor drugs include:

Invirase®	Fortovase®	Norvir®
Crixivan®	Viracept®	Agenerase™
Kaletra™		

Nucleoside Reverse Transcriptase Inhibitors (NRTIs or Nukes)

Nucleoside reverse transcriptase inhibitors (NRTIs) are also known as nucleoside analogues or "nukes." These drugs prevent healthy T cells in the body from becoming infected with HIV. The drugs affect the reverse-transcription phase of replication. NRTIs contain defective versions of the building blocks, or nucleotides, used to convert RNA to DNA. The new DNA cannot be completed or incorporated into the healthy genetic material of the cell, and the cell cannot produce new viruses. Side effects include bone marrow toxicity, renal toxicity, and peripheral neuropathy (painful tingling or burning in the hands and feet).

NRTIs include:

Retrovir® (AZT)	Zerit®	Videx®
Videx EC®	Hivid®	Epivir®
Ziagen™	Combivir®	Trizivir™

Nonnucleoside Reverse Transcriptase Inhibitors (NNRTIs or Non-Nukes)

Nonnucleoside reverse transcriptase inhibitors (NNRTIs) prevent healthy T cells from becoming infected with HIV by causing the virus replication to halt. NNRTIs attach themselves to reverse transcriptase and prevent the enzyme from converting RNA to DNA. Therefore, HIV's genetic material cannot be combined with genetic material of the cell. This prevents the cell from producing new viruses. NNRTIs are never used as the first line of defense. NNRTIs are used only after a person becomes intolerant to NRTIs or the disease progresses. Drug resistance can occur by a single mutation of the HIV. NNRTIs have adverse drug interactions with protease inhibitors.

NNRTIs include:

Viramune®
Rescriptor®
Sustiva™



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Adverse Events

Medication adverse events are harmful reactions to drugs administered at normal dosing. Antiretroviral agents cause many adverse effects and must be monitored closely to prevent further declines in health.

Drug Failure

Drug failure is defined as the persistence or appearance of detectable virus in clients who had a suppressed viral load. According to research, adherence levels of 95% and higher are necessary to avoid virologic failure in most clients.

Drug Resistance

Drug resistance occurs when the drug no longer has an effect on HIV. The HIV has developed mutations and resists the drugs. Causes of drug resistance include the following.

Poor Adherence to Treatment

- When dosages are missed or delayed, the virus has the opportunity to mutate (change), causing the drug to no longer be effective.
- Missing just one to two pills a month can cause the virus to mutate.
- The client may choose to temporarily discontinue a drug regime. The combination of severe side effects, pill burden, and lifestyle changes may be overwhelming, causing the client to take a *drug holiday*.

Weak Treatment Regimen

- The drug dosage may not be strong enough for the individual.
- One important reason to find an experienced infectious-disease physician is to ensure the properly prescribed dosage at the start of treatment.

Low Drug Levels

- The absorption rate may be affected because of diet, alcohol use, or recreational drug use.
- The levels of the drugs affect all people differently.
- Herbal remedies may diminish the effects of the drugs.

Cross Resistance

When HIV develops resistance to one drug, it also may develop resistance to the drugs in the same class. This limits the available drugs that can be used.

Avoiding Resistance

Communicate with the physician all concerns about the treatment regimen.

- Adhere to the prescribed treatment regimen. The more knowledge the client has, the better the chance of compliance with the treatment plan.



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Kaposi's Sarcoma

- Kaposi's sarcoma is a type of cancer.
- It was one of the first diseases seen in people with AIDS and remains one of the most common cancers in HIV-positive people.
- The disease causes tumors or lesions ranging in color from pinkish-red to brownish-blue.
- The lesions are usually flat, painless, and do not blanch.
- Lesions can affect various parts of the body, including the following.

Skin

- Requires no treatment
- Not a life-threatening condition

Inside the Mouth

- Can make eating painful and difficult
- Compounds the problem of weight loss

Gut (Large Intestine and Colon)

- Causes diarrhea, cramping, and bleeding
- Can be life-threatening if left untreated
- Requires systemic therapy

Lungs (Pulmonary Kaposi's Sarcoma)

- Can cause severe breathing problems and discomfort
- If left untreated, can be fatal
- ✱ • Requires systemic therapy

Lecture Material for
Transparency
Masters
7-9 and 7-10

● OBSERVATION AND REPORTING

See Module 8 for more information. The most important role of the HCA is observation and reporting. Treating symptoms early can prevent hospitalization and deterioration of any client, but especially a client with AIDS.

Respiratory Changes

Upper respiratory infections can lead to hospitalization and death. A simple cold can become life-threatening. Anemia can also cause changes in respiration. Monitor all signs and symptoms and report all findings to the supervisor.

Observe the following:

- Does the client have a productive cough (producing sputum) or non-productive cough?
- Does the cough interfere with activities of daily living?

- Can the client talk with ease?
- How far can the client walk before becoming short of breath?
- How many pillows does the client sleep on?
- Has the client's activity level changed?
- How much can the client do before becoming short of breath? Is this with or without assistance?

Fatigue

Fatigue is a common complaint among AIDS clients. Incorporate rest periods into the client's daily routine; for instance, after AM care (even if the HCA did all the work), before and after a meal, and after any activity. Make the client as comfortable as possible. The client may prefer to sleep in a chair rather than the bed.

Possible causes of fatigue include:

- Lack of rest and exercise.
- Poor diet.
- Depression and anxiety.
- Alcohol and recreational drug use.
- Infections.
- Changes in metabolism.
- Anemia.
- Side effects of medications, including insomnia.
- Night sweats.

Visual Changes

Many of the opportunistic infections can lead to visual disturbances and blindness. Ask the client if there have been any changes in vision. Inspect the eyes for signs of infection and report all changes.

CMV Retinitis

- This is a severe eye infection commonly seen in AIDS clients.
- It occurs in the late stages of the disease with CD4⁺ counts of less than 50.
- If left untreated, it will cause blindness in two to six months.
- Symptoms include bleeding, inflammation, and vision loss.
- CMV retinitis is treated with IV medications.

Changes in the Central Nervous System

Mental Status Alterations

Some medications can alter mental status, including personality changes, changes in level of consciousness, lethargy, and perceptual changes. Clients



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Possible causes of wasting syndrome include the following:

- A decreased appetite can be caused by sores in the mouth, irritation of the stomach, nausea, and vomiting.
- The virus decreases the absorption of the nutrients necessary for cell growth.
- Changes occur in the way the body metabolizes nutrients. This may be due to the immune system's efforts to overcompensate for the virus or certain medications.

Gait Disturbances

Clients may experience alterations in gait because of the following:

- Visual changes
- Fatigue
- Confusion and changes in mental status
- Fever and infection
- Dizziness
- Side effects of medications

The HCA should:

- Monitor the client's need for assistive devices (e.g., cane, walker, wheelchair).
- Assist the client with ambulation and transfers.
- Maintain safety.
- Report changes to the supervisor.

Osteonecrosis (Avascular Necrosis)

Osteonecrosis is a crippling bone disease that causes bone death from the lack of blood supply, usually affecting the hip bones.

The disease can be attributed to:

- Longer survival rate.
- New drug therapies.
- Alternative lifestyles.
- HIV infection.

Gynecologic Disturbances

Female clients with HIV and AIDS will have gynecologic problems. As the T-cell count drops, the symptoms will worsen. Chronic yeast infections and abnormal Papanicolaou (Pap) smears are common. Women with HIV are 10 times more likely than uninfected women to have human papillomavirus (HPV) or cervical warts. HPV increases the risk of cervical cancer. The HCA should ask the client if she is experiencing vaginal burning, itching, or discharge.



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- Increased weakness and malaise.
- Fever.
- Headache.
- Generalized muscle aches.
- Chills.
- Anorexia.
- Increasing loss of appetite.
- Swollen glands.

Comparison of Virtual Photos

Each observation of the client should resemble a “snapshot photo.” Observe the client and environment as you complete your duties and compare it with the virtual photo from the day before. Compare each day with the day before and with your first meeting. Report any changes to the supervisor.

Observe the following:

- Did the client complain that he has not been sleeping well?
- Has yesterday’s prepared meal been eaten?
- Did the client change clothes from the day before?
- Has there been a change in appearance or hygiene?
- Are there any changes in activity level?
- Are there any mood changes?
- Has the client experienced any episodes of confusion?



Lecture Material for
Transparency
Masters
7-11 and 7-12

● CARING FOR THE AIDS CLIENT AT HOME

Use Infection-Control Practices

Standard Precautions

See Module 4 for more information. Standard precautions are intended to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection. They extend the coverage of universal precautions by recognizing that any bodily fluid may contain contagious microorganisms. This applies to all clients, regardless of their diagnosis.

Use standard precautions when in contact with any of the following:

- Blood
- All body fluids, secretions, and excretions (except sweat), regardless of whether they contain visible blood
- Broken skin
- Mucous membranes



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- Do not clean or vacuum with the client in the room (dust can become airborne). Vacuum cleaners stir up dust and allergens in the air.

Do Laundry Regularly

- Handle soiled clothing as little as possible; use gloves and personal protective equipment as needed. Put the soiled items in a plastic bag until washed.
- A normal wash cycle will kill HIV.
- Wash all bedding every week in water that is at least 130°F. Wash pillows weekly.

Promote Independence

- Set small, attainable goals. Achieving a predetermined goal will promote self-esteem. Completing simple tasks allows the client to concentrate on what can be done rather than what cannot be done. Feelings of loss and depression are common when faced with physical limitations.
- Reinforce to the client that there will be “good days” and “not-so-good days.” On days when the client feels better, more can be done, and on days when the client feels worse, he or she should rest more.

Avoid Becoming Overwhelmed

Cope With Stress

- Caring for someone who is very ill can be difficult. It can affect you physically and emotionally. Take one thing at a time. Get through the bath and then think about the next task.
- Organize your day. Make a list and check off each item when completed. This provides a feeling of accomplishment.
- Use relaxation techniques to help reduce stress. Many people find meditation or quiet time (e.g., taking a bath, listening to music, sitting in a dark room) helpful. Simply counting to 10, breathing, or exercising can reduce symptoms of stress.
- The technique of visualization, or thinking a happy thought, enhances self-confidence and makes an upcoming stressful time easier to handle.

Be Nonjudgmental

- Do not bring any prejudice into the client’s home. Discuss fears or concerns with the supervisor.
- Do not blame the client for getting the disease. No one deserves to be ill, regardless of any high-risk behaviors or personal beliefs. Many clients were not educated about the risks until it was too late. Furthermore, not all AIDS clients participated in high-risk behaviors.
- Treat the client with respect and dignity, including the right to privacy and confidentiality.

Maintain Confidentiality

- Confidentiality means that personal information is kept private unless the client says otherwise. All clients have the right to privacy.
- In April 2001, the Standards for Privacy of Individually Identifiable Health Information took effect [45 *CFR Parts 160 and 164*] (<http://www.hhs.gov/ocr/hipaa>). This is the first national standard to protect individuals' medical records and other personal health information.
- Revealing information about the HIV status of a person can have serious consequences other than the emotional anguish of revealing personal information. Employment, housing, and personal safety could be jeopardized if the information were disclosed.
- All health care personnel are ethically and legally obligated to keep all information about a client's illness and treatment confidential. Only staff members who are directly involved in the client's care should have access to the client's file or information.
- Information about a client is confidential and must not be discussed casually with others or in public spaces. Do not discuss the client's medical history with family members or with other staff members who are not involved in the case.

(Insert your agency's confidentiality policy here.)

● AUDIENCE INTERACTION FOR TRANSPARENCY MASTER 7-12

Discuss the following scenarios regarding confidentiality issues.

- Discussing a client's illness with another client
- Discussing a client's diagnosis with another HCA
- Speaking to your supervisor about one client in front of another client
- Telling your family what happened to your client today

● THE EFFECTS OF HIV AND AIDS

Remember that each person with AIDS is different and is affected differently by the disease. The changing symptoms can be stressful to the client and caregivers. Clients can routinely become ill and recover. On many occasions, it is unclear whether a client is going to live through a particular illness. Symptoms can change quickly, so report changes immediately to prevent serious infections or complications.

Notify the supervisor if the client complains of any of the following:

- Difficulty breathing
- Cough or difficulty swallowing
- Sores in the mouth or tongue
- GI disturbances (nausea and vomiting; diarrhea; or frequent, watery, and loose stools)



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HIV AND AIDS

Transparency Master **7-1**

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Viral markers

- **Viral load (HIV RNA levels, viral burden)**
- **T-cell count or CD4⁺ count**
- **CD4⁺ percentage**





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AIDS: Observation and reporting

- **Respiratory changes**
- **Fatigue**
- **Visual changes**
- **Changes in the central nervous system**
- **GI disturbances**
- **Wasting syndrome**

(continues)



AIDS: Observation and reporting (continued)

- **Gait disturbances**
- **Osteonecrosis**
- **Gynecologic disturbances**
- **Pain**
- **Fear of addiction**
- **Signs and symptoms of infection**
- **Comparison of virtual photo**



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Section Three

Patient Care

This section's goal is to educate the student about various disease processes and care for the selected diseases most commonly seen in home care. The role of the home care aide (HCA) is to support and enhance a client's ability to respond positively to physical and psychosocial stresses. Each disease is examined in relation to anatomy and physiology, complications, HCA interventions, client needs, and observation and reporting skills.



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weaknesses affect the client's ability to perform ADL. By detecting the smallest changes, the HCA can better care for the client.

- Use all of your senses when observing the client (sight, smell, hearing, touch, and taste).

Sight

Through sight, the HCA can:

- Observe the appearance of the client and the home.
- Observe how well the client moves.
- Determine how well the client can complete her ADL.
- Determine whether assistive devices are being used safely.
- Observe signs of shortness of breath, pain, mood changes, fear, or other forms of distress.

Sight is the easiest sense to use, but not always the easiest one to explain. For example, the HCA observes the client wearing a heavy sweater when the temperature in the home is 78 degrees. The HCA must determine why the client is wearing the sweater. Possible questions the HCA should consider include:

- Is the client cold, or does the client have a fever? (Take the client's temperature.)
- Does the client have any other clothing? Is the sweater worn from the previous day?
- Is the client confused and unable to determine the appropriate dress?

Report all findings to the supervisor.

Smell

Through the sense of smell, the HCA can determine whether:

- The client needs to be bathed (body odor).
- The client has signs of diabetes. (Diabetic clients have sweet-smelling urine and acetone-smelling breath.)
- The client has an infection. (*Pseudomonas* has a foul smell.)
- The client is incontinent (odor of urine or feces in the home).
- The home has a gas leak (smell of gas).

Hearing

By listening, the HCA can:

- Detect abnormal breath sounds, such as wheezing or Cheyne-Stokes respiration (abnormal noisy breathing with periods of no breathing), or shortness of breath.
- Determine whether the client is answering questions appropriately.
- Assess the client's well-being by conversations or complaints.



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- Is there safe access out of the home in case of fire?
- Is there appropriate space to care for the client?
- Does the client have the necessary equipment to be cared for at home?
- Is it safe for the client to be in the home?



Lecture Material for
Handout
8-3

Head-to-Toe Assessment

Head-to-toe assessment is a detailed observation of the client, taking into account all of the body systems. The assessment is done as the HCA interacts with the client.

Skin

- Observe the skin of the entire body throughout the assessment.
- The skin should always be warm and dry. Note if the client is sweating or if the skin is moist.
- Observe the color of the skin: pale, flushed (red), blue (cyanotic), yellow, cherry red, or gray.
- Note any lesions or sores, especially over the body prominences (bones close to the skin).
- Is there any swelling (edema)? Is there pitting edema? (This is an indentation that remains after pressing on a swollen area with a finger.)
- Check skin turgor (resiliency of the skin). If the client is dehydrated, you will be able to lift the skin and it will stay in that position for a few seconds (tenting).

Head and Neck

- Note the mental status of the client.
- Observe the shape of the head. Are there any deformities?
- Note the client's facial color.
- Observe the color and distribution of the hair; note any lesions, sores, or infestations.
- Note the facial expression of the client. Are there any signs of distress? (This may include fearfulness or avoidance of eye contact.)
- Are there any noticeable facial droops at the eyelids or mouth?
- Observe the neck for any lumps or enlarged or bulging carotid arteries.

Eyes

- Note whether the client uses corrective glasses for distance and/or reading.
- Does the client squint or adjust reading material to see the print?
- Observe for cataracts (cloudy covering over the lens of the eye).
- Observe pupil size (black center of the eye). Are they round? Dilated or constricted?
- Does the client have symmetrical drooping of the eyelids?



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When assisting a client with ADL, the HCA can observe each body system, gathering more information to compare with the virtual photo. Review how to observe each body system of the client during ADL.

During Bathing

The HCA can observe several body systems when assisting a client with a bath.

The HCA can observe the *skin* for:

- Temperature. (Is the skin warm, sweaty, clammy, cold?)
- Texture. (Is the skin dry, moist, thin, rough, fragile?)
- Skin turgor, or resiliency. (Is there edema or swelling of the skin?)
- Injuries. (Are there skin lesions, cuts, or bruises?)

The HCA can observe the *cardiovascular system* and *respiratory system*, including:

- How easily the client tires.
- Whether the client requires assistance to complete ADL.
- The strength of the client.
- Whether the client becomes short of breath.
- Whether the client needs frequent rest periods.

The HCA can observe the *nervous system* and *muscular system*, including:

- Whether the client has coordinated movements.
- The client's range of motion.
- Whether the client can hold the soap or washcloth, and for how long.
- The client's mental status, by seeing whether the client completes the bath appropriately.
- Whether the client is following simple commands.

During Meal Preparation

The HCA can observe the client when assisting with meal preparation.

The HCA can observe the *skin*, *cardiovascular*, and *respiratory systems* as previously described in the bathing section.

The HCA can observe the *nervous system*, including:

- Whether the client is using cooking utensils appropriately and safely.
- Whether the client can stand alone by the stove or cooktop safely.
How is the client's balance?

The HCA can observe the *muscular system*:

- For fine motor skills and strength.
- To see whether the client can peel, cut, mix, or arrange food.



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Common Observations to Report

Changes in mental status	Swelling, edema
Confusion	Shortness of breath
Changes in mood	Changes in vital signs
Uncooperative attitude	Falls
Changes in speech	Pain or injuries
Changes in mobility, gait	Changes in skin color
Paralysis or weakness	Changes in sleep habits
Tremors	Numbness
Reactions to medication	Decreased fluid intake
Nausea, vomiting, diarrhea	Changes in weight
Bleeding	Changes in appetite
✱ Painful urination	Hospitalization

Instructor's
version with
answers for
Handout
8-2

● REAL-LIFE SCENARIO

An elderly woman with a history of heart problems and congestive heart failure was not feeling well. The client frequently awoke during the night to use the bathroom because of her diuretic. The woman believed she would sleep and feel better if she did not take the medication, so she stopped taking her prescribed dose of diuretic. The client's ankles began to swell. The HCA observed the swelling of the ankles when helping the client put on her shoes. The HCA instructed the client to elevate her feet. The HCA did not remind the woman to take her medications as specified in the plan of care. By day two, the ankle edema (swelling) was very noticeable. The HCA inquired about her swollen ankles, but the client stated that she was on her feet too much and had not kept her feet elevated. The HCA assisted the client and reminded her again to elevate her feet. The HCA did not, however, report the change (swollen ankles) to her supervisor on either day. After the HCA left, the elderly woman was exhausted and went to bed early. The HCA arrived in the morning to find the client in bed with her skin pale to blue in color. She was diaphoretic (sweating) and experiencing shortness of breath and confusion. The HCA called 911. The client was admitted to the intensive care unit of the hospital and was put on a ventilator to help her breathe.

Question 1. What should the HCA have done, and when?

Answer: The HCA should have informed the supervisor of the client's swollen ankles at the first observation. Also, the HCA should have inquired whether the client had taken her diuretic as prescribed.

Question 2. What are the risks to the client when changes in the client's condition are not reported?

Answer: The client is at greater risk for illness, hospitalization, disability, or death.



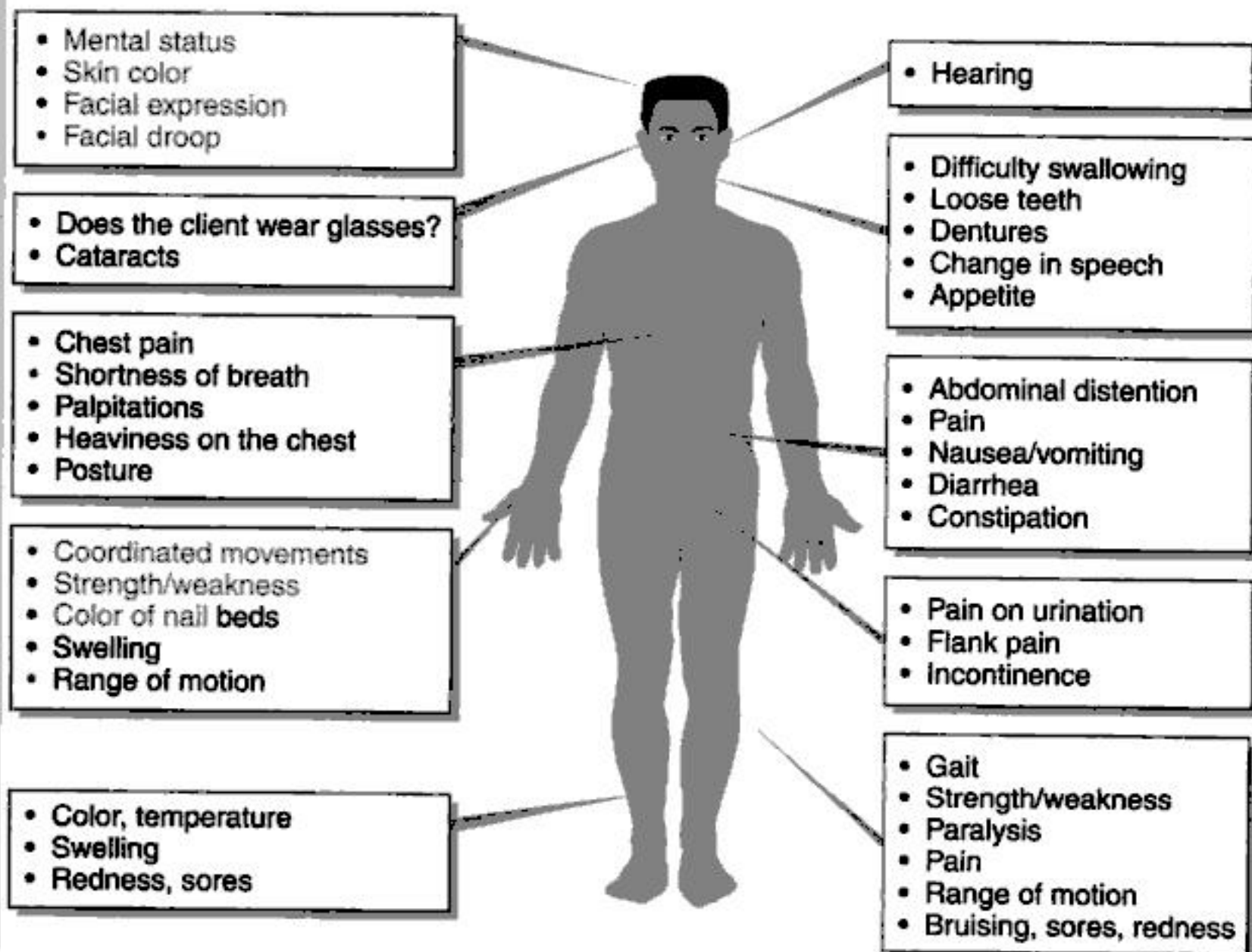
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HEAD-TO-TOE ASSESSMENT**Handout 8-3**



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Compare Present condition



to virtual photo



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- As the cells migrate to the surface, they become dehydrated and flattened, and then die. This process takes 15–30 days. Dead cells are shed from the body. Some of the cells are rubbed off by friction with the environment (e.g., clothes, contact with others). Shedding of cells from the scalp is called dandruff.

Dermis

- The dermis is made up of dense fibrous connective tissue, which contains blood vessels, nerves, lymph vessels, smooth muscle, sweat glands, hair follicles, and sebaceous glands.
- Blood vessels provide nutrition for the epidermis.
- Motor nerves are present to control smooth muscle, and sensory receptors monitor the skin and external environment.
- The fibrous tissue of the dermis provides strength and support to the epidermis. In the fingers, the dermis creates ridges that bind with the epidermis, creating fingerprints.

Subcutaneous Layer

- This layer contains adipose cells (fat cells).
- This layer is located above the muscles.

Hair

- Rapidly dividing cells push the older hair cells to the surface through the hair shaft.
- The hair has a limited protective function, shielding against heat and cold.
- Eyelashes and nasal hairs protect against foreign particles that may enter the eyes and nose.

Pores

- Pores release sweat from the sweat glands (sudoriferous glands). This function aids in cooling the body temperature.
- Sweat is odorless; bacteria feed on the sweat and produce body odor.
- Pores secrete some waste products from the body.

Sebaceous Glands

- Sebaceous glands secrete an oily substance (sebum) into the hair follicles, lubricating the hair and skin. This is how the skin receives moisture.
- If this lubricant is decreased or washed away, the skin will become dry.
- As we age, the production of sebum decreases.



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Respiratory System

- The respiratory system provides oxygen and eliminates carbon dioxide from the body.
- A weakened respiratory system will affect the levels of oxygen and carbon dioxide at the cellular level.

Systems Responsible for Mobility

- Mobility is provided by the muscular system, skeletal system, and central nervous system.
- Proper mobility increases circulation, which increases the supply of blood, nutrients, oxygen, and water to the cells.
- Elimination of waste products is increased with mobility, as is the circulation of white blood cells.
- Immobility reduces circulation and increases pressure on the skin from sitting or lying down. Mobility reduces pressure to skin areas.
- Proper mobility decreases the risk of injuries.

Renal System

- The kidneys eliminate waste products from the blood.
- Poor function of the kidneys reduces the filtration rate of the blood.

Digestive (Gastrointestinal) System

- Digestion changes food into nutrients usable for cell growth.
- Problems with digestion will affect the nutrients needed for the cells, which hinders cell growth and repair.

Endocrine System

- The endocrine system aids in homeostasis by providing the chemicals (hormones) needed for all body functioning.
- Hormones control the blood flow to the skin, metabolism of protein and fats, and normal growth of body tissues.
- Alteration in the endocrine system results in changes in hormone levels.

Age

- Age causes changes in the skin, including decreased fat under the skin, reduction of elastin, and a decrease in circulation. Skin is dryer because of the loss of glands. There are noticeable pigment changes (i.e., age spots).
- Capillaries are more visible because of the decrease in subcutaneous fat, and the skin provides less protection. There can be an increase in bruising or skin tears. Skin may resemble plastic wrap or cellophane.
- The reduction in the fat layer reduces the protection over joints and bony prominences, increasing the risk of pressure ulcers and injuries.



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Gel Mattress

- This is a new mattress system.
- The gel in the mattress decreases pressure around bony prominences.

Powered Lateral Turning Beds

- These beds can turn the client automatically.
- They are used for clients who are immobile or paralyzed.



General Lecture
Material
No
Transparency
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● **SKIN CARE FOR CLIENTS RECEIVING RADIOTHERAPY AND/OR CHEMOTHERAPY**

Radiotherapy and chemotherapy are treatments used to destroy cancer cells. Both cancer cells and healthy cells are affected. This predisposes the client to skin infections, so skin care for these clients is crucial.

Radiotherapy

- Radiation is a cancer treatment using x-rays or gamma rays to impair the replication of cancer cells. The radiation is directed to a specific treatment site.
- Clients will have markings on the skin to indicate the target for the radiation. The HCA should not wash off these markings.
- The most common side effect is skin irritation to the treated area. The skin in this area may appear red or burned. Redness occurs within two to three weeks after the start of the treatment. The irritation can progress, causing severe peeling and oozing of the skin.
- Topical medications are available for radiation-induced skin irritation. Contact the nurse in the radiation oncology department for more information.
- Notify the supervisor at the first sign of skin irritation.

Tips for Minimizing Skin Irritation During Radiation Treatments

- Wash the affected area with cool water and mild soap.
- If the head is being treated, use a mild shampoo (e.g., baby shampoo).
- Pat the skin dry; do not rub.
- Use an electric razor rather than a straight razor.
- Avoid using shaving lotions or scented creams.
- Use non-irritating lotion or cornstarch.
- Do not use perfumes, deodorants, or makeup in the treated area.
- Check with the supervisor before using new creams or lotions.
- Avoid using heating pads and ice packs on the skin in the treated area.

- Use only paper tape when applying dressings to the treated area.
- Apply loose-fitting clothing over the skin in the radiated area. Cover the area with non-irritating materials. Avoid wool and synthetic fabrics.
- Protect the area from friction and injury.
- Avoid sun exposure to the treated area.

Chemotherapy

- Chemotherapy is the use of medications taken internally to treat cancer. The drugs are given intravenously and sometimes orally. The drugs attack rapidly dividing cancer and non-cancer cells. Chemotherapy is not cell specific. Skin cells are also rapidly dividing cells.
- Observe the scalp for irritation. Chemotherapy commonly causes hair loss, although it will grow back.



Lecture Material for
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● PRESSURE ULCERS (PU)

A pressure ulcer is any lesion caused by unrelieved pressure on the skin resulting in damage to the underlying tissue (AHCPR Clinical Practice Guideline, 1992). A pressure ulcer is also known as a decubitus ulcer, pressure sore, ischemic ulcer, or bedsore.

- Pressure sores are caused by prolonged pressure on the skin, decreasing the circulation.
- The ulcer develops into a cone-shaped sore with the point facing toward the body.
- Ulcers can vary in size. The PU can be as small as a dime and take a few weeks to heal, or it can be large enough to put a fist into the wound. A large PU can take more than a year to heal and require multiple surgeries.
- The most important thing to remember about pressure ulcers is that they are *easier to prevent than to treat*.

Areas Prone to Pressure Ulcers

High-risk areas, where the bone can be felt through the skin or bony prominences, include:

- Sacrum (tail bone).
- Heels.
- Elbows.
- Scapulae (shoulder blades).
- Spine.
- Back of the head.
- Malleoli (ankle bones).



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Poor Nutrition

- Malnutrition affects homeostasis of normal tissues.
- The result is a reduced ability to heal.

Underlying Illness

- Any compromised body system or poor general health will affect the skin.
- The resources needed for cell repair are diverted to managing the underlying illness.

Fever

- Elevated temperature increases the metabolic rate and the need for oxygen and nutrients.
- A fever adds stress to the body, further compromising skin integrity.

Infection

- Infection also elevates the metabolic rate and the need for oxygen and nutrients.
- Microorganisms feed on the skin cells and destroy the tissue.

Poor Circulation

- Circulation may be compromised in peripheral vascular disease, diabetes mellitus, and other conditions.
- Poor circulation increases the risk of developing PU.

Age

- Changes in the skin occur with aging.
- The elderly have a greater risk of falls and injuries.

Prevention of Pressure Ulcers

The main goal of the HCA is to prevent pressure ulcers. The secondary goals are to promote healing and prevent the formation of additional pressure ulcers.

Positioning

- Inspect high-risk areas at least every two hours (even if the client must be lifted to see the buttocks).
- With each position change, assess the skin and provide skin care. Clean the area if necessary. Use lotions and provide back rubs to promote circulation. Avoid rubbing alcohol because it dries the skin. Use cornstarch on the edge of the bedpan to decrease friction on the skin.
- If a reddened area does not disappear within 10 minutes after the pressure is removed, increase the frequency of turning.



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Program/Course _____ Instructor's Name _____

CARING FOR THE SKIN**Pre/Post Test**

1. The outer layer of the skin is called the:
 - a. epidermis.
 - b. dermis.
 - c. adipose layer.
 - d. subcutaneous layer.
2. All of the following are functions of the skin *except*:
 - a. maintaining temperature.
 - b. eliminating waste products.
 - c. preventing infection.
 - d. controlling metabolic rate.
3. Which of the following clients is at the *least* risk for skin breakdown?
 - a. the 82-year-old female with urinary incontinence
 - b. a 24-year-old man who is paralyzed
 - c. the 32-year-old woman who exercises three times a week
 - d. a man receiving chemotherapy treatments for cancer
4. All of the following measures are used to prevent pressure ulcers *except*:
 - a. keeping the skin clean and dry.
 - b. changing the client's positioning at least every two hours.
 - c. positioning the client on his or her side, lying directly on the greater trochanter.
 - d. using cornstarch on the edge of the bedpan.



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SKIN CARE





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Caring for the skin

- **Keep skin clean and dry**
- **Increase circulation**
- **Provide proper nutrition**
- **Decrease pressure and avoid creases**
- **Use mechanical aids**





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Module 10

Caring for the Cardiac Client

GOAL

To help the student understand the cardiac system and common cardiac disorders

OBJECTIVES

After completion of the presentation, students will be able to:

- Describe the anatomy of the heart.
- Describe the normal circulation.
- Define the term *coronary artery disease*.
- List four treatments for coronary artery disease.
- Define the term *heart failure*.
- List the symptoms of a myocardial infarction.
- Define the term *hypertension*.



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- Angina pectoris is a classic symptom of CAD and is a sign that someone is at increased risk of heart attack, cardiac arrest, and sudden cardiac death.
- Symptoms often occur when the heart needs more blood, such as during physical activity, extreme temperatures (hot or cold), and emotional stress.

Types of angina include stable and unstable angina.

Stable Angina

- Stable angina is predictable in its origin.
- Pain from stable angina usually occurs after physical activity.
- Stable angina is relieved with rest and nitroglycerin.

Unstable Angina

- Unstable angina is unpredictable in its origin.
- The pain is of a longer duration and can occur at any time.
- The pain is not relieved with rest.



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Arteriosclerosis

Arteriosclerosis is thickening of the walls of the arteries. It prevents the arteries from being pliable (also called hardening of the arteries).

Coronary Atherosclerosis

- Coronary atherosclerosis is the most common form of arteriosclerosis. It affects the inner lining (lumen) of the arteries.
- A buildup of plaque forms in the inside of the arteries. Plaques consist of fatty substances, cholesterol, and waste products from the cell; calcium deposits; and fibrin. Plaque formation begins in the teen years.
- Fat builds up and forms connective tissue and calcium, thickening the inner lumen of the vessels. The thick inner lumen decreases the diameter of the artery and decreases blood flow and oxygen to the heart muscle. Plaques can rupture and occlude the vessel.
- Atherosclerosis can lead to stroke, MI, and other diseases, depending on the location of the plaque buildup.
- The cause is unknown, but atherosclerosis is linked to damage from high cholesterol and high triglycerides (high-fat diet), hypertension (high blood pressure), and smoking.
- Atherosclerosis is eight times more likely to occur in people with high cholesterol, hypertension, and smokers. Using preventive health care can reduce the risk. See Module 19 for more information.



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- Heart palpitations
- Weakness
- Decreased urine output
- Increased heart rate
- Increase in respiration, or more than 20 breaths per minute

Right Ventricular Failure/Right Heart Failure

In right heart failure, the right side of the heart loses the ability to pump efficiently. The fluid entering the heart backs up, and the veins and tissues in the body begin to swell. Blood may back up in the liver, gastrointestinal tract, and extremities. The backup of blood decreases the amount of blood going to the lungs.

Symptoms of Right Heart Failure

- Fatigue
- Edema (accumulation of fluid) in the feet, ankles, and legs
- Abdominal edema (causing pressure on the internal organs and the diaphragm)
- Decrease in appetite
- Pronounced neck veins
- Heart palpitations
- Feelings of faintness
- Cough

Congestive Heart Failure (CHF)

Congestive heart failure is the term used when fluid backs up into the lungs, feet, legs, and abdomen. CHF becomes a chronic condition when the kidneys lose their ability to excrete sodium and water, leading to edema.

Pulmonary Edema

Pulmonary edema is the buildup of fluid in the lung tissue and alveoli. This condition results from CHF and is a medical emergency.

Symptoms of Pulmonary Edema

- Dyspnea
- Shallow, rapid breathing
- Restlessness
- Productive cough
- Frothy, pink sputum
- A bubbling sensation in the lungs
- A feeling of drowning
- Clammy and pale skin, sometimes cyanotic (blue)



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Symptoms of MI

- Severe or crushing chest pain
- Pain or radiating pain to the neck, jaw, shoulder, or back
- Heaviness or pressure in the chest area ("Someone is sitting on my chest" or "It feels like there are bricks on my chest.")
- Aching
- Burning
- Squeezing pain (like squeezing a fist)
- Nausea
- Heartburn
- Pale and clammy skin
- Diaphoresis (sweating)
- Difficulty breathing or shortness of breath
- Irregular heartbeat with palpitations
- Elevated blood pressure
- Feelings of doom

Unlike angina pectoris, the pain generally does not go away with rest. MI is diagnosed by blood tests to determine enzyme levels in the heart.

Treatment of MI

Reperfusion therapy increases the blood supply to the heart by eliminating the blockage through medications, invasive procedures, and surgeries.

Medications

- Clot-dissolving agents are used to dissolve the clot in a coronary artery and restore some blood flow (e.g., streptokinase, urokinase, or tissue plasminogen activator [TPA]).
- They must be given within hours of the MI to be effective.

Angioplasty

- Opens blocked coronary arteries
- Allows blood to flow freely

Surgery

- CABG (open heart surgery)
- Placement of coronary stents

● **CARDIAC REHABILITATION**

Cardiac rehabilitation enhances both the physical and psychosocial aspects of a cardiac diagnosis. This therapy begins once the client is home and includes a medical evaluation, exercise program, education, counseling, and reduction of cardiac risk factors.





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Plan Meals

- Provide meals that are easy to digest. Small, frequent meals are more manageable for the client.
- Encourage the client to choose low-sodium foods.
- Encourage fluid intake unless contraindicated for the client. Try adding a splash of fruit or juice to the water for flavoring (e.g., lemons, oranges, cranberry juice).
- Avoid beverages with caffeine, sugar, or artificial ingredients. Sports drinks should be used sparingly because of the high levels of sugar, sodium, and other electrolytes, which can be harmful to the client.
- Maintain the same routine of the client's eating habits as before the illness. If the client ate in the dining room, continue to eat in the dining room. If the client is no longer able to climb the stairs to the dining room, make a special area for eating with a tablecloth or special plates.
- Sometimes changing a routine and making a meal special is a good idea; for example, try a nice place setting or have the client eat at the table instead of in front of the television.
- Monitor weight loss or gain. Is there nausea or anorexia? Compare daily weights. Notify the supervisor of any changes (even one or two pounds). Encourage weight loss if the client is overweight. Discuss with the supervisor ways to enhance the client's diet.
- Avoid constipation because straining places an extra burden on the heart. Water consumption promotes regularity. Notify the supervisor if the client has not had a bowel movement in three days.

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10-10

Monitor Exercise and Activity

- Activity level is individual to the client. Discuss with the supervisor the amount of activity the client can tolerate. Stop activity if any cardiac symptoms occur.
- All activities should start slowly to avoid stressing the heart. For example, start with passive range of motion and progress to active range of motion; start with sitting up in the chair and then progress to short walks.
- Follow the exercise plan determined in the plan of care.

Maintain a Safe Environment

See Module 2 for more information.

- Keep the home clean.
- Clean the bathroom and kitchen daily to avoid mold and mildew.
- Maintain good ventilation. Leave doors open between rooms for better air circulation. Air out rooms when possible.
- Use exhaust fans in bathrooms to remove moisture.



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CARING FOR THE CARDIAC CLIENT**Pre/Post Test**

1. Cardiovascular disease is a term used to describe:
 - a. abnormal conditions of the heart and blood vessels.
 - b. abnormal conditions of the arteries.
 - c. abnormal conditions of the veins.
 - d. none of the above.
2. During normal circulation, poorly oxygenated blood enters the lungs from the:
 - a. left ventricle.
 - b. right ventricle.
 - c. left atrium.
 - d. right atrium.
3. Coronary artery disease begins:
 - a. in old age.
 - b. over the age of 50.
 - c. only if there is a family history.
 - d. in your teens.
4. What is *not* a symptom of coronary artery disease?
 - a. shortness of breath
 - b. fast heartbeat
 - c. swollen ankles
 - d. weakness
5. Symptoms of a myocardial infarction include:
 - a. chest pain that radiates down the left arm.
 - b. chest pain, heaviness in the chest, nausea, and palpitations.
 - c. no symptoms at all.
 - d. elevated blood pressure, shortness of breath, and frequent urination.
6. Our lifestyle has no bearing on our cardiac health.
 - a. True
 - b. False





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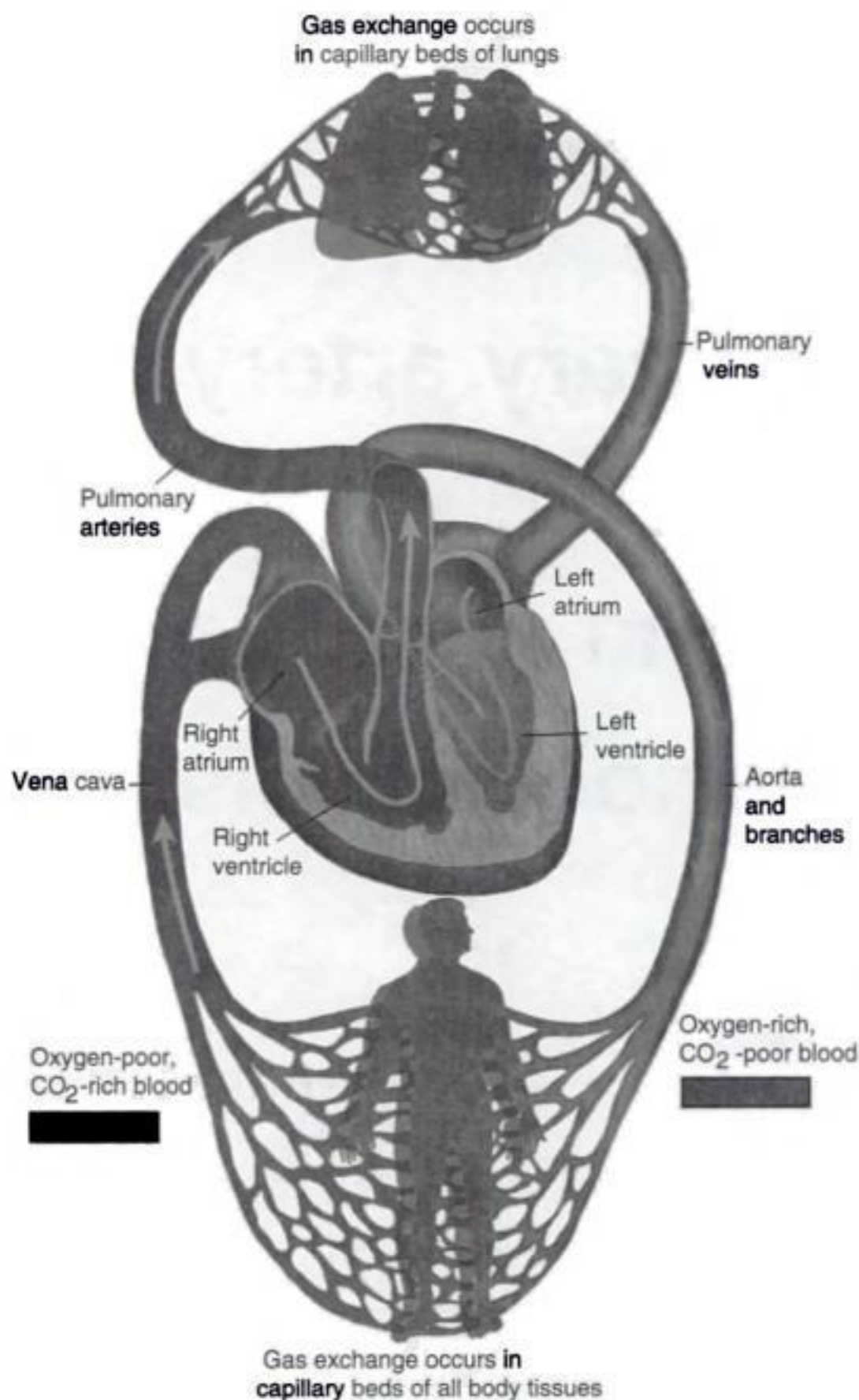


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Circulation



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Common cardiovascular diseases

**(continued from
Transparency Master 10-4)**

- **Heart failure**
- **Valvular heart disease**
- **Cardiomyopathies**
- **Hypertension**
- **Cardiac arrhythmia**
- **Myocardial infarction**





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Module 11

Caring for the Client With a Cerebrovascular Accident (CVA)

GOAL

To demonstrate effective techniques to care for a client with a cerebrovascular accident (CVA)

OBJECTIVES

After completion of the presentation, students will be able to:

- Define a *brain attack*.
- Name the types of brain attacks.
- Describe how a stroke can cause different limitations in different people. List four physical limitations associated with a CVA.
- Name the three types of therapies used by clients after a CVA.
- Describe the two types of aphasia.
- Describe three ways to assist a client who has difficulty swallowing.



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High-Sugar Diet

- A high-sugar diet increases the risk of diabetes.
- Insulin in the blood may influence the buildup of plaque in the arteries.



General Lecture
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● UNDERSTANDING THE NERVOUS SYSTEM

Functions of the Nervous System

The nervous system transmits nerve impulses (messages) all over the body. The impulses are sent to the brain, and the brain interprets the messages and performs the function. When damage to the brain occurs, the pathways are interrupted and the information cannot be processed.

Components of the Nervous System

There are three components of the nervous system.

- The *central nervous system* includes the brain and the spinal cord.
- The *peripheral nervous system* includes the cranial and spinal nerves.
- The *autonomic nervous system* includes the sympathetic and parasympathetic nervous systems.

The *sympathetic nervous system* controls the:

- Motor and sensory function.
- Fight or flight response.

The *parasympathetic nervous system* (special effects) controls:

- Pupil constriction.
- Slowing of the heart rate.
- Increased secretion of glands other than sweat glands.
- Constriction of the bronchioles.
- Specific cranial and sacral nerves.



Lecture Material for
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Master
11-5

The Brain

The brain is divided into lobes or sections. Each lobe is responsible for different functions.

Sections of the Brain

The frontal lobe controls:

- Emotions.
- Personality.
- Intellect.
- Morality.
- Speech.



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- Stop smoking.
- Limit alcohol consumption to less than two drinks a day.
- Monitor blood cholesterol levels.
- Exercise daily.
- Maintain a diet low in sodium and fat.
- Get routine physicals and prevention screenings.
- If experiencing any stroke symptoms, seek immediate medical attention.

● **DIAGNOSIS OF A CVA**

Diagnostic testing is performed to determine the:

- Source or cause of the stroke.
- Site of the stroke.
- Extent of the stroke.

Computed Tomography (CT Scan)

- CT without contrast is performed to determine whether the stroke is hemorrhagic or ischemic.
- CT does not show definitive changes for 24–48 hours after the onset of symptoms.
- Signs of ischemia may appear within three hours.

Positron Emission Tomography (PET Scan)

- PET scanning is a noninvasive imaging procedure.
- It assesses perfusion and levels of metabolic activity in the body.
- It can help determine treatment options.
- It can be performed within a few hours of the stroke.

Magnetic Resonance Imaging (MRI)

- The MRI generates pictures of thin sections of the body and allows the physician to differentiate between normal and diseased tissue.
- MRI may show evidence of ischemic stroke sooner than CT scan.
- The MRI can be performed with or without contrast and is noninvasive.

Ultrasonography

- An ultrasound is a noninvasive test in which sound waves are used to produce a picture of the body.
- Carotid ultrasound screens for carotid artery stenosis.



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Loss of Autonomy

- Physical limitations and memory loss will affect the client's level of autonomy.
- Inability to perform many tasks independently and relying on others often lead to anger and frustration.

Decreased Self-Esteem

- The client is aware of loss of functioning and changes in body image.
- Decreased self-esteem is common when the client also experiences a loss of role (e.g., primary breadwinner).

Changes in Personality

- If the stroke affects the frontal lobe of the brain, personality changes may result.
- This is difficult for the family, especially if the client's personality changes are unfavorable.
- ✿ • A client who was quiet and refined may become loud and aggressive.

General Lecture
Material
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● **THE STROKE SURVIVOR**

- After the diagnosis of a brain attack, the long recovery period begins.
- The recovery period is long, tedious, and frustrating. Clients and family members may become anxious with their new roles as patient and caregiver.
- Support services and the presence of an HCA can lessen the burden.

Common concerns that clients and family members may have, once at home, include the following:

- Possibility of having another stroke
- Inability to accept limitations or disabilities
- Safety issues
- Nursing home placement
- Changes in the home environment
- Family members' new duties as caregivers
- Abandonment of friends and family
- Being sick, different, or deformed

Types of Rehabilitation**Physical Therapy**

- Physical therapy helps restore physical function. The therapist uses range-of-motion (ROM) exercises and strengthening exercises to achieve this goal.

Teaching Alternative Communication.

- Pictorial-language boards or symbol systems (communication boards) are boards with pictures or symbols representing objects, tasks, or responses. The client points to the symbol corresponding to the need or response. This can be useful with both forms of aphasia.
- Mechanical word processors and programmed language boards are computerized devices to aid in communication rehabilitation.

Determinants of Rehabilitation

Factors that may influence recovery include:

- Client's age at the time of the stroke.
- Cognitive impairment.
- Ability to follow commands.
- Client's desire to recover.
- Depression.

● ROLE OF THE HCA FOLLOWING A CVA

The HCA is directly involved with the client's recovery. Always do the following:

- Treat the client with respect and be patient.
- Give support to the client when needed, but most important, offer to listen.

Follow the Plan of Care

- Review the client's abilities and limitations with the supervisor.
- Promote self-care and always maintain safety.
- Review the client's exercise with the supervisor.
- Know the client's swallowing ability before feeding.

Develop Achievable Goals With the Client

- The entire team, including the client, family, supervisor, HCA, physical therapist, occupational therapist, speech therapist, and physicians, should develop the goals together. The goals should be consistent with the plan of care. Make the goals achievable. If goals are too difficult, the client will become discouraged.
- Make the goals measurable; for example, the client will be able to walk five steps with the HCA's assistance in one week.
- Reevaluate the goals as needed.
- Determine whether the skill is too difficult or too easy for the client.
- Time frames often need to be changed (e.g., from one week to two weeks).



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Treatments for Swallowing Problems

Proper Positioning

The client should be positioned properly to aid in eating.

- The client should be sitting upright with the body and the head bent slightly forward.
- The knees are bent and feet are flat on the floor.
- The head should be tilted forward to assist with swallowing.
- Food should be placed properly so the client can see it on the plate.
- Clients should remain in the forward position (head upright and leaning forward) until all food in the mouth has been cleared.

Food Preparation

Make sure that pureed foods are as thick as possible. If the client can manage, provide food that can be chewed. One piece of food is easier to eat than many small pieces (check gag reflex first). Avoid foods that break apart easily, such as rice or chopped meats.

Dysphagia Diets

Dysphagia diets are used when clients have difficulty swallowing. Diets are based on the consistency of the foods.

In the dysphagia *pureed* diet:

- All foods are blended to a smooth consistency.
- No chewing is required.

In the dysphagia *pudding-consistency* diet:

- Consistency is thicker than with the pureed diet.
- No chewing is required.

In the dysphagia *ground moist* diet:

- Foods are finely chopped and moistened (mashed foods).
- Minimal chewing is required.

In the dysphagia *soft-to-chew* diet:

- Consistency is normal but with lower fiber content.
- No seeds, nuts, or crust are allowed.
- Moderate chewing is required.

New Swallowing Techniques

- Following a CVA, the client must learn new ways to swallow.
- The speech pathologist teaches exercises that will help with swallowing.

Feeding Tubes (Gavage)

- Feeding tubes are used when the client is unable to swallow safely. A tube is surgically inserted into the client's stomach (gastrostomy). Nutrition is fed through the tube.

(Insert your agency's policy regarding feeding tubes and the HCA here.)



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Signs and symptoms of a brain attack

Sudden:

- **Numbness or weakness**
- **Difficulty with
communication**
- **Changes in consciousness**

(continues)

Signs and symptoms of a brain attack (continued)

Sudden:

- **Changes in coordination**
- **Severe headache**
- **Visual changes**
- **TIA**



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Expectorants

- Expectorants help loosen mucus secretions in the airways.
- This allows the client to expel the mucus.
- Examples include Robitussin and Breonisin.

Diuretics

- Diuretics help the body excrete excess fluid.
- This avoids excess water retention associated with right-heart failure.
- The client should be monitored for dehydration.
- Examples include furosemide and spironolactone.

Provide Oxygen Therapy

Oxygen therapy is used in advanced cases of COPD for poor ventilation and perfusion. Confusion is the first sign of decreased oxygen levels. Administration of oxygen increases the arterial oxygen blood levels, decreases dyspnea (shortness of breath), and improves neurologic function. The client is able to perform ADL with less shortness of breath when oxygen therapy is used.

Oxygen therapy is a drug and must be used as directed by the doctor. Do not change the flow of oxygen unless directed by the physician.

Oxygen therapy may be used:

- While exercising or performing ADL.
- While sleeping.
- Continuously.

Notify the supervisor if the client is using oxygen therapy. The home medical equipment and the service company providing the oxygen-therapy equipment should provide instructions on user care and maintenance of the equipment.

Hypoxia (inadequate oxygen levels in the cells) is characterized by:

- Dizziness.
- Mental confusion.
- Cyanosis (bluish color of the skin, including mucous membranes and lips).
- Tachycardia (high heart rate).
- Hypertension (high blood pressure).

Dangers of Oxygen Therapy

Ventilatory drive (what makes us breathe) is associated with hypoxic stimulation (low oxygen levels). That is, when oxygen levels are low, we breathe.

Observe the client and the environment when completing your duties.

- Did the client sleep in the bed?
- Are there more pillows than usual?
- Did the client complain of not sleeping well?
- Is yesterday's prepared meal eaten?
- Did the client change clothes from the day before?
- Has there been a change in appearance or hygiene?
- Are there any changes in activity level?
- Are there any changes in mood?
- Are there any episodes of confusion?
- Does the client show dyspnea on exertion (shortness of breath when exerting energy)?

Report any changes to the supervisor.

Promote Independence

- Set small, obtainable goals. Achieving a predetermined goal will promote self-esteem. It can be very hard for the client to accept new limitations.
- Reinforce to the client that there will be "good days" and "not-so-good days." On days when the client feels better, more can be done. On days when the client feels worse, he or she should rest more.
- Avoid becoming overwhelmed. Take one thing at a time. Get through the bath and then think about what is next. Make a list and check off each item when completed; this provides a positive feeling of accomplishment. Organize your day.
- Assisting a client can promote independence. When the HCA assists the client with bathing, the client will not be as tired and will be able to do other things, such as visit with friends at the senior club. Or, the client will have the energy to complete exercises because the HCA did the housekeeping chores.
- Physical limitations and disabilities can cause feelings of helplessness. Whenever a client is feeling helpless, ask why he or she feels that way. Respond with something positive in the client's life, such as "you are able to get out of bed by yourself," "you are a great cook," or "you tell the best stories."
- If the client feels helpless because the HCA is present, respond by describing how the HCA can make the client independent. "Because I assist you with your bath, you can go to the senior club." "Because I assist you with your meals, you can spend more time with family." "Because I can assist you, you do not have to call your daughter for help."

Helpful hints:

- The client may feel best after taking medications.
- Plan activities accordingly.



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CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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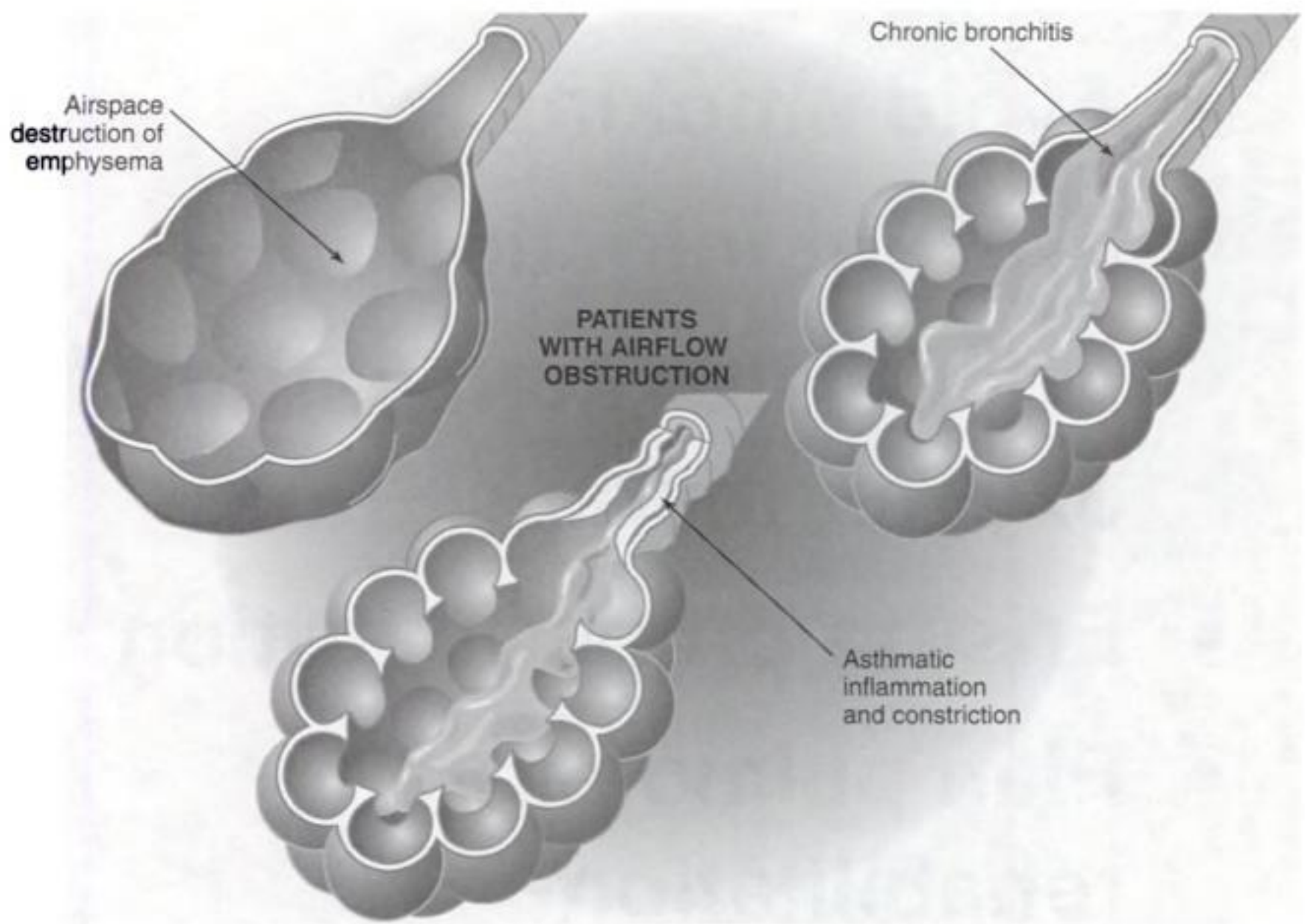
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COPD



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Goals of the treatment plan for COPD

- **Avoid smoking**
- **Prevent infection**
- **Administer medications/
oxygen therapy**
- **Ensure proper nutrition**
- **Plan pulmonary
rehabilitation**





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Without insulin, there is no key to unlock, or open, the cells, so the cells become starved of glucose. The body will try to use other ways to feed the cells by breaking down fats and proteins. The byproduct of this process changes the body's plasma pH levels, leading to acidosis. Death will occur if the disease is left untreated.



Lecture Material for
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Use the following analogy to describe how blood glucose levels are affected by insulin.

Think of insulin as the keys to your home.

Think of a cell as your home.

Think of yourself as glucose.

Think of the street in front of your home as the bloodstream.

- If you do not have keys to get into your home, you are locked out and left in the street. If you do not have insulin, the glucose cannot get into the cell and the glucose remains in the bloodstream.
- You are left out on the street and become cold and hungry. The cells cannot absorb the needed energy and the cells begin to starve.
- The bloodstream has a high concentration of glucose. When the blood glucose level is high, it is called *hyperglycemia*.

We can use the same analogy if we have too much insulin.

If you have the keys, you can get into your home.

If everyone has a key, then everyone will be in your home.

No one is left in the street.

- If the body has insulin, the glucose goes into the cells.
- If the body has too much insulin, all of the glucose goes into the cells.
- No glucose is left in the bloodstream.
- A low glucose level in the bloodstream is called *hypoglycemia*.
- The brain gets about 25% of its sugar from the bloodstream. Because the brain cannot store glucose, a continual amount must be maintained by the bloodstream. The brain cells begin to starve if they do not receive enough glucose.
- Too little blood glucose can cause the brain cells to starve (*hypoglycemia*).
- Too much blood glucose can cause the body tissues to starve (*hyperglycemia*).



Medications

Some prescription and nonprescription drugs may elevate blood glucose levels. These include:

- Nicotinic acid (vitamin B₃).
- Glucocorticoids.
- Thyroid hormone.
- Beta-adrenergic agonists.
- Thiazide diuretics.
- Dilantin®.
- Some cold medications.

- Before your client takes any new medications (including over-the-counter or holistic medications), discuss with the primary care physician.
- Beta-blockers can mask hypoglycemic symptoms.

Alcohol

- Alcohol lowers blood glucose levels.
- Alcohol interferes with the liver's ability to convert stored sugar when blood glucose levels drop too low.
- If the client is drinking alcohol, monitor blood glucose and food intake.

Sexual Activity

- Sex can cause your blood glucose level to fall.
- Any physical sexual act can reduce the blood sugar level.

Female Factors

Hormones and Contraceptives

- Changes in hormone levels of estrogen and progesterone can cause unpredictable blood glucose levels.
- Oral contraceptives work by altering the levels of these hormones.
- Blood glucose may be too high or fall too low. In some women, it can increase the insulin resistance.

Pregnancy

- Specific hormones are released during pregnancy.
- The hormones cause insulin resistance. The increase in insulin resistance is normal when a woman is pregnant.
- Medication, diet, and exercise may need to be modified during pregnancy.





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- The progression of renal disease is different for each client. The best preventive measure is to maintain glucose control.
- Diabetic neuropathy is the most common cause of end-stage renal disease. Clients require renal dialysis to live.

Prevention of Kidney Disease

For prevention, the client needs to:

- Follow a strict diet of low protein and low sodium.
- Monitor fluid intake (fluid restrictions may be needed).
- Maintain glucose levels.

Retinopathy

- Retinopathy is an eye disorder resulting from changes in the retinal blood vessels. The blood vessels are weakened and allow leakage into the retina of the eye.
- Retinopathy can occur without visual change. Severity and progression are related to glucose control. Blurred vision or blindness occurs in advanced stages.
- According to the ADA, diabetes is responsible for 8% of legal blindness in the United States.
- DM causes 12,000–24,000 people to lose their sight each year (ADA).

Prevention of Retinopathy

Prevention includes:

- Regular eye exams.
- Maintaining proper glucose control.
- A healthy diet.



Lecture Material for
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● **ROLE OF THE HCA**

The HCA may care for different types of clients with diabetes. Some may be newly diagnosed and have been hospitalized for DKA or diabetic hyperglycemic hyperosmolar coma and are weak. Others may be newly dependent on insulin because of an acute exacerbation. Such a client may have been unable to maintain glycemic control with oral medications and needed to be hospitalized for treatment. Another client may have chronic diabetes with long-term complications and have limited ability to perform ADL. Whatever the case, the care for the client remains the same.

Interventions for the HCA

- Remind the client to take medications as directed, with food.
 - Assist the client with assembling all necessary items for diabetes treatment. The client may have difficulty with the task because of the neuropathy.



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Question 4. Describe daily foot care.

Answer: Daily foot care for a diabetic client consists of the following:

- Bathe the feet daily with mild soap.
- Test the water temperature.
- Have the client test the water with his elbow or inside of the wrist.
- Do not soak the feet for long periods of time.
- Dry the feet thoroughly, including between the toes.
- Use lotion to soften dry areas.
- Do not cut corns or calluses.
- Do not cut toenails.
- Inspect for redness, sores, or skin breakdown.
- Report any changes to the supervisor.


GROUP ACTIVITY

● **DISCUSSION ON CLIENTS WITH DIABETES**

1. Discuss potential problems a newly diagnosed diabetic client may experience. Include the following in your discussion:
 - Problems with the diet
 - Taking the injections or side effects of medications
 - Hypoglycemic or hyperglycemic reactions
 - Foot care
2. Plan a menu for a client with diabetes.
3. Review medications used for the client with diabetes.

Types of Oral Hypoglycemia Agents

Sulfonylureas

- These agents stimulate the pancreas to make more insulin.
- Trade names include Amaryl®, DiaBeta®, Diabinese®, Dymelor®, Glucotrol®, Glucotrol XL®, Glynase PresTab®, Micronase®, Orinase®, and Tolinase®.

Biguanides

- These agents decrease the amount of sugar made by the liver.
- A trade name is Glucophage®.

Alpha-Glucosidase Inhibitors

- These agents slow the absorption of the starches eaten.
- Trade names include Glyset® and Precose®.



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REAL-LIFE SCENARIO

An HCA was caring for a client who has severe neuropathy of the feet and hands. The client's feet were put into a basin to be washed. The client stated that the water was too cold and asked the HCA to add boiling water to raise the water temperature. The HCA was trying to please the client and added boiling water to the basin. The client had his feet submerged in the boiling water, and sustained second- and third-degree burns to his feet.

Question 1. What did the HCA do wrong?

Question 2. What could the HCA have told the client about adding boiling water to the basin?

Question 3. Why did the client sustain such serious burns?

Question 4. Describe daily foot care.



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Complications of diabetes

- **Diabetic ketoacidosis**
- **Diabetic hyperglycemic hyperosmolar coma**
- **Macrovascular disease**
- **Microvascular disease**



Interventions for the HCA

- **Remind the client to take medications with food**
- **Prepare meals**
- **Monitor & record blood glucose/urine tests**
- **Follow a “sick-day routine”**
- **Observe and report changes**
- **Provide psychological support**

Fundamentals of foot care for the client with diabetes

- **Bathing**
- **Inspection**
- **Filing toenails**
- **Socks**
- **Shoes**





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Module 14

Caring for the Client With Alzheimer's Disease

GOAL

To educate the home care aide (HCA) about caring for a client with Alzheimer's disease or other forms of dementia

OBJECTIVES

After completion of the presentation, students will be able to:

- Define *dementia*.
- Describe the three stages of Alzheimer's disease.
- List six commonly observed signs of Alzheimer's disease.
- Describe the process of diagnosing a client with Alzheimer's disease.
- Describe what is meant by *probable Alzheimer's disease*.
- List six interventions for caring for a client with dementia.

● GENERAL INFORMATION/OVERVIEW

Alzheimer's disease (AD) is described as a progressive decline in mental capacity. One in ten families has a relative with AD.

- As the population ages, there will be a higher incidence of AD.
- AD develops in 10% of the population after the age of 65. Approximately 50% percent of the American population over the age of 85 will develop AD.
- We all experience memory lapses from time to time. Some memory problems are more serious than others.
- Many of us have said, "I keep forgetting things; I must be getting Alzheimer's." Forgetting where you placed your keys is not a sign of AD. Not knowing what to do with the keys may be a sign of AD.
- People with AD do not regress back to their childhood. The brain no longer has the capacity to make decisions or complete tasks as an adult would, so the thought process or developmental age is that of a child.
- The disease impairs the intellectual functioning of the person.

Dementia

- Dementia is an impairment in the intellectual functioning of a person.
- Dementia describes a group of symptoms that are caused by changes in brain function. A loss of mental faculties affects memory, personality, and behavior.
- Dementia seriously affects a person's ability to carry out daily activities. Dementia is not a normal part of aging.
- The term *dementia* has replaced the use of the terms *senile*, *chronic organic brain syndrome*, and *acute organic brain syndrome*. The word *senile* actually means old.
- Alzheimer's disease is one type of dementia.

A person with dementia may:

- Ask the same question frequently.
- Be very forgetful.
- Get lost in familiar places.
- Be unable to follow simple commands.
- Be unaware of people, places, or time.
- Overlook safety hazards.
- Have poor personal hygiene.

Dementia is caused by many conditions. Some conditions are treatable and can be reversed. Many medical conditions may cause AD-like symptoms but are not AD. The two most common forms of dementia in older people are multi-infarct dementia and Alzheimer's disease.



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● STAGES OF AD

Symptoms of AD begin slowly and become steadily worse. As the disease progresses, symptoms change from mild forgetfulness to serious impairments in thinking, judgment, and ability to perform ADL. Eventually, the client will require total care. Survival averages 8–12 years after diagnosis.

Note: Criteria for staging AD vary, and some classification systems may include additional levels between the stages listed below.

Early Stage

The first stage of AD generally lasts 2–4 years. The symptoms are subtle, and the family may not be aware of any changes.

- The client overreacts to events.
- The client is forgetful.
- The client lacks interest in social events.

Middle Stage

This stage lasts between 2 and 12 years. Symptoms worsen during this period and include:

- Progressive memory loss.
- Paranoia.
- Hallucinations.
- Mood swings.
- Loss of social ability (e.g., embarrassing behaviors, cannot find his or her way home, wandering).

Difficulties for the Client During the Middle Stage

Difficulty Communicating

- Difficulty in naming objects
- Substituting inappropriate words when speaking
- Difficulty with writing
- Slow speech

Difficulty With ADL

Multi-task behaviors are affected first. These include:

- Personal hygiene.
- Cleaning the home.
- Taking out the trash.
- Forgetting to turn off the stove.

Difficulty Following Simple Commands

- Difficulty making decisions
- Inability to learn new tasks
- Inability to balance a checkbook
- Losing the train of thought during conversations



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- Allow time for the client to respond.
- Introduce one idea at a time.
- Use gestures to explain ideas to the client.
- Do not accept an incorrect response without correcting it. Have the client repeat the correct response (e.g., "John, that is a chair?").
- Have the client identify items if appropriate (e.g., "What is this bottle?" Shampoo.).

If the client is having difficulty communicating:

- Try to guess what the client is trying to say (e.g., "Are you worried about the house?").
- Supply a word if the client is having difficulty.
- Have the client point to the object or act out what is wanted.
- Establish regular routines for the client who is unable to communicate.

Instructions should be specific and offer no choices.

- Avoid questions that require difficult choices. Say, "It is time for your bath," rather than, "Do you want to take your bath now?" or "We are going to the kitchen," rather than, "Do you want something to eat?"
- Avoid statements with too many concepts or ideas. The instructions should match the client's ability to comprehend the multi-task description. The concept "We are going into the kitchen and we will make some lunch," could be separated by instructing the client first to go to the kitchen and, once there, instructing the client about lunch.

Establish a Nighttime Routine

- Behavior problems, when present, are often worse at night.
- Establish bedtime rituals that are calming, such as reading to the client or offering warm milk.
- Avoid activities that excite the client.
- Use nightlights to prevent disorientation.
- Limit caffeine consumption during the day.
- Discourage daytime napping.
- Incorporate an exercise program during the day to help prevent restlessness.

Do Not Take the Client's Behaviors Personally

- The client acts out because of frustration and/or fear.
- The client will pick up on your feelings, and this may exacerbate the unwanted behaviors.





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Question 3. List other events that can trigger this type of behavior.

Answer:

- Being rushed
- Having to think about too many things at once
- Frustration at not being able to complete a task
- Not understanding what is going on
- Being tired
- Feelings of being treated like a child



GROUP ACTIVITY

Consider the following thought-provoking activity. Ask the audience to close their eyes and imagine the following:

- You awaken to find yourself in a place you do not recognize. The bedroom and the personal belongings are not yours. The people you see are strangers. How do you feel? (e.g., scared, anxious, confused)
- Take it one step further: You are unable to communicate. You cannot understand the language and they cannot understand you.
- Next, one of the strangers begins to speak to you, starts to remove your clothes, and leads you to a room. What thoughts are you having? (e.g., violation, fear)

The above is a description of an HCA assisting a client with AD with taking a shower. Does the image of someone helping you take a shower resemble the image you just experienced? This could be what the client with dementia is experiencing when assisted with personal care. The client with dementia is lost in his or her own surroundings.

● RESOURCES

Alzheimer's Association

<http://www.alz.org>

Family Caregiver Alliance

<http://www.caregiver.org>

● REFERENCES

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- This disease causes no true paralysis or loss of sensation. Stretching and flexibility exercises can prevent debilitating contractures. The use of upper-extremity and fine-motor coordination should be stressed.
- Diaphragmatic breathing exercises can increase volume when speaking and assist the client's breathing. Clients with PD often develop pulmonary complications.
- Special attention should be paid to the client's posture. A firm bed decreases contractures and improves bed mobility.
- Medications should be given before mealtime to help facilitate oral and pharyngeal movements.
- The diet should be low in protein. Protein competes with dopamine production.
- Evaluate the client's ability to swallow. Drooling can be an embarrassment to the client, so provide the client with a supply of tissues.
- Facial oral and lingual muscle exercises should be encouraged to help the client with the mask facial expression, eating, and speech articulation.
- Assist the client with the use of artificial tears to keep the eyes lubricated.
- Assistance with ambulation may be necessary as the disease progresses. Demonstrate proper use of assistive devices.



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● **ROLE OF THE HCA WITH THE CLIENT WITH DISABILITIES**

Clients with disabilities are unable to do everything. They do have limitations that may require assistance with ADL. The role of the HCA is to help the client to achieve maximum independence and not to take control of his or her life. Promoting empowerment and self-actualization will enable the client to be more independent and increase self-esteem.

- Assist the client with lifestyle changes. The onset of a new disability or further limitations can produce negative feelings. Listen and encourage the client to express feelings and needs. Support groups can ease feelings of loneliness.
- Care should be self-directed by the client. Develop measurable goals to assist the client in being as independent as possible.
- Assist the client with ambulation, personal care, skin care, meal planning and preparation, and household chores.
- Encourage the use of assistive or adaptive devices (e.g., cane, walker, wheelchair, braces, sliding board, utensils, tub chairs). This will promote independence.



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Psychosocial Considerations

- The psychological aspects of a disability can affect clients in various ways.
- Factors regarding the severity of limitations, length of time since the onset of the disability, and deterioration of function all contribute to how a client deals with it psychologically.
- The need for sexual intimacy and relationships does not disappear, as do other abilities. The client may remain sexually active, and privacy should be respected. Clients who do not have an intimate relationship may project their feelings onto the HCA. Notify the supervisor of any inappropriate behaviors.
- Financial constraints contribute to depression and isolation and decrease social activities. These add to feelings of low self-esteem and low self-worth.
- The presence of a support system will help the client deal with the stresses of a disability. Support groups can help a client to accept changes in body image.
- Encourage the client to express feelings of anger, decreased self-esteem, depression, and loneliness.

Accessibility and the Client With Disabilities

- Accessibility is allowing persons with disabilities access to buildings, public transportation, restaurants, and stores.
- People with full function may not see the barriers of individuals with disabilities. Physical limitations, including confinement to a wheelchair, poor vision, or hearing impairment, can prevent a person from going to the movies, eating at restaurants, or shopping.
- Individuals with disabilities should not need permission to enter a store. Having to call the store manager to gain access when able-bodied persons enter without confirmation is discrimination. This makes the person with a disability feel like a child and a burden. Barrier-free access enables access without assistance.

Several modifications can make areas accessible to individuals with disabilities.

- Breaks in curbs
- Wheelchair ramps
- Doorways that are at least 32 inches wide
- Low thresholds in doorways
- Bathrooms that can fit a wheelchair or walker
- Seating for persons in wheelchairs
- Aisles wide enough for walkers or wheelchairs

- Ambulation can be impaired because of the decrease in coordination, muscle weakness, and/or pain.
- Tremors can lessen the ability to complete tasks, including writing and eating.
- Sensory impairment can lead to burns and other safety hazards.
- Problems with falls, caused by impaired motor function or dizziness, can prevent a client from going out into the community.
- Cognitive abnormalities may cause the client to limit social activity or work.

Question 3. Define *disabled* or *disability*.

Answer: Disability, or being disabled, is the inability to function normally, either physically or mentally. The federal government defines disability as: "Inability to engage in any substantial, gainful activity by reason of any medically determinable physical or mental impairment, which can be expected to last or has lasted for a continuous period of not less than 12 months."

GROUP ACTIVITY

1. Discuss personal feelings toward individuals with disabilities.
2. Discuss stereotypes of a person with a disability.
3. Discuss how a person with a disability may be discriminated against.
4. Discuss common accessibility barriers within the building you are in and within most clients' homes.

RESOURCES

American College of Rheumatology
<http://www.rheumatology.org>

American Parkinson Disease Association
<http://www.apdaparkinson.com>

The Arthritis Foundation
<http://www.arthritisinsight.com>

Family Caregiver Alliance
<http://www.caregiver.org>

Lupus Foundation of America
<http://www.lupus.org>

MS Foundation
<http://www.msfacts.org>

National Council on Disability
<http://www.ncd.gov>

THE CLIENT WITH A DISABILITY

**Arthritis
Lupus
MS
Parkinson's Disease**

Transparency Master **15-1**



Symptoms of advanced Parkinson's disease

- **Symptoms progress to both sides of body**
- **Tremors (including pill rolling)**
- **Rigidity**
- **Bradykinesia**

(continues)



Symptoms of advanced Parkinson's disease

(continued)

- **Postural instability**
- **Shuffling gait**
- **Difficulty swallowing**
- **Unwanted eyelid closure**



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Thrombosis (Blood Clots)

- Thrombosis is an abnormal condition in which a thrombus, or blood clot, forms within a blood vessel.
- A clot can occur in the larger veins of the pelvis and lower extremities after surgery.
- A thrombus most commonly occurs in the calf, thigh, or pelvic veins. A clot may form without causing symptoms.

Thrombosis is due to the following:

- Venous stasis (blood flow is slowed or halted in the veins) caused by prolonged immobilization or pressure on vein walls from leg straps in the operating room
- Hypercoagulation (increased clotting)
- Damage to the venous wall

Thrombophlebitis (Phlebitis)

Thrombophlebitis is inflammation of a vein, often accompanied by formation of a clot, caused by trauma to the vessel wall. The inflammation is due to an infection; a chemical irritation (intravenous medications); postoperative venous stasis; prolonged sitting, standing, or immobilization; or a long period of intravenous catheterization. Many of the listed causes are commonly observed during the postoperative period.

Superficial Vein Thrombophlebitis

This type of thrombophlebitis occurs in a vein just under the skin.

- A reddened line along the path of the vein may be present.
- The client may complain of tenderness or a bump in the area.
- The area is sensitive to pressure and is warm to the touch.
- The surrounding area may be red (erythematous).
- The entire limb may be pale, cold, and swollen.
- Serious complications are rare.

Deep Vein Thrombophlebitis

This type of thrombophlebitis occurs in a deep vein.

- The client usually complains of an aching or cramping pain.
- The client is positive for Homans' sign: pain in the calf when walking or pain with dorsiflexion (flexing toward the head) of the foot.
- The risk of serious complications can be high.
- The clot can damage valves in the vein, leading to future problems with swelling of the leg and permanent obstruction in the vein.
- An embolus (a clot that breaks away) can form and travel through the bloodstream. The embolus will lodge in a small capillary and block blood flow and oxygen if not treated.

Pulmonary Embolism

- A pulmonary embolism is an embolus blocking small vessels in the lung. The condition is frequently life-threatening if the clot is large and interferes with ventilation.



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Three Phases of Wound Healing

Inflammation

- Inflammation begins at surgery and continues for four to six days after surgery.
- The wound contains exudate, which includes blood, lymph, and fibrin at the wound edges.
- Blood supply is increased to the area.
- Strands of fibrin begin to form to hold the tissues together.
- The tissue is weak and needs sutures to hold the wound together.

Proliferation

- Proliferation begins five days to two weeks postoperatively.
- Wound healing occurs during this phase.
- Increased fibroblasts, collagen, skin cells, and blood vessels are produced at the site.
- The tissue becomes stronger, allowing for the removal of skin sutures or staples.
- Continue to prepare meals high in protein during this phase to assist with wound healing.

Maturation

- Maturation begins in the second or third week after surgery and lasts up to two years.
 - The outside of the wound appears healed, but the healing process continues in the tissues.
- ❖ • Promote a healthy diet to continue with tissue repair.

Lecture Material for
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Master
16-5

● MONITORING THE WOUND

Observation and reporting are important for several characteristics of the wound.

Appearance of the Wound

- When observing a surgical wound, look at the size of the incision. Note the length and any unique features.
- Determine whether there is any exudate (crust formation along the edges of the wound).
- Look for redness, which is commonly seen on the outer edges in the first two to three days and then should disappear.
- Observe for the presence of staples, sutures, or wound closures. Look for irritation around staples or suture sites. Note whether the closures are intact. Two to three days postoperatively, the skin around sutures or staples is swollen. Generally sutures or staples are removed seven to ten days postoperatively. Adhesive strips are often used after sutures or staples are removed to support the incision site.



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● RANGE-OF-MOTION EXERCISES

Review Module 11 for more information on range of motion. Handout 11-3 can accompany the demonstration.

Option: For small groups, have them separate into partners and practice the range-of-motion exercises. For large groups, select a volunteer and demonstrate the range-of-motion exercises.

GROUP ACTIVITY

1. Ask the audience to list the benefits of early ambulation.
2. Have the audience list the types of dressings an HCA may change.
3. Have the audience demonstrate the correct technique for changing a nonsterile dressing.

● RESOURCE

The Association of Perioperative Registered Nurses
<http://www.aorn.org>

● REFERENCES

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CARING FOR THE POSTOPERATIVE CLIENT

Pre/Post Test

1. Pain-management strategies for the postoperative client are best taught:
 - a. before the surgical procedure.
 - b. at the time of the surgical procedure.
 - c. after the surgical procedure.
 - d. only if the client has pain.
2. Atelectasis is caused by:
 - a. pain.
 - b. pain medication.
 - c. immobilization.
 - d. all of the above.
3. A pulmonary embolism is a life-threatening condition caused by:
 - a. air becoming trapped in the alveoli and causing the alveoli to collapse.
 - b. an infection in the lungs (pneumonia).
 - c. a cut in the pulmonary vein during lung surgery.
 - d. a blood clot that becomes dislodged and blocks a blood vessel in the lung.
4. Early ambulation during the postoperative period can:
 - a. improve respiratory rate, cardiac output, muscle strength, gastrointestinal function, pain, and morale.
 - b. cause delayed wound healing.
 - c. improve muscle strength only.
 - d. be harmful to the client.
5. Wound infection can be a complication of surgery. What is the best way an HCA can prevent infection?
 - a. hand washing
 - b. wearing personal protective equipment
 - c. reminding the client to take antibiotic medications
 - d. none of the above



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CARING FOR THE AGING CLIENT**Pre/Post Test**

1. The elderly population is increasing because of:
 - a. technological advances.
 - b. better health care.
 - c. community programs.
 - d. all of the above.
2. What is the most obvious change when we age?
 - a. less income
 - b. more free time
 - c. physical appearance
 - d. becoming forgetful
3. Some researchers believe the effects of aging are caused by:
 - a. free radicals.
 - b. exposure to the sun.
 - c. poor diet.
 - d. little income.
4. Part of the normal aging process is to:
 - a. become forgetful and mentally impaired.
 - b. become incontinent to urine.
 - c. have problems adapting to changes in light.
 - d. get cancer.
5. Safety is a major concern with the aging client. Name two ways an HCA can prevent safety hazards.
 - I. Assist the client in and out of the shower.
 - II. Install smoke detectors.
 - III. Install an alarm system.
 - IV. Report changes to the supervisor.
 - a. I and II
 - b. II and III
 - c. I and III
 - d. I and IV



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**As you are,
I once was.**

**As I am,
you will be.**





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Section Four

Supportive Measures

Section four provides supportive measures for the client, family, and the home care aide.

Information on healthy eating and prevention of illness offers practical information to assist everyone involved in the client's care. These supportive measures are especially important when caring for a client near the end of life.



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Nutrients can be placed into six categories.

- Carbohydrates
- Lipids (fats)
- Proteins
- Vitamins
- Minerals
- Water

Carbohydrates

- Carbohydrates make up approximately one-half of our daily calories.
- They provide the energy needed for the body to function.
- The cells of the body need carbohydrates to grow and repair.
- Carbohydrates are necessary in the diet. They are broken down into sugar (glucose), which gives the essential energy for the brain, nervous system, and the muscles of the body to work. Because the heart is a muscle, glucose is also important for cardiac function.
- Carbohydrates allow the body to maintain a constant temperature of 98°F.
- Carbohydrates are divided into simple and complex carbohydrates.

Simple Carbohydrates

- One sugar molecule, or monosaccharide, is a simple sugar. Sucrose is the name for the simple sugar. Table sugar and candy are examples of sucrose.
- Fructose is another type of simple sugar. Fructose is found in fruits, such as oranges and watermelon.
- Two or more sugar molecules are called disaccharides. Lactose, or milk sugar, and maltose, or barley malt, are examples of a disaccharide. Lactose is found in milk and cream. Maltose is found in beer and some cereals.

Complex Carbohydrates

- Complex carbohydrates are called starch or polysaccharides, which are chains of sugar molecules. Examples of complex carbohydrates are potatoes, pasta, grain, and beans.
- A diet high in carbohydrates can be dangerous, especially for children and pregnant women. Having too many carbohydrates in the diet means that there is not enough protein and fiber. On the other hand, a diet too high in fiber and bulk grains can lead to digestive problems.

Lipids (Fats)

- Lipids, fat-like substances found in the blood, include cholesterol, fatty acids, and triglycerides. Fats are essential for body function.
- Lipids provide more energy than carbohydrates.
- Lipids help the cells in the body to function properly and repair damage.

- Lipids are responsible for maintaining proper hormone production. For example, they help regulate the production of female sex hormones.
- Lipids provide the insulation (myelin) in the central nervous system. The fat coats the lining of the nerves and allows the nerves to function optimally.
- Lipids help to carry the fat-soluble vitamins A, D, E, and K.
- A diet too low in fat can hinder the absorption of the fat-soluble vitamins, and the person can become vitamin deficient. Contrary to some fad diets, taking all the fat out of the diet is very unhealthy.

Proteins

- Proteins are made up of amino acids, which are essential for sustaining life. Every cell of the body uses proteins to function.
- Proteins repair organs and make enzymes, some of which aid in the digestion process. They make hormones, one of which is insulin. Insulin helps to maintain blood sugar levels.
- There are twenty amino acids, which are divided into two groups: essential and nonessential amino acids.
 - Nine essential amino acids are known. These amino acids are found only in food.
 - Amino acids that are produced by the body are called nonessential amino acids. The body manufactures 11 nonessential amino acids.
- Proteins help to maintain water balance in the body. Proteins are large molecules that prevent fluid from leaving the vascular system (blood supply) and moving into the body tissues. An example of this disorder is swelling (edema).
- Hair, nails, and muscles are made of protein. Proteins rebuild the muscles of the body (e.g., the heart).
- Proteins help a developing fetus to grow, help the mother to produce breast milk, and make antibodies to help fight infections.
- There are two types of proteins: complete and incomplete proteins.

Vitamins

- Vitamins are needed for body growth and healing. Vitamins alone cannot provide energy for the body.
- The body functions without vitamins, but vitamins are essential in maintaining good health.
- The body is not capable of making vitamins on its own. All vitamins must be obtained from the diet.
- The cooking process can destroy many vitamins.
- Vitamins are divided into fat-soluble and water-soluble vitamins.

Fat-Soluble Vitamins

- Fat-soluble vitamins are stored in fat cells. The fat-soluble vitamins are A, D, E, and K.

- Because these vitamins are stored in the body and are not easily excreted, toxicity is a risk.

Water-Soluble Vitamins

- Water-soluble vitamins are filtered through the kidneys. Excess amounts of the vitamins are excreted in the urine, which eliminates the risk of toxicity.
- Examples of water-soluble vitamins are vitamins C and B, biotin, and folic acid.

Minerals and Trace Elements

- A mineral is an inorganic chemical element obtained from compounds in food. A trace element is a mineral that the body requires only in small amounts.
- Minerals are necessary for optimum growth, development, and health by contributing to biochemical and physiologic processes.
- Minerals do not provide energy, but are vitally important in maintaining the nervous system and the support of bone structure.
- The body uses only the minerals needed; others are excreted.

Water

- The body is 60% water, and all body cells need water to survive.
- Water is second to oxygen in sustaining life.
- Water transports vitamins and minerals throughout the body.
- Water helps lubricate the body and its joints.
- Water helps maintain body temperature.
- Water transports waste out of the body through urine and stool.



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● **FOOD DIGESTION**

Digestion is the process by which food is broken down into components small enough for the body to absorb and use where needed. Digestion begins when food is seen and smelled. The mouth begins to salivate and the stomach juices begin to flow. This prepares the mouth and stomach for the food.

Mouth

Chewing

- When food is chewed, the saliva and teeth break down the food elements.
- The saliva contains enzymes that begin the digestion process even before swallowing.
- Saliva lubricates the food and makes it easier to swallow.



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- Learning how to combine foods is important for proper nutrition. This will ensure a well-balanced diet with all the daily body-building protein needed.

Combinations making a complete protein include:

- Whole wheat bread and peanut butter
- Brown rice with beans
- Milk with whole grain cereal
- Whole grain pasta and cheese.

According to the Food Guide Pyramid, eat 2–3 servings of this group each day. A serving size consists of 2–3 ounces of cooked, lean meat. When choosing other foods within the group, one egg, one-half cup of cooked dry beans, 2 tablespoons of peanut butter, or one-third cup of nuts is equivalent to 1 ounce of lean meat. One ounce of lean meat equals one-third of a serving size.

Vegetables

- Vegetables provide vitamins, minerals, and fiber while being low in fat.
- Incorporate a variety of vegetables into the diet to obtain the needed nutrients (e.g., dark green, leafy vegetables; deep yellow vegetables; starchy vegetables; and legumes).
- Legumes contain protein and can be substituted for a meat source (for vegetarians).
- The Food Guide Pyramid recommends 3–5 servings of vegetables daily.
- The serving size of vegetables equals 1 cup of raw, leafy vegetables; one-half cup of cooked vegetables; and three-quarters of a cup of vegetable juice.

Fruits

- Fruits are a good source of vitamins A and C and contain potassium.
- Fruits are low in fat and sodium.
- The Food Guide Pyramid recommends 2–4 servings daily.
- A serving size equals one medium apple or orange, one-half cup of fruit, and one-third cup of fruit juice.

Bread, Cereal, Rice, and Pasta

- This group consists of carbohydrates, which supply energy and maintain constant body temperature.
- The Food Guide Pyramid recommends 6–11 servings per day.
- A serving size equals one slice of bread, 1 ounce of cereal, and one-half cup of cooked cereal, rice, or pasta.





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Leading causes of death

- **Cancer:** **555,500**
- **Diabetes:** **69,301**
- **Stroke:** **167,000**
- **Heart disease:** **710,760**



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● GENERAL INFORMATION/OVERVIEW

Dying is part of life. Death of a client raises personal issues and beliefs and reminds us of our own mortality.

- Death is a subject of much debate; religious leaders, philosophers, and political ideologies all ponder its meaning.
- Perceptions of death and expressions of grief vary by age, culture, past experience, support systems, and spiritual beliefs. Spiritual beliefs include practices, rites, and rituals directed toward the loss and grieving process.
- Behaviors of grief may not indicate the true feelings of the bereaved, but instead reflect the expectations of the person's culture.

● AUDIENCE INTERACTION FOR TRANSPARENCY MASTER 20-1

Ask the audience what is meant by a *good death*. The definition of a *good death* may be different for everyone. The phrase *good death* may seem morbid or even impossible to think about.

Possible definitions include:

- A good quality of life until the end.
- Dying in your sleep.
- Dying suddenly.
- Having a chance to tell loved ones that you love them.

The home care aide's (HCA's) own feelings and experiences about death influence how the client and family are treated. Caring for others during the end of life can be both rewarding and emotionally consuming at the same time.

The HCA is faced with:

- Providing for someone's last wishes.
- Dealing with emotions of the client's family.
- Dealing with personal feelings toward the client.
- Fulfilling the goals of care, which may be different from his or her own beliefs.



● GRIEF

Grief is the physical and emotional response to loss, death, or separation. The physical symptoms are similar to those felt in fear. The emotional patterns go through stages. Everyone who was touched by the loss can feel grief.

- How a person grieves is influenced by culture.
- Experiences of loss early in life affect how someone deals with future losses.



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Suggestions for maintaining objectivity and a professional relationship with the client include:

- Keep to your normal working hours.
- Discuss any concerns with your supervisor.
- Report any incident immediately; do not let the situation get out of control.
- Be open with the client. For example, "Mrs. Green, thank you for trusting me, but I think your daughter should help you make such decisions," or "Agency policy prevents me from acting as your guardian."
- Follow the plan of care. For example, "I cannot do that; it is not on the plan of care." Notify the supervisor if the client is requesting other duties.
- When feeling a loss of objectivity, discuss changing assignments with the supervisor. Do this as a last resort because the client may have difficulty trusting a new HCA at this stage. Continue to assess the relationship with the client.



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● MORAL AND ETHICAL CONCERNS OF DEATH AND DYING

Spirituality

- Spirituality is the client's philosophy and beliefs.
- Spirituality is the expression of the philosophies that we have chosen for our lives.
- Near death, the client reviews and analyzes his or her belief system, which influences the meaning of death.
- Clients may not have a formal religious affiliation. This does not mean that they do not have spiritual needs.
- If a clergy member is requested, discuss with the family and supervisor ways to provide such visits.
- Respect the client's beliefs.
- Listening encourages the client to express needs and accept his or her fate.

Confidentiality

- Maintaining confidentiality is difficult when a person is ill. Everyone is worried about the client, including neighbors, friends, and other HCAs working in the building.
- Continue to maintain confidentiality no matter how often you are approached by caring visitors.
- Discuss concerns with the supervisor.



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