

A Disease Process Module:

Understanding
Multiple Sclerosis



We hope you enjoy this Inservice, prepared especially for nursing assistants like you. You work very hard, and we appreciate the effort you make to complete these educational materials. It shows your desire to continue learning and growing in your profession!

After finishing this inservice, you'll be able to:

- Name the parts of the body affected by multiple sclerosis.
- Name and describe the most common symptoms of MS.
- Discuss at least 3 complications to watch for with MS clients.
- Describe at least 6 ways to help your MS clients stay safe and healthy.
- Demonstrate at least 3 ways to help your MS clients in their daily activities.

IN THE KNOW

The Inservice Club For Nursing Assistants

Instructions for the Learner

If you are studying the inservice on your own, please:

- Read through all the attached materials. You may find it useful to have a highlighting marker nearby as you read. Highlight any information that is new to you or that you feel is especially important.
- If you have questions about anything you read, please ask _____.
- Take the quiz. Think about each statement and circle the best answer.
- Check with your supervisor for the right answers. You pass the quiz with at least eight correct answers! Print your name, write in the date, and then sign your name.
- Keep the inservice information for yourself, and turn in the quiz page to _____ no later than _____.
- Show your Inservice Club Membership Card to _____ so that it can be initialed.



THANK YOU!



Fast Facts About MS

- MS is not contagious! (A person can't catch it like the flu or a cold.)
- Twice as many women than men have MS. And, white people are twice as likely to get MS than black people.
- MS is rarely diagnosed before age 12 or after age 55. (It hits most often between the ages of 20 and 40.)
- It's most commonly found in the U. S., Canada, Europe, and South America.
- Multiple Sclerosis means "many scars".
- MS isn't considered a "fatal" disease.

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IN THE KNOW

The Inservice Club For Nursing Assistants

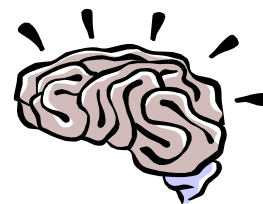
Picture This: You wake up in the morning and your eyes feel like they're being stabbed by sharp knives. Your voice is shaky as you say, "Good morning!" You feel dizzy and you trip as you get out of bed. A few minutes later, when your arm goes numb, you drop your cup of coffee. You already feel exhausted and have trouble swallowing your breakfast. Then, the muscles in your legs start to spasm—bringing tears to your eyes. You try to rush to the bathroom but your legs won't cooperate. Halfway there, your bladder gives out. You feel so embarrassed about the mess you've made. **Imagine starting every day this way. This could be your life if you had multiple sclerosis!**

What Is Multiple Sclerosis?

- Multiple Sclerosis (or MS for short) is a disease of the central nervous system—the brain and the spinal cord.
- Every moment of our lives, messages are being sent between the brain and the nerves located all over our bodies. Unfortunately, MS attacks and destroys tissues in the nervous system, causing it to "short circuit". When this happens, those messages between the brain and the nerves arrive **late**—or **not at all!** Think of it this way:
- MS is a *chronic* condition which means that it continues over a long period of time—usually a life-time! It often gets worse as time goes by and can lead to permanent disabilities.

When you want to take a sip of water, what happens? Your brain sends an instant message to the muscles in your hand to pick up your glass of water. Without thinking about it, your hand grabs the glass. But, for people with MS, the right

messages don't always get to the muscles. This can keep them from doing even simple things—like picking up a cup.



MS affects everyone in a different way. It depends on what part of the brain is destroyed or damaged.

Keep reading to learn more about multiple sclerosis...

Facts About The Central Nervous System

- The central nervous system is divided into two parts: the brain and the spinal cord.
- The brain weighs about three pounds.
- The brain looks very wrinkled and moist. It contains over **10 billion** nerve cells.
- Messages between the brain and the nerves travel at about 240 miles per hour!
- The spinal cord is in segments—like the body of a worm. It is kept safe by the bones of the spine.
- When brain cells die, they can't be brought back to life.
- The spinal cord is about 18 inches long and weighs just over one ounce.



Magnetic Resonance Imaging (or MRI) scans were first done on people with MS in 1981. Using MRI machines to “see” inside the brain gave doctors a better understanding of MS.

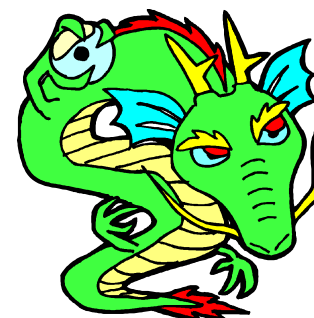
Facts About Multiple Sclerosis

- MS was first recognized as a disease in the 1870's.
- The average person with MS lives with the disease for about 30 years.
- About one third of those people live in the United States!
- MS is a pretty *common* disease of the central nervous system—especially in young adults.
- Over one million people around the world have multiple sclerosis.
- MS doesn't seem to have any negative effects on pregnancy, labor or delivery.

MS is not directly passed down from one generation to the next, but it may tend to strike certain families.

Facts About People With Multiple Sclerosis

- Nearly half of all people with MS have problems with their vision at times. This is caused by damage to the nerves in the eye.
- Fatigue is one of the most common MS complaints. Over 75% of MS clients report having fatigue.
- About half the people with MS experience difficulties with concentration, attention, memory, and judgment.
- Bladder problems affect approximately 90% of people with MS at some point during their illness.
- Only 25% to 30% of people with MS become disabled to the point where they may need a wheelchair.
- Studies have shown that up to 2/3 of people with MS are able to continue working—despite the disease.



Multiple sclerosis has been called “a dragon ready to devour”!

What Causes Multiple Sclerosis?

No one knows for sure! Doctors have managed to figure out **what** goes wrong in the brain to cause MS, but they haven't yet figured out **why** it goes wrong.

They have some ideas about what might cause MS, including:

- An autoimmune disease—a condition that causes the body to attack itself.
- Exposure to something in the environment—like a bad chemical.
- A virus.
- A genetic problem.

How Is Multiple Sclerosis Diagnosed?

Is it MS or not? That's a good question! MS can be tricky to diagnose because many of the early symptoms come and go.

Here's an example of what usually happens:

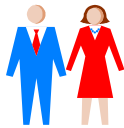
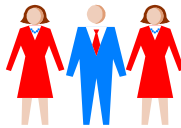
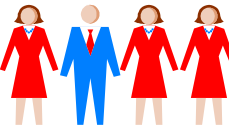

- John starts to notice some numbness in his legs and some blurry vision. He tells his doctor about these symptoms who says that John is probably just too stressed out.
- John's symptoms come and go. After a while, he has some trouble walking. John's doctor decides that maybe it's more than just stress. He orders an MRI to check for "scars" on John's brain.
- The doctor also orders some blood tests. He wants to make sure that John doesn't have some other problem. *For example, Lyme Disease also causes scars on the brain.*
- In addition, John has a test called a "spinal tap" so the doctor can test the fluid in his spinal cord. He also has electrical tests on his nerves to see how well they are working.
- After all the tests are completed, John's doctor is able to tell him that he has MS.

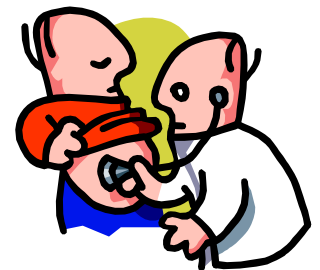


According to one study, over 30% of new MS attacks begin shortly after a common viral illness—when the immune system is weak.

Exacerbations of symptoms...also known as attacks, bouts, relapses or flare-ups...occur in more than 80% of people with MS. These attacks usually last between one and three months.

Out of Ten People With Multiple Sclerosis...

2 will have BENIGN MS	3 will have DISAPPEARING MS	4 will have RELAPSING MS	1 will have CHRONIC MS
			
Benign MS is mild, causing only a few attacks. Then, it usually goes away forever—leaving no permanent disability.	This type of MS comes and goes, sometimes disappearing for years at a time!	Relapsing MS may disappear at first, but then it comes back—getting worse with each attack.	With this type of MS, the symptoms are bad from the start—and just keep getting worse. It often leads to partial or full disability.



When someone has symptoms of MS, a detailed medical history and a thorough physical examination by a doctor is important.

The 10 Most Common Symptoms of Multiple Sclerosis

There is no set pattern to MS. Every person has different symptoms depending on which areas of the central nervous system have been damaged or destroyed.

For example: *Mary's MS has damaged the part of her brain that controls smooth muscle control. She has balance and coordination problems which cause her to walk unsteadily, to shake, and to fall. Mary does not have other symptoms like vision trouble because that area of her brain isn't affected.*

Remember...MS is unpredictable. Some symptoms will last for just hours or days and some last for years. They can be mild one day and severe the next.



Keep in mind that most people will experience more than one symptom of MS, but no one has *all* of them at the same time.

1. Vision Difficulties

Vision problems are often one of the first signs of MS. Your clients may experience:

- Blurred, foggy, hazy or double vision.
- Colors that appear "washed out".
- Rapid, jerky eye movement and eyeball pain.
- Blindness (in severe cases).
- NOTE: These vision problems are usually caused by inflammation of the nerves in the eye. You'll probably notice that only one eye is affected at a time. The symptoms are not permanent—they last for seconds or minutes.

2. Coordination & Balance Problems

Your clients with multiple sclerosis may:

- Have trouble walking and have problems keeping their balance.
- Tend to drop things and feel clumsy and uncoordinated.
- Shake, jerk, sway or trip.
- Complain of dizziness, lightheadedness and spinning feelings.
- NOTE: These problems might just be annoying or they might be disabling. They can come and go at any moment.

3. Weakness

People with MS may complain of:

- A general loss of strength and control in the arms, hands, feet and legs.
- An inability to lift, pull, carry, grip and push things.
- A heavy feeling in one leg, making it difficult to lift. (You may notice this problem when they climb stairs or try to step over something.)
- Weakness in both legs, especially if they've had MS for a long time.

The first symptoms of MS are often:

- *Difficulty walking*
 - *Numbness or "pins and needles".*
 - *Blurred, double and/or loss of vision*
-



Heat may cause MS symptoms to get worse for a short period of time.

The 10 Most Common Symptoms of MS, *continued*

4. Numbness

Your clients with MS may feel:

- Numb—especially in their arms and legs. This numbness is usually not painful and is harmless.
- Tingling, a “pins and needles” sensation or like their skin is “crawling”.
- A “band-like” tightness across their bodies and a burning sensation that moves down their backs and legs.
- More sensitive to touch—sometimes even light touches are painful.
- NOTE: This symptom doesn’t usually respond to medication.

5. Fatigue

You may notice that your MS clients:

- Get tired very easily—often for no particular reason.
- May not be able to tolerate a lot of physical activity without getting “tuckered out”.
- Suffer from exhaustion over their entire bodies. It can be hard to overcome.
- NOTE: Fatigue is one of the most troublesome symptoms of MS. Over 75% of people with MS report problems with fatigue.

6. Speech Difficulties

Your clients with multiple sclerosis may:

- Have very mild speech problems that almost go unnoticed.
- Talk slowly or hesitate between words.
- Speak with a slight slur. Or their voice may be shaky, especially if they are having muscle tremors.
- Talk in a “jerky” manner. (The words may seem to *explode* out of their mouths.)
- Complain about having trouble with swallowing.

7. Spasticity

People with MS may experience:

- Spastic muscles—especially in their legs. This makes their muscles tight and stiff so they don’t move smoothly.
- Spasms in their muscles which may be mildly uncomfortable or very painful.
- Times when their legs lock up or “give out” entirely.
- A limp or one leg that drags.
- NOTE: It takes more effort for people with MS to walk and get around.



MS fatigue has been described as: “...like my plug has been pulled,” “like turning all of a sudden into rubber.”

According to some MS clients, thinking too much about numbness can actually make it worse. Most say that they try to ignore it!



Emotions, stress, fatigue, and temperature can make MS symptoms worse!

The 10 Most Common Symptoms of MS, *continued*

8. Bowel & Bladder Problems

You may notice that your MS clients have:

- Constipation. This is the most common bowel problem although diarrhea can happen, too.
- Frequency—the need to urinate often (sometimes *constantly*). This is a common early symptom of multiple sclerosis.
- Urgency—the urge to urinate right now! They may not be able to hold their urine once the urge is felt.
- Hesitancy—trouble getting started when they want to urinate.
- Retention—their bladders don't empty completely.
- Nocturia—waking up at night because of the need to urinate. (Or, urine may just leak out during sleep.)
- Incontinence—some leakage of urine and/or total loss of control.

- NOTE: Bowel and bladder symptoms may be temporary or may continue for a long time. It depends on the type of MS. Changes in diet, routine, adding supplements or medications may help control symptoms. If the urinary problems get too bad, your client may need to use a catheter several times a day or may need a permanent catheter.

9. Sexual Changes

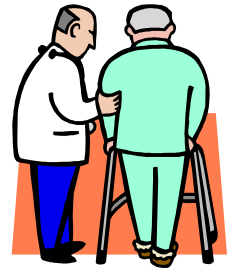
Your clients may tell you that:

- Their sexual response is affected by MS, too.
- They have trouble with impotence (*males*).
- They have difficulties with arousal (*female*).
- Have a loss of sensation all over their bodies.
- Being overly sensitive to touch makes sexual contact painful.

10. Mental Changes

Your clients may complain that:

- They are more forgetful than they were in the past. (Usually, the forgetfulness is fairly mild.)
- It takes them longer to think of a name or a thought.
- Being able to concentrate and to stay organized may be more difficult.
- NOTE: Not too long ago, multiple sclerosis was thought to have only *physical* symptoms. That has changed. Now, the medical community realizes that MS does affect *mental* abilities and emotions. Not everyone with MS has these problems and they usually don't show up with the first attack. Remember that other factors like medications, depression, stress and fatigue may all have an affect on mental abilities.



As MS advances, some clients may need to use canes and walkers to help them get around.

"My leg started acting funny. It felt as if one leg was longer than the other... At first it didn't cause me any problems walking... then everybody started telling me I was walking stupid... I got so I was walking slow and would even stagger."



"I used to sit reading for three or four hours at a time. Now, I put my work down when my concentration starts to fuzz, usually within twenty minutes of so."

With Your MS Clients, Watch Out For...

Pressure Sores

- Pressure sores usually begin with redness or blisters on the skin.
- Some MS clients lose the “signal” that tells them to shift their weight while sitting or lying down. This keeps them in one position for too long and puts them at risk for pressure sores.
- These sores tend to show up on the thighs, buttocks, tail bone and heels—or any part of the body that presses against a hard surface (like a bed or wheelchair).

Urinary Tract Infections

- Urinary tract infections are called UTI’s for short. They include infections of the kidneys, bladder and urethra.
- UTI’s are triggered by the many bladder problems that MS clients tend to have.
- Urinary infections require medications and can become chronic.

Pain

- Most MS symptoms cause some degree of physical discomfort.

- A few people with MS have sudden jabs of pain on one side of the face—especially the mouth, cheekbone, jaw, eye socket and forehead. And, it’s often triggered by physical activity such as chewing, talking, singing or sudden laughter.
- Another cause of pain is optic neuritis. It triggers intense, hot pains from the eye nerve up to and behind the eyeball.
- Spasticity can cause pain, too. Muscle spasms (like “charley horses”) put the legs into painful contractions.



Almost every person with MS will experience discomfort at some point during the disease.

Remember...signs of depression include weight loss or gain, lack of energy, overwhelming feelings of sadness, anxiousness, sleeping more or less than usual, loss of interest in usual activities, and thoughts of suicide.

And, Keep An Eye Out For These Problems...

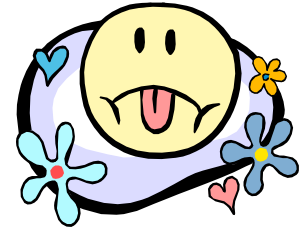
- **Weight Gain**—a possible problem for MS clients who can’t exercise.
- **Hyperextension**—weakened hip muscles cause clients to swing their legs out so their foot clears the ground.
- **Cold Feet**—a problem due to poor circulation. It’s usually a harmless condition.
- **Foot Drop**—when weak foot and ankle muscles cause the toe to drop while the client is walking.
- **Swollen Ankles**—a common problem for those who aren’t active. Can get worse in the summer due to the heat.
- **Depression**—a problem with any chronic disease. Can be mild or serious.



It’s important to watch your clients for *any* changes in their symptoms. Report changes immediately!

Some Tips for Helping Clients with Multiple Sclerosis

- Remind your clients to take their medications on time. Medications work better when they're taken on schedule.
- If childproof medicine caps are difficult for your clients to remove, suggest that they request *regular* caps from the pharmacy. (*Caution—if there are children in the house, take extra care to keep all medications out of their reach!*)
- If your clients manage their own medications, help them keep their drugs organized. For example, suggest they use a plastic pill box with a compartment for each day of the week.
- Remind your clients to drink lots of water with their medications.
- Let your supervisor know right away, if your MS clients aren't taking their medications properly.
- Eating balanced meals is very important! Encourage your clients to eat properly and to avoid skipping meals.
- If you cook for your client, do your best to include foods high in fiber. Avoid sweets, fried foods and fatty meats to help promote good health and to avoid constipation.
- Encourage your clients to eat foods with plenty of fiber— like raw vegetables, fresh fruits, bran cereals, fruit juices, and whole grain breads. This will help prevent or manage constipation.
- Avoiding dehydration is also important. Remind your clients to drink plenty of fluids! Eight to ten cups of fluid a day is necessary for good bowel health.
- Keep in mind that drinking lots of fluid might pose a problem for MS clients who suffer from bladder problems. Talk with your supervisor about how to help your clients balance their need for fluids with their bladder problems.
- Many doctors and nutritionists recommend a daily intake of cranberry juice for people who suffer from bladder infections. It helps acidify the urine and keeps bacteria from growing in the bladder.
- Check with your supervisor about encouraging your MS client to get regular exercise. Physical activity improves general health and emotional well-being. And it will help muscle tone.
- Water exercise is helpful because it's easier on the joints and it offers buoyancy so your that your MS client uses less energy. The cool water is helpful, too, so that they don't get too hot!!



Remind your client's to *pace themselves!* Don't let them do too much all at once. This helps prevent MS fatigue.

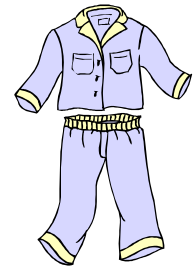
"I notice that every time I get a little cold or sniffles my symptoms start acting up. I've been told that when MS people get sick they get sicker than others. I believe it."



Always remember that if you have any questions about what you can or can't do for a client, ask your supervisor.

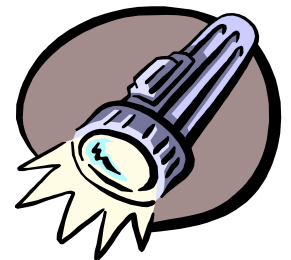
More Tips for Helping Clients with MS

- Remember warm temperatures make MS symptoms worse and can cause flare-ups. Don't let your MS clients overdo it.
- Since heat causes MS symptoms to get worse, remind your clients to use air conditioning in their homes and cars. They should also avoid steam baths, saunas, and too much sun!
- When bathing, remind your MS clients not to soak in the tub too long or to use overly hot water.
- If your clients get too hot, try running cool water over their wrists for 3 to 4 minutes. *Or* have them suck on a piece of ice. *Or* have them take a cold bath or shower. Fanning helps, too.
- MS fatigue is a big problem for many clients, so encourage them to take lots of rest breaks throughout the day.
- Your clients will have good days and bad days. On a good day, your clients may be full of energy and eager to be active. Remind them not to overdo it so they won't get tired or make their symptoms worse.
- Encourage your clients to rest before they become exhausted.
- Help your clients break an activity down into a series of smaller tasks. And, remind them to save some activities for another day.
- Help your clients organize their rooms or homes to help save their energy. *For example:*
 - Place frequently used things within easy reach.
 - Use pegboards to hang things on.
 - Use a lazy susan to bring things within easy reach.
- If your MS clients suffer from leg cramps, you can offer to massage their legs for them.
- To help with muscle spasms, you may want to suggest taking a warm bath instead of a shower. (*Not too warm, though...remember heat can make MS symptoms worse.*) When helping your clients get dressed, dress the weak part of the body first. To undress, take the garment off the good side first.
- Suggest that your clients wear clothes made from "silky" fabric. Slippery fabrics makes it easier to move when changing positions.
- If your clients sit a lot, suggest they wear clothes a size larger than they normally wear. Larger clothing will be more comfortable and is easier to put on and take off.



Encourage your clients to wear comfortable clothing and to dress in layers which will help them have better control over their body temperature.

*For many years, MS clients were advised **never** to exercise. They were told to remain calm and idle as much as possible. It was thought that exercise caused symptom flare-ups.*



Encourage your clients to have a night light in their rooms for nighttime trips to the bathroom. A flash light by the bed may be helpful, too.

Even More Tips for Helping Clients with MS

- Remove all “throw” rugs to help your clients avoid falls and walk easier.
- Check to see if your MS clients have grab bars by their shower or tub and near the toilet. They help prevent falls.
- A raised toilet seat may be helpful to your MS clients. It makes it easier to get on and off the toilet. Some come with armrests which give added support to help prevent falls.
- If your MS clients are unsteady on their feet or tire very easily, suggest a shower bench or shower chair and a handheld shower head.
- If your clients prefer to take baths, suggest that they use a bath pillow so they can lie back and relax. Be sure they have non-skid strips or mats in their tubs so they don't slip or slide under the water! Be sure to help your clients get in and out of the tub.
- If your clients see one or more kind of therapist, encourage them to practice their exercises and to keep their appointments!
- Physical therapists design exercise programs to help your clients avoid further weakness. Try exercising along with your clients!
- Occupational therapists can teach your clients new ways to perform everyday tasks. If possible, ask the therapists at your workplace to show you tricks and shortcuts that will help your clients.
- If your MS clients use urinary catheters, you can help keep them clean.
- Keep in mind that people with MS can't help their bladder control problems. It's not their fault if they have accidents.
- Working with MS clients takes patience—but remember—**so does living with MS!**



Encourage your MS clients to keep their rooms and homes free of clutter. It's easier to use a walker or wheelchair.

Physical therapists help determine if a client needs a cane, brace, walker, wheelchair, etc. Not only do they help choose a device, they fit it and show the client how to use it properly.

There are many items available in stores that may help your MS clients in their everyday lives. Many of these “gadgets” help save time and energy. Check with your supervisor and /or family members about getting some of these things for your client:

- Sock puller
- Zipper pulls
- Dressing stick
- Grabbers
- Long handled shoehorn
- Elastic stretch shoelaces
- Velcro strips & fasteners
- Button hole helper
- Soap on a rope
- Shower bench
- Raised toilet seat
- Big handled utensils



Remember to be patient with MS clients who have memory troubles. They can't help it!



EMPLOYEE NAME (Please print):

DATE: _____

- **I understand the information presented in this inservice.**
- **I have completed this inservice and answered at least eight of the test questions correctly.**

EMPLOYEE SIGNATURE:

SUPERVISOR SIGNATURE:

Inservice Credit:

<input type="checkbox"/> Self Study	1 hour
<input type="checkbox"/> Group Study	1 hour

File completed test in
employee's personnel file.

IN THE KNOW

The Inservice Club For Nursing Assistants

Are You "In the Know" About Multiple Sclerosis?

Circle the best choice and then check your answers with your supervisor!

- 1. Your MS client, Mrs. Oliver, has been sitting in the hot sun too long which has caused her symptoms to get worse, you may have to:**
 - A. Call 911.
 - B. Help her take a cool bath.
 - C. Make her lie down.
 - D. Bring her a nutritious snack.
- 2. True or False**
Multiple sclerosis is a contagious and curable disease.
- 3. Mr. Carson has suddenly started to leak urine during his sleep. You should:**
 - A. Encourage him to drink a couple of glasses of water before bedtime.
 - B. Fuss at him for wetting the sheets.
 - C. Tell your supervisor about it immediately.
 - D. Change the sheets and keep quiet about it.
- 4. True or False**
Multiple sclerosis affects everyone in the same way.
- 5. Mrs. Smith has trouble with MS fatigue. You should:**
 - A. Suggest that she keep her mind off it by staying busy all day long.
 - B. Tell her to quit complaining about being so tired.
 - C. Encourage her to take several rest breaks throughout the day.
 - D. Suggest that she stay in bed all day and do nothing.
- 6. People who have Multiple sclerosis may have trouble with:**
 - A. Depression and forgetfulness.
 - B. Incontinence and constipation.
 - C. Numbness, tingling, and walking.
 - D. All of the above.
- 7. True or False**
There is only one type of Multiple sclerosis.
- 8. True or False**
Occupational and Physical therapies aren't very helpful to the MS client.
- 9. True or False**
Multiple sclerosis is a disease of the blood.
- 10. True or False**
Most people who have MS die within five years of diagnosis.