

## 15

# Medications and Technology in Home Care

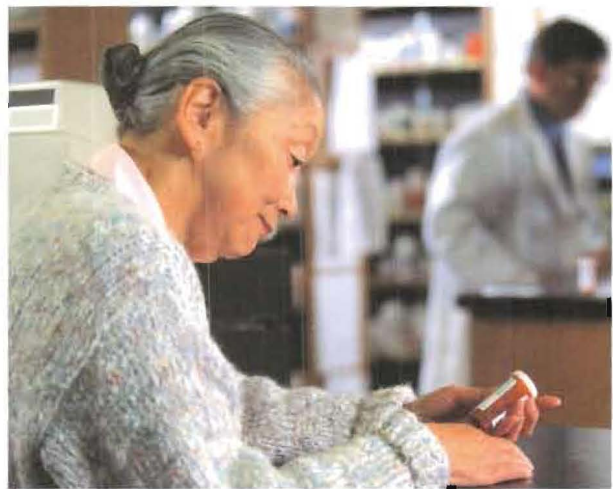
## 1. List four guidelines for safe and proper use of medications

People who need home care often need medications. Clients who have problems such as coronary artery disease, high blood pressure, and diabetes may take many drugs, all with different purposes and effects. Home health aides do not usually handle or give medications. However, HHAs need to understand the kinds of medicine clients may be taking. They also need to know what to do if a client experiences side effects or refuses to take medication.

### Guidelines: Safe and Proper Use of Medications

- G** Never handle or give medications unless you are specifically trained and assigned to do so. Do not touch the inside of a medicine bottle or the pills or medicines themselves. Do not put any medication into a client's mouth. Handling or giving medication can have serious consequences. Only people who have had special training are allowed to give medications.
- G** Observe clients taking their medication. Although you cannot handle or give medication, you can remind clients to take their medications. You can also bring medication containers to clients, and provide water or food as needed to take with the medication. Always observe, report, and document as appropriate.

- G** Know the difference between prescription and nonprescription (over-the-counter, or OTC) medication. Antibiotics (such as penicillin), heart medication (such as nitroglycerin), and potent pain medication (such as codeine) are examples of prescription drugs. Aspirin or cold medications, such as decongestants, are over-the-counter drugs (Fig. 15-1).



**Fig. 15-1.** Be aware of all medications a client is taking. Know the difference between prescription and over-the-counter medications.

- G** Be aware of all medications a client is taking. There are many possible side effects and interactions among medications. Watch for symptoms such as itching, trembling or shaking, anxiety, stomachache, diarrhea, confusion, vomiting, rash, hives, or headache. Any of these symptoms could indicate a side effect or interaction. Report any of these symptoms to your supervisor.



## 2. Identify the “rights” of medications

Knowing the five basic “rights” of medications will help prevent mistakes.

1. **The Right Client:** Always check the label on the medication container to make sure the client’s name is on it.
2. **The Right Medication:** Check the expiration date and the name of the medication before giving the container to the client. Make sure the medication name on the container matches the name listed in the care plan.
3. **The Right Time:** Make sure the instructions on the medication label about what time or how often to take the medication match the instructions in the care plan.
4. **The Right Route:** Check the label for instructions on how the medication is to be taken. Make sure the instructions on the label match those in the care plan.
5. **The Right Amount:** Make sure the instructions on the container label for how much medication to take match the instructions in the care plan.

An HHA should call her supervisor if the medication label and the care plan do not agree on any of the five rights. She should also call her supervisor if there is not enough information on the label or in the care plan, or if there is another problem with the medication (for example, the client’s name is not on the container).

Some rights have been added to this list in recent years in an effort to reduce medication errors. They include things like the *right documentation*, *right reason*, *right response*, *right to refuse*, and *right equipment*. Not all agencies use this longer list, so HHAs should follow agency policy.

### Dosages

Prescription medication comes from the pharmacy with the instructions printed on the label (Fig. 15-2). The information listed on the label includes the name of the medication, dosage instructions, how

the medication should be taken, the quantity of medication included, the amount of refills allowed, the medication’s expiration date, and any specific warnings. The patient’s name and the pharmacy’s name and contact information are also included.

When assisting a client to self-administer medication, the HHA should read the directions on the bottle before handing the bottle to the client. Dosage means how much medication should be taken each time (the right amount). A capsule, tablet, or pill will be ordered with both the strength of one pill and how many are to be taken each time. For example, the bottle may read *Zolpidem 10 mg tablets, take one tablet by mouth at bedtime as needed*.

The label will state how the medication should be taken (the right time and route). For example, the zolpidem should be taken by mouth at bedtime. Sometimes the prescription states to *Take as needed*. This means the client is not required to take the drug; the drug should be taken when the client has symptoms. The zolpidem is to be taken as needed for sleep. However, medications that are ordered as needed will have a maximum daily dose/limit stated on the label.

Liquid oral medications may be ordered in teaspoons, tablespoons, or milliliters. The HHA should provide the client an oral syringe or medication dosing cup—not a spoon used at the table (and ideally not a measuring spoon used for cooking either)—to measure the dose. Medications which are to be put into the eyes or ears will be labeled with the number of drops per dose. A nasal spray label will state how many sprays are in one dose. Medications for inhalers may be pre-measured into dose-sized packages.

The HHA should learn the abbreviations that are approved by his agency, and he should always call his supervisor if he has a concern or question.



**Fig. 15-2.** Medications come with instructions from the pharmacist. Instructions include the dosage and when and how to take the medication.



Some elderly people have a hard time remembering to take all their medications. In addition, there may be instructions to remember. Examples of instructions include taking pills with food or on an empty stomach, or drinking plenty of fluids. HHAs must pay close attention to the medication schedule. The nurse usually sets this schedule. HHAs should become familiar with all doctors' instructions on how and when to take medications and should use forms as ordered (Fig. 15-3). If the specified time for a dose passes, an HHA should remind the client to take the medicine. If a client does not take a medication that has been ordered, it should be reported to the supervisor.

**Fig. 15-3.** Many home health agencies use medication forms to help the client or aide document the client's self-medication. (REPRINTED WITH PERMISSION OF BRIGGS HEALTHCARE®, BRIGGSHEALTHCARE.COM, 800-247-2343)

- Remind the client when it is time for medication.
- Check for the right person, medication, time, expiration date, route, and amount.
- Read the medication label for the client.
- Identify the container and bring the bottle or container of medication to the client.
- Bring the client equipment needed to prepare and self-administer medication.
- Provide food or water to take with the medication as directed.
- Shake liquid medications if ordered by the care plan.
- Open and close containers.
- Position the client for taking the medication.
- Observe the client taking the medication.
- Document that the client took the medication, the time, and any other medications or food taken at the same time.
- Report any possible reactions to the supervisor. Call the supervisor if there are any problems or questions.
- Clean and store or properly dispose of special medication equipment after use.
- Return the medication to storage.

Home health aides are NOT allowed to do any of the following:

- Break apart or crush capsules or tablets.
- Mix medication with food or drink.
- Pour or mix medication from one bottle into another, even if both contain the same medicine.
- Touch medication directly with their hands.
- Assist with self-administration of medication if the client's name is different from that on the label.

- Assist with medication whose label has been removed or changed.
- Assist with medicine if the medication name does not match the name in the care plan.
- Use appearance alone to identify a medication.
- Assist the client in taking more or less of a medication than is ordered.
- Remove or change a medication label.
- Assist the client with medicine at a time when it is not ordered.
- Provide the wrong liquid for swallowing medications.
- Put medication into the client's mouth.
- Draw up a solution for injections.
- Give the client an injection.
- Dispose of used injection needles/syringes.
- Insert suppositories or other medication into the rectum.
- Insert or apply vaginal medication.
- Do special cleaning of the client's eyelids or eyelashes to prepare for eye medications.
- Put drops into the eye, ear, or nose.
- Apply prescription medications to the skin.

Some clients have reactions to certain medications, and some medications may interact with others, causing problems. To avoid these problems, all medication that is taken must be documented. The HHA should report drugs, prescription or nonprescription, that the client takes that are not part of the care plan. Even a pill as common as aspirin should be noted. Reporting and documenting any reactions the client may have to medications is important.

Avoiding certain foods or substances can be important when taking certain medications. For example, drugs that have sedative or calming effects should never be mixed with alcohol. If the client does not follow these restrictions, the HHA

must notify her supervisor immediately. The doctor and pharmacist will inform the client and the family of any possible side effects from the medication. Common side effects include dizziness, drowsiness, headache, nausea and vomiting, and confusion. More serious side effects occur when there is an allergic reaction to the medication. Allergic reactions with symptoms like hives, fever, rash, or difficulty breathing can be life-threatening. They may require emergency help.

**4. Identify observations about medications that should be reported right away**

If a client shows signs of a reaction to a medication, or complains of side effects, the HHA must report it right away. Her supervisor can assess whether or not the symptom is caused by the medication. The HHA's responsibility is to report her observations.

**Observing and Reporting: Medications**

- ☐ ☐ Dizziness or fainting
  - ☐ ☐ Nausea, vomiting, or diarrhea
  - ☐ ☐ Rash, hives, or itching
  - ☐ ☐ Difficulty breathing or swelling of the throat or eyes
  - ☐ ☐ Drowsiness
  - ☐ ☐ Headache or blurred vision
  - ☐ ☐ Abdominal pain
  - ☐ ☐ Any other unusual sign
- In addition, report any of the following problems immediately:
- ☐ ☐ Client refuses to take the medication as directed.
  - ☐ ☐ Client takes the wrong dose (amount) of medication.
  - ☐ ☐ Client takes the medication at the wrong time.
  - ☐ ☐ Client takes the wrong medication.
  - ☐ ☐ A medication container is missing or empty.



## 5. Describe what to do in an emergency involving medications

If a client has a severe allergic reaction to a medication, takes the wrong dose, or takes medications together that cause complications, emergency medical treatment is necessary. An overdose, whether it is accidental or intentional, must be treated as poisoning. The HHA must call the local poison control center immediately and should follow their instructions (aapcc.org). Poison control will send paramedics if needed.

For severe drug reactions or interactions, the HHA should call 911 for emergency help. She should stay with the client and not give any liquids, food, or other medications unless instructed to do so by emergency personnel. The supervisor should be notified as soon as possible.

## 6. Identify methods of medication storage

When assisting with the proper storage of medications, the HHA should follow these guidelines:

### Guidelines: Proper Storage of Medications

- G** Keep the client's medications in one place, separate from medicine used by other members of the household.
- G** If there are young children or a disoriented elderly person in the home, recommend to the family that medications be locked away.
- G** All medications should be kept in childproof containers if children are in the home. To avoid an accidental overdose, keep medications out of reach of children.
- G** If medicine requires refrigeration, store the bottle toward the back on an upper shelf, out of a child's reach (Fig. 15-4).
- G** Store all medications away from heat and light.

- G** The client or a family member should discard medications that have expired, are not labeled, or are discolored. Medications should not be discarded in the trash; children or animals may have access to them. Ask your supervisor for specific disposal instructions if the client or family will not dispose of expired medications. Do not dispose of them yourself.



**Fig. 15-4.** Store medication properly. Keep medications out of the reach of children.

## 7. Identify signs of drug misuse and abuse and know how to report these

Drug misuse and abuse may be accidental or deliberate. It includes the following:

- Refusing to take medications
- Taking the wrong dose or taking it at the wrong time
- Mixing medication with alcohol
- Taking drugs that have not been prescribed
- Taking illegal drugs
- Sharing drugs with others

Misuse and abuse of drugs is extremely dangerous. It can even be fatal.

If a client refuses to take certain medications, an HHA can explain that recovery often depends on taking the right medication. If the client still refuses, the HHA should notify his supervisor. The HHA should not push the client to take the medication, but he can try to find out what is making the client reluctant to take it. Getting the client to express concerns may help the

HHA give information to the care team. A doctor or nurse can then either persuade the client to take the medication or adjust the treatment. People may avoid taking prescribed medication because they cannot afford it or because they have difficulty obtaining it. Sometimes the client is confused about which drugs to take, at what hour, and in what quantities. Home health aides can help. If the client wants to know why he needs to be taking certain medications, an HHA can ask the nurse or doctor to provide an explanation. People who have conditions that affect mental function, such as dementia, will greatly benefit from friendly reminders. Other reasons people do not take medication are that they dislike the side effects and they have difficulty swallowing pills. These problems can be overcome once the supervisor is aware of them. HHAs should be alert to the signs of misuse or abuse and report them immediately.

**Observing and Reporting: Drug Misuse and Abuse**

- O/R Depression
- O/R Anorexia
- O/R Change in sleep patterns
- O/R Withdrawn behavior or moodiness
- O/R Secrecy
- O/R Verbal abusiveness
- O/R Poor relationships with family members

The drugs that pose the highest risk for causing drug dependency are pain medications, tranquilizers, muscle relaxers, and sleeping pills. Chapter 18 contains more information about opioid painkillers and dependency.

**8. Demonstrate an understanding of oxygen equipment**

**Oxygen therapy** is the administration of oxygen to increase the supply of oxygen to the lungs. This increases the availability of oxygen to

the body tissues. Oxygen therapy is used to treat breathing difficulties and is prescribed by a doctor. Home health aides should never stop, adjust, or administer oxygen for a client.

Oxygen will be delivered to the home in cylinders or tanks or produced by an oxygen concentrator. Compressed oxygen and liquid oxygen are stored in tanks of varying sizes (Fig. 15-5). An oxygen concentrator produces and distributes oxygen, but does not store oxygen. The agency that supplies the oxygen will service the equipment and provide training on its use.



Fig. 15-5. This is one type of oxygen tank.

Some clients receive oxygen through a **nasal cannula** (KAN-ye-la). A nasal cannula is a piece of plastic tubing that fits around the face and is secured by a strap that goes over the ears and around the back of the head. The face piece has two short prongs made of tubing. These prongs fit inside the nose, and oxygen is delivered through them (Fig. 15-6). A respiratory therapist fits the cannula. The length of the prongs (usually no more than half an inch) is adjusted for the client's comfort. The client can talk and eat while wearing the cannula.



Fig. 15-6. A nasal cannula.



An **oxygen concentrator** is a box-like device that changes air in the room into air with more oxygen. Oxygen concentrators are quiet machines. They can be larger units or portable ones that can move or travel with the client (Fig. 15-7). They have at least one filter that typically needs to be cleaned once per week. Oxygen concentrators run on electricity. They are plugged into wall outlets and are turned on and off by a switch. It may take a few minutes for the oxygen concentrator to reach full power after it is turned on. Clients who use oxygen concentrators will often have a backup oxygen tank available in case of a power outage.



**Fig. 15-7.** These are a type of oxygen concentrator.  
(PHOTOS COURTESY OF PHILIPS, WWW.USA.PHILIPS.COM, 1-800-744-5477)

Clients who do not need concentrated oxygen all the time may use a face mask when they need oxygen. The face mask fits over the nose and mouth. It is secured by a strap that goes over the ears and around the back of the head. Plastic tubing connects the mask to the oxygen source. The mask should be checked to see that it fits snugly on the client's face, but it should not pinch the face. It is difficult for a client to talk when wearing an oxygen face mask. The mask must be removed for the client to eat or drink anything.

Oxygen is a very dangerous fire hazard because it makes other things burn (supports combustion). **Combustion** (*kom-BUS-chuhn*) means the process of burning. Working around oxygen requires special safety precautions.

### Guidelines: Working Safely around Oxygen

- G** Post *No Smoking* and *Oxygen in Use* signs. Never allow smoking in the room or area where oxygen is used or stored.
- G** Remove all fire hazards from the area. Fire hazards include electrical equipment, such as electric razors and hair dryers. Other fire hazards are cigarettes, matches, space heaters, and flammable liquids. **Flammable** means easily ignited and capable of burning quickly. Examples of flammable liquids are alcohol and nail polish remover. Read the labels on liquids if you are unsure. If they say *flammable*, remove them from the area. Notify your supervisor if a fire hazard is present and the client does not want it removed.
- G** Do not burn candles, light matches, or use lighters around oxygen. Any type of open flame near oxygen is a dangerous fire hazard.
- G** Do not use oxygen near wood-burning or gas stoves, gas space heaters, or fireplaces.
- G** Do not use an extension cord with an oxygen concentrator.
- G** Do not place electrical cords or oxygen tubing under rugs or furniture.
- G** Avoid using fabrics such as nylon and wool that can cause static electricity discharges.
- G** Oxygen can be irritating to the nose and mouth. The strap of the nasal cannula or face mask can also cause irritation around the ears. Check the nasal area and behind the ears for signs of irritation. Report and document any irritation you observe.
- G** Do not use any petroleum-based products, such as Vaseline or Chapstick, on the client or on any part of the cannula or mask. Oil-based lubricants can be a fire hazard.
- G** Learn how to turn oxygen off in case of fire. Never adjust the oxygen setting or dose.

In addition, follow these guidelines for oxygen tanks, liquid oxygen, and oxygen concentrators:

**For clients using oxygen tanks:**

- G** Count and record pulse and respirations before and after the client uses the oxygen tank to see if there are any changes.
- G** The flow meter shows how much oxygen is flowing out to the client at any time. It should be set at the amount stated in the care plan. If it is not, report this to your supervisor. Do not adjust the oxygen level.
- G** Make sure the humidifying bottle has distilled water in it and is attached correctly. Wash the humidifying bottle according to the care plan or equipment supplier's instructions.
- G** Change the nasal cannula when ordered. It will need to be changed when it is hard or cracked, at least once every two weeks. It should also be changed after the client has had a cold or the flu. Wash the plastic tubing once or twice per week with soap and water and rinse it well.
- G** Make sure the oxygen tank is secured and will not tip over.

**For clients using liquid oxygen:**

- G** Turn off supply valves when the reservoir is not in use.
- G** Do not tip the reservoir on its side.
- G** Make sure the reservoir is not in a closet, cupboard, or other closed-in space.
- G** Do not cover the reservoir with bed linens or clothing.
- G** When lifting the reservoir, lift with two hands. Do not roll the reservoir or walk it on its edge.
- G** Do not touch frosted parts of the equipment, because the cold can cause frostbite. Do not touch liquid oxygen; it can also cause frostbite. Report if the reservoir is leaking.

**For clients using oxygen concentrators:**

- G** Count and record pulse and respirations before and after client uses the oxygen concentrator to see if there are any changes.
- G** The oxygen concentrator dial must be set at the same rate as indicated in the care plan. If it is not, report this to your supervisor. Do not adjust the oxygen level.
- G** Check the humidifying bottle each time the device is used to see that it has distilled water in it and that it is screwed on tightly. Distilled water, not tap water, must be used because minerals in tap water may clog the tubing.
- G** Make sure the concentrator is in a well-ventilated area, at least six inches from a wall.
- G** Because the air filter cleans the air going into the machine, brush it off daily to remove dust.

**Humidifier**

A humidifier is a device that puts moisture into the air. Clients who use oxygen equipment or who have breathing problems may use humidifiers. Making the air moist or humid can make clients more comfortable.

There are different types of humidifiers; some humidifiers put warm moisture into the air and some put cool moisture into the air.

For cleaning and care of a humidifier, the HHA should follow the manufacturer's instructions. Because pathogens grow in moist areas, the water tank of the humidifier should be washed often. Other HHA responsibilities may include adding water to the humidifier when needed, and possibly adding special tablets to prevent mineral buildup.

**9. Explain care guidelines for intravenous (IV) therapy**

**Intravenous** (*in-tra-VEE-nus*) **therapy**, often called *IV therapy*, is the delivery of medication, nutrition, or fluids through a vein. When a doctor prescribes IV therapy, a nurse inserts a needle or tube into a vein. This allows direct access to the bloodstream. Medication, nutrition,



or fluids either drip from a bag suspended on a pole or are pumped by a portable pump through a tube and into the vein (Fig. 15-8). Some clients with chronic conditions may have a permanent opening for IV lines, called a *port*. This opening has been surgically created to allow easy access for IV fluids.













**Fig. 15-8.** A client receiving intravenous medication.


Home health aides never insert or remove IV lines. They are not responsible for care of the IV site. Their only responsibility for IV care is to report and document any observations of changes or problems with the IV line.

### Observing and Reporting: IVs

Report any of the following to your supervisor:

-  The tube/needle falls out or is removed
-  The tubing disconnects
-  The dressing around the IV site is loose or not intact
-  Blood is in the tubing or around the site of the IV
-  The site is swollen or discolored
-  The bag is broken, or the level of fluid does not seem to decrease
-  The IV fluid is not dripping or is leaking
-  The IV fluid is nearly gone
-  The pump beeps, indicating a problem

 The pump is dropped

 The client complains of pain or has difficulty breathing

The home health aide should document his observations, any instructions received from his supervisor, and the care he provided. The HHA should not do any of the following when caring for a client who has an IV:

- Measure blood pressure on an arm with an IV line
- Get the IV site wet
- Pull or catch the tubing on anything, such as clothing (special gowns with sleeves that snap and unsnap are available to lessen the risk of pulling out IV lines)
- Leave the tubing kinked
- Lower the IV bag below the IV site
- Touch the clamp
- Disconnect the IV from the pump or turn off the alarm

### Assisting in changing clothes for a client who has an IV

*Equipment: clean clothes*

1. Wash your hands.
2. Explain the procedure to the client, speaking clearly, slowly, and directly. Maintain face-to-face contact whenever possible.
3. Provide privacy if the client desires it.
4. Wash your hands.
5. If the bed is adjustable, adjust the bed to its lowest position. If the bed is movable, lock the bed wheels.
6. Assist the client to a sitting position, making sure her feet are flat on the floor. Adjust the bed height if needed (if possible). Let the client sit for a few minutes to adjust to the change in position.

7. Ask the client to remove the arm without the IV from clothing. Assist as necessary.
8. Help the client gather the clothing on the arm with the IV. Carefully lift the clothing over the IV site and move it up the tubing toward the IV bag (Fig. 15-9).



**Fig. 15-9.** Make sure clothing does not catch on tubing.

9. Lift the IV bag off its pole, keeping it higher than the IV site. Carefully slide the clothing over the bag. Place the bag back on the pole.
10. Set the used clothing aside to be placed with the soiled laundry.
11. Gather the sleeve of the clean clothing.
12. Lift the IV bag off its pole and, keeping it higher than the IV site, carefully slide the clothing over the bag (Fig. 15-10). Place the IV bag back on the pole.



**Fig. 15-10.** Always keep the IV bag higher than the IV site.

13. Carefully move the clean clothing down the IV tubing, over the IV site, and onto the client's arm.

14. Have the client put her other arm in the clothing. Assist as necessary.
15. Observe the IV for one minute to make sure that it is dripping properly (Fig. 15-11). If it is not dripping at all or if the drops are coming too slowly or too rapidly, notify the supervisor. Make sure none of the tubing is dislodged and the IV site dressing is in place. Make sure the tubing is not kinked.



**Fig. 15-11.** Observe the IV to make sure it is dripping properly.

16. Assist the client with changing the rest of her clothing as necessary.
17. Leave the bed in its lowest position. Place soiled clothes in the laundry hamper.
18. Wash your hands.
19. Document procedure and any observations.

### Complementary or Alternative Health Practices

Many people use complementary or alternative health practices. **Complementary medicine** refers to treatments that are used in addition to conventional medical treatments prescribed by a doctor. **Alternative medicine** involves practices and treatments that are used instead of conventional methods. Clients may use any of the following:



- Chiropractic medicine concentrates on the spine and musculoskeletal system. Chiropractors believe that a misaligned spine can interfere with the body's proper function. Chiropractors do not use drugs or surgery; they use hands-on manipulations, also called adjustments, of the spine or other joints. They also teach exercises and provide nutrition and other health counseling.

Heat, cold, and muscle stimulation are used to improve function. Chiropractors are frequently consulted for back, neck, and joint pain, as well as for headaches.

- Massage therapy manipulates soft body tissues with touch and pressure and is used to reduce stress, promote relaxation, aid circulation, and give relief from pain.
- Acupuncture is a very old Chinese healing technique. Very fine needles are inserted into specific points on the body in order to restore health, relieve pain, or treat other conditions.
- Homeopathy involves giving small doses of a substance to stimulate the body's ability to heal itself.
- Herbs and other dietary supplements may be taken for prevention as well as treatment of diseases or conditions. If an HHA knows that a client is taking herbs or supplements, she should report this to the supervisor because some can cause serious problems if taken with certain medications.

If clients are using complementary or alternative medicine, the HHA should not make judgments about treatment or discuss her opinions. She should not make recommendations about these methods or offer suggestions. If an HHA has concerns, she can talk to her supervisor.

## Chapter Review

1. What are four guidelines for promoting safe and proper use of medications? Briefly describe why each guideline is important.
2. List five basic "rights" of medications and explain what they mean.
3. What does dosage tell a person about medication?
4. What should an HHA do if she notices any problem with a client's medication?
5. List 10 tasks an HHA may perform if she is instructed to help a client with self-medication.
6. List 18 tasks an HHA may NOT do with regard to medications.
7. What are four signs of an allergic reaction to a medication?
8. Name five side effects of medications.
9. List seven signs an HHA should report immediately to her supervisor that might indicate a reaction to medication.
10. How should an HHA treat an overdose? Whom should she call?
11. What is the best place to keep medications if there are young children in the home?
12. List five signs of drug abuse and misuse.
13. What are two common reasons people avoid taking prescribed medications?
14. What is a nasal cannula?
15. What is an oxygen concentrator?
16. Why is oxygen a dangerous fire hazard?
17. List two examples of fire hazards that must be removed from the area when oxygen is in use.
18. List two examples of flammable liquids.
19. What is a home health aide's only responsibility as far as IV therapy is concerned?
20. What is complementary medicine? What is alternative medicine?