

## Teaching Plan

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To use this lesson for self-study, the learner should read the material, do the activity, and take the test. For group study, the leader may give each learner a copy of the learning guide and follow this teaching plan to conduct the lesson. Certificates may be copied for everyone who completes the lesson.

### ***Learning objectives***

A participant in this lesson will be able to:

- Describe multiple sclerosis (MS) and how it affects the body
- Understand the most common physical, emotional, and cognitive (thinking) problems of people with MS
- List ways to assist people with some of the problems of MS

### ***Activity***

1. Use the crossword puzzle at the beginning of the session as a pretest to stimulate interest in the topic. Or, introduce the lesson by asking your learners to tell you what they know about multiple sclerosis. Even if you do not currently care for people with MS, the chances are good that you will eventually.
2. Using your board or flip chart, draw a large outline of the basic human central nervous system, similar to the example in Figure 24.1. Use this picture (it can be very rough) as you deliver a mini-lecture based on the first two pages of the learning guide. Illustrate your talk by writing some of the terms and the signs and symptoms of MS on the board. If you prefer, copy the example illustration for your learners.
3. If you did not use it as a pretest, use the crossword puzzle now as a learning activity. Review the answers together.

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4. Lead your group to discuss the “Ways to Help People with MS” on the last two pages of the learning guide. If you currently have people with MS in your agency, ask if your staff members have any specific questions or problems with the people they are caring for. Work together to suggest solutions based on what was learned in this lesson.

### ***The lesson***

Review the material in the lesson with participants. Allow for discussion.

### ***Conclusion***

Have participants take the test. Review the answers together. Award certificates to those who answer at least seven (70%) of the test questions correctly.

### ***Test answers***

1. d
2. b
3. b
4. a
5. a
6. b
7. b
8. a
9. a
10. a

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## Multiple Sclerosis

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Contents:

- How MS affects the body
- Common problems associated with MS
- Helping people with MS

### Overview

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Multiple sclerosis (MS) is a disease that damages the body's central nervous system. There is no cure for MS, but while it is sometimes disabling, it is not fatal.

The central nervous system is composed of the brain and the spinal cord. It controls voluntary movements. When you move, the brain sends a message down the spinal cord to nerves that go throughout the body and to the muscles, telling them what to do. The nerves send reports back to the brain about how you are moving and what you are feeling.

A protective substance called myelin covers the nerves in the brain and spinal cord. It works like the insulating cover on an electric wire, enabling electric impulses to travel to and from the brain.

Multiple sclerosis causes the body to attack its own myelin, creating hard scar tissue on the damaged myelin and sometimes severing the nerve fiber itself. These damaged or destroyed areas interrupt the nerve impulses in their travels. The messages from brain to body and back again can get lost or distorted by these bumps in the road. The body may not work like it is supposed to because of lost or garbled messages.

The term sclerosis in the name of this disease refers to the scar formation, and multiple refers to the many areas of the central nervous system that are damaged.

## MULTIPLE SCLEROSIS

### ***How does MS affect the body?***

Some common signs and symptoms of MS:

- Weakness
- Numbness and tingling
- Stiffness
- Tremors
- Difficulty walking
- Visual problems
- Speech problems (slurred or slow)
- Swallowing problems
- Pain (in face, body, legs, and arms)
- Bowel and bladder problems
- Sexual difficulties
- Fatigue
- Depression
- Difficulty remembering things
- Difficulty solving problems

### ***What happens to people with MS?***

Multiple sclerosis is very unpredictable, and it follows a different course and causes different symptoms in every individual. Not knowing what will happen is very frustrating for the person with MS.

Many people with MS do well over their lifetime and do not need much help. Others become disabled and may need home care, assisted living, or skilled nursing care.

Usually, people with MS develop symptoms that may last a few days or several months, after which the symptoms may disappear or level off for a while (remission). The symptoms can appear again at any time (exacerbation). Some people may completely recover between exacerbations. Others may never have a remission. Some people continue to get worse, losing more functions with time.

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### ***Common problems in MS***

**Fatigue** is experienced by 90% of people with MS. It often interferes with the ability to perform routine daily activities. The body is working extra hard because nerve impulses have to struggle past scar tissue to get to their destination, creating overwhelming fatigue that can happen at any time, without warning or apparent cause. In addition, it takes more effort to do things because of other symptoms of MS, such as difficult movement or depression. Some things that may worsen MS fatigue are:

- Heat, fever, increased body temperature
- Stress
- Excessive physical activity

**Problems with movement** are often disabling and cause the individual with MS to need the help of others. When a person can't control arm or leg movements, they have difficulty doing everyday activities.

When messages from the brain to the limbs are interrupted or distorted, many different things can happen. The muscles might tighten up or spasm, or the hands may have tremors. Or, a message to move might get through only partially or not at all, resulting in weakness, paralysis, clumsiness, or falling. When the muscles around the mouth or throat are affected, the individual may have difficulty speaking or swallowing.

Stress, fatigue, and heat may temporarily worsen MS symptoms. Hot weather, or hot bath or shower water, may make it difficult for the person to see or move for a while.

**Problems with sensation** include difficulties with any of the five senses: hearing, sight, smell, taste, and touch. When messages from the nerves in the body cannot be properly sent back to the brain, the person may not be able to feel normal sensations, such as temperature, pressure, or position. The individual with MS might have poor vision, double vision, or see "holes" in the field of vision. Hearing, taste, and smell are rarely affected.

The individual with MS might have feelings of numbness, burning, or tingling. They may feel pain even when there is no injury. Muscle spasms can be very painful, as can the stabbing pains they sometimes experience in the face. Injuries can result from sensory problems. For example, if someone with MS can't

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feel that bath water is too hot, they might get burned. Falls or foot damage can occur if they cannot feel the ground under their feet.

**Cognitive changes** affect some, though not all, people with MS. Thought processes may be slowed. Common problems are:

- Difficulty remembering things
- Difficulty solving problems, leading to poor judgment
- Language problems, such as being unable to think of the right word
- Difficulty in concentrating or focusing.

People who have these problems are not crazy or lazy. The symptoms may come and go and may get worse with depression, anxiety, fatigue, or stress.

**Emotional discomfort**, such as depression or anxiety, is a serious difficulty in MS. Many people with MS become depressed if they can't do things for themselves. Signs of depression include social withdrawal, altered sleeping or eating habits, and talk of hopeless feelings or suicide. Always report these to a supervisor.

**Bowel and bladder problems**, such as constipation, diarrhea, bowel incontinence, urinary incontinence, and urinary retention (unable to void) are common in people with MS because of the disrupted communication between the brain and the body.

## Helping People with MS

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There are many different ways to assist people with MS and to alleviate discomfort. Because MS symptoms are different in every person, guidance on how to help is listed by symptom.

### ***Managing fatigue***

The following guidelines can help people with MS manage their fatigue and maximize their activities:

- People with MS should stay in a comfortably cool, well-ventilated room

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- Bath or shower water should not be too hot
- Activities and tasks should be planned ahead and spread throughout the day
- Activities and tasks should be paced, with periods of rest during the day
- Focus on activities and tasks that must be done or have the highest priority

When helping someone with MS, remember that fatigue has a big impact on an individual's ability to carry out activities of daily living. A person might be able to transfer with assistance in the morning but be so fatigued or weak by evening that they must be lifted. Even someone who can normally do certain things might need your help occasionally.

### ***Assisting with movement and muscle problems***

Because people with MS may have problems with movement, be sure to:

- Encourage as much independence in self-care as possible.
- Keep mobility aids such as walkers, canes, crutches, scooters, and wheelchairs maintained and ensure they are used properly and safely.
- Keep the physical environment as safe and uncluttered as possible.
- Respect privacy for hygiene and dressing. Ask the person what he or she would like to wear.
- Remember that hot bath or shower water, or hot weather, may temporarily worsen symptoms.
- Help the individual stay well groomed. Put a magnifying mirror at eye level and style hair or assist with makeup as requested.
- Check that braces or splints worn by someone to support a leg or arm do not cause pressure sores or skin irritation.
- Follow the therapist's instructions if the the individual with MS needs to have his or her arms and legs moved through a range of exercises and you are responsible for helping.
- Turn the person and ensure he or she changes positions at least every two hours to prevent pressure sores and skin breakdown if that person cannot move independently in bed or a chair must be used.
- Keep assistive devices within reach.
- Provide a straw, cut up tough foods, and open food containers at meals.
- Be very careful with hot food or liquids if the person's ability to feel is impaired.

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- Ask what he or she would like to eat next if you are feeding someone.
- Allow plenty of time for chewing and swallowing, and watch for swallowing problems.
- Supervise the person constantly during eating to reduce the risk of choking. Also:
  - Have the person sit up while eating, and encourage the individual to eat slowly
  - Reduce distractions by turning off the TV or eliminating other noises
  - Be sure the food is the proper consistency for their needs (soft, pureed, etc.)
- Immediately report any choking or coughing problems associated with drinking or eating.

### ***Relieving painful and abnormal sensations***

To help a person who might be in pain or experience abnormal sensations, remember that wearing a glove or stocking may ease the burning or tingling in a hand or leg and that range-of-motion and stretching exercises may ease the discomfort caused by immobility.

### ***Managing cognitive and emotional difficulties***

The following are some strategies that can help manage cognitive problems:

- Organize the environment so that items used regularly remain in familiar places.
- Develop a consistent daily routine.
- Limit activities for a short time period.
- Conduct conversations in quiet places to minimize distractions.
- Repeat information and write down important points.
- Follow verbal instructions with written backup and visual aids when possible.
- Introduce change slowly, one step at a time. Work on one task at a time.
- Encourage the person to keep a notebook of important information.
- Provide a quiet environment for activities that require more mental activity.

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### ***Helping people with depression and anxiety***

Encourage people who are feeling depressed or anxious to express their feelings, and listen without judging. Help them stay connected to others by phone and letters; support friendships. Assist with hobbies, interests, and activities.

### ***Managing bowel and bladder problems***

People with MS often experience issues with bowel and bladder function. The following guidelines can help you assist the person and ease discomfort.

#### **Constipation**

Observe how often the person has a bowel movement, and:

- How hard or soft the stool is and how much difficulty the person has passing the stool
- Any complaints of fullness in the stomach area

Report these signs to a supervisor. A high-fiber diet and plenty of fluids help with constipation.

#### **Diarrhea and bowel incontinence**

Diarrhea can occur if a person has been constipated and developed an impaction. Irritating foods, such as coffee and some spices, might also cause it. In people with MS, diarrhea might be due to other problems with the muscles and organs. Report diarrhea to your supervisor.

To help a person with bowel incontinence:

- Respond quickly when they need help going to the bathroom.
- Encourage a high-fiber diet and offer fluids often.
- Become familiar with the person's pattern of bowel elimination, and then offer opportunities for bathroom use as often as needed. Assist the individual to the bathroom and give sufficient time and privacy. Be sensitive to the embarrassment the person might feel.
- Use protective undergarments. Change them as soon as they become soiled.

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- Wash affected areas with gentle soap and dry thoroughly after each bowel movement.
- Observe skin for moistness, redness, or breakdown.

### Urinary incontinence

You may need to help the person control the amount and timing of fluid intake. If they are incontinent at night or during a recreational activity, they might want to avoid fluids in the evening or before the activity. It is important to get at least eight glasses of liquid per day. Always be prompt in answering requests for assistance to get to the bathroom.

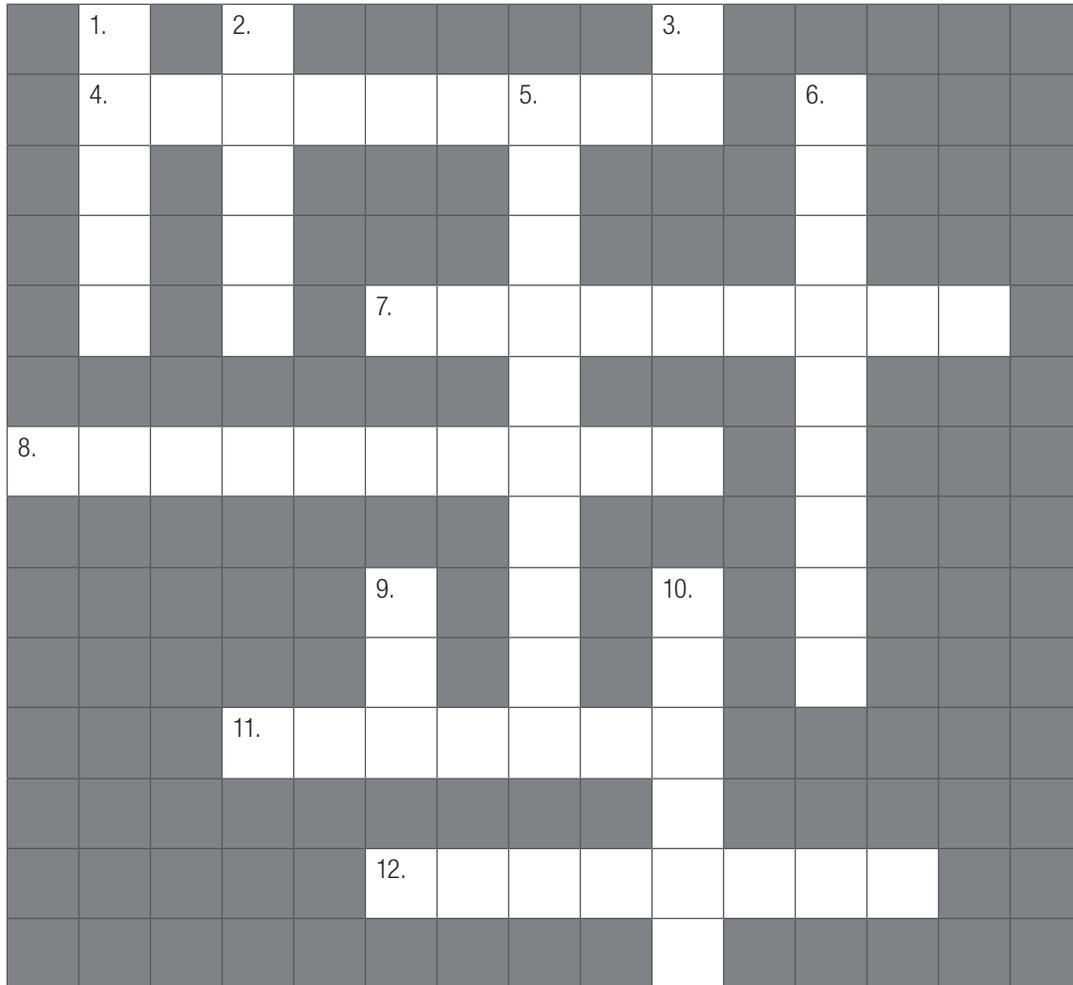
### Urinary retention

Sometimes people with MS are unable to completely empty urine from the bladder because of nerve damage or medications. To help them, monitor voiding patterns so that you will notice if they are experiencing an inability to empty the bladder. Some people with MS insert a catheter into their bladder several times per day to drain the urine. You can help by gathering the necessary supplies. Sometimes a catheter must stay in all the time. Help by keeping the tubing and drainage bag as clean as possible.

## MULTIPLE SCLEROSIS

Figure  
24.1A

### Multiple Sclerosis Crossword Puzzle



**Across:**

- 4. Means the muscles are unable to move.
- 7. Hard scar tissue on the covering of the nerves.
- 8. This connects the brain to the nerves. (two words)
- 11. A symptom experienced by 90% of people with MS.
- 12. Means that many places in the nervous system are affected.

**Down:**

- 1. What happens when a muscle tightens up and can't relax.
- 2. This sends and receives messages to and from the nerves and muscles.
- 3. Initials that stand for a disease of the central nervous system.
- 5. When people with MS have trouble with this, it can be difficult to eat.
- 6. Feeling or awareness of conditions within or without the body.
- 9. If bath water is at this temperature, it can worsen MS symptoms temporarily.
- 10. The insulating sheath that covers the nerves.

## MULTIPLE SCLEROSIS

Figure  
24.1B

### Multiple Sclerosis Crossword Puzzle Answer Key

	1. S		2. B						3. M					
	4. P	A	R	A	L	Y	5. S	I	S		6. S			
	A		A				W				E			
	S		I				A				N			
	M		N		7. S	C	L	E	R	O	S	I	S	
							L				A			
8. S	P	I	N	A	L	C	O	R	D		T			
							W				I			
					9. H		I		10. M		O			
					O		N		Y		N			
			11. F	A	T	I	G	U	E					
									L					
					12. M	U	L	T	I	P	L	E		
									N					

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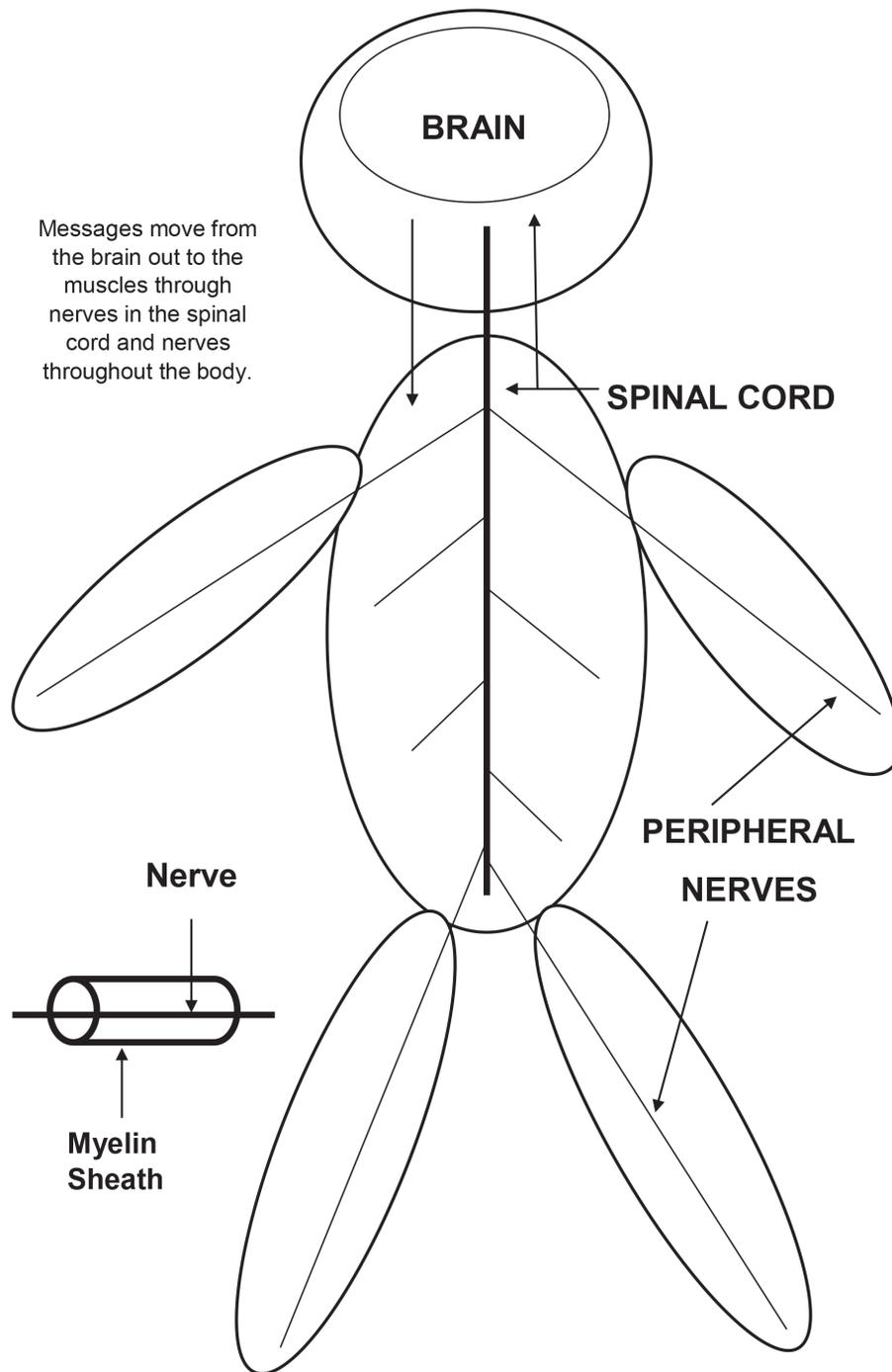
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Figure 24.2

**Sample Diagram of the Nervous System**



**TEST**

**Multiple Sclerosis**

Name \_\_\_\_\_ Date \_\_\_\_\_ Score \_\_\_\_\_

**Directions:** Circle the best answer.

1. **Common symptoms of MS include all of the following except:**
  - a. Problems with vision
  - b. Bladder problems
  - c. Numbness
  - d. Deafness
  
2. **Which of the following is true about MS fatigue?**
  - a. Most people with MS never feel fatigued
  - b. People with MS can get fatigued even without doing much
  - c. There isn't much you can do to manage MS fatigue
  - d. A hot tub would be good for someone with MS who is suffering from fatigue
  
3. **Which of the following is true about cognitive changes in people with MS?**
  - a. MS never affects cognitive functions
  - b. People with MS may have difficulty concentrating and solving problems
  - c. Fatigue and emotional stress do not make cognitive functions worse
  - d. If a person with MS has a memory problem, it is likely to become very severe
  
4. **When myelin is damaged, messages traveling from the brain and spinal cord may be disrupted, causing weakness.**
  - a. True
  - b. False
  
5. **Pressure sores can be caused by a tight splint or brace.**
  - a. True
  - b. False

**TEST**

**Multiple Sclerosis (cont.)**

6. Most people with MS have difficulty in understanding language.  
a. True      b. False
  
7. Hot baths and heat packs can alleviate MS symptoms.  
a. True      b. False
  
8. Sometimes people with MS get better for a while and then get worse again.  
a. True      b. False
  
9. A person with MS who has problems with sensation is at risk for burns.  
a. True      b. False
  
10. Wearing stockings or gloves may relieve tingling or burning.  
a. True      b. False