



# Patient education: Multiple sclerosis in adults (The Basics)

[Written by the doctors and editors at UpToDate](#)

## What is multiple sclerosis?

Multiple sclerosis is a disease that causes vision problems, numbness and tingling, muscle weakness, and other problems. It happens when the body's infection-fighting system attacks and damages nerve cells and their connections in the brain and spinal cord ([figure 1](#)). When the body's infection-fighting system, called the "immune system," attacks the body's own cells, it is called an "autoimmune response."

Many people refer to multiple sclerosis as "MS."

## What are the symptoms of MS?

The condition can cause many symptoms, but not everyone with MS has all of them. Plus, the symptoms of MS can also be caused by problems other than MS. In general, MS symptoms can include:

- Numbness, tingling, and feeling "pins and needles"
- Muscle weakness or spasms, which can cause you to drop things or fall
- Vision problems, eye pain, and odd eye movements
- Feeling dizzy or off-balance, which can cause you to fall
- Trouble walking or speaking
- Problems controlling your bowels or bladder
- Sex problems
- Sensitivity to heat, which makes symptoms worse
- Trouble thinking clearly

Most people with MS have only a few of these symptoms. But people with severe MS can have most or all of them.

## Are there different forms of MS?

Yes. Doctors give different names to MS, depending on how it progresses. The disease can be:

- **Relapsing-remitting** – This means the symptoms of MS come and go. When the symptoms flare up, it is called an "attack" or "relapse." These attacks can last for days to weeks and usually get better slowly. In between attacks, people often feel pretty normal. But some people have problems that last even after an attack gets better. Relapsing-remitting is the most common type of MS.
- **Secondary progressive** – This means the symptoms come and go at first but then begin to steadily get worse. This happens to many people who start out with relapsing-remitting disease.
- **Primary progressive** – This means the symptoms steadily get worse from the beginning.
- **Progressive relapsing** – This means the symptoms steadily get worse, and on top of that there are also attacks that come and go.

## Is there a test for MS?

Yes and no. If your doctor suspects you have MS, he or she can order an MRI of your brain and sometimes your spinal cord. An MRI is an imaging test that creates pictures of the inside of your body. This test can show whether your nerves are damaged. Even so, this test might not be able to show right away if you have MS. In many cases, doctors can diagnose MS only after seeing how symptoms and test results change over time.

In some cases, your doctor might order additional tests to see if you have MS. These might include:

- A lumbar puncture (sometimes called a "spinal tap") – During this procedure, a doctor puts a thin needle into your lower back and removes a small amount of spinal fluid. He or she then checks the fluid for signs of MS.
- A test called "evoked potentials" or "evoked responses" – This is a way for the doctor to look at the electrical signals in your brain and spinal cord. It involves sticking small "electrodes" to your skin. The doctor can then measure the nerve signals in your brain while you look at lights, listen to sounds, or feel a mild electrical current.
- Optical coherence tomography – This test uses a special light to look at the inside of your eyes for signs of MS.

In other cases, you may need blood tests to check for diseases that can be similar to MS.

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## Should I see a doctor or nurse?

See your doctor or nurse right away if you have any of the symptoms listed above and you do not know what is causing them.

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## How is MS treated?

It depends on what type of MS you have. There are different medicines for:

- **Treating attacks** – If you have an MS attack, your doctor can give you medicines called steroids. These are different than the steroids athletes take to build up muscle. They reduce the body's autoimmune response, so they can shorten the length of an attack.
- **Preventing attacks** – There are several different medicines for people who have MS attacks (relapsing-remitting MS). These medicines are called "disease-modifying therapy." They reduce the chances that MS symptoms will flare up. But they do not cure the disease. Some of these medicines come in shots. Many people learn to give themselves the shots. Some newer medicines for MS come as pills or capsules that you can swallow. Other medicines are given through a thin tube that goes into a vein, called an "IV." There are different schedules for the IV medicines, but most involve doses only every few weeks or months.

Some of these medicines might also reduce the chances that MS attacks will turn into progressive MS. Talk to your doctor about which kind of medicine is best for you.

- **Slowing down progressive MS** – A medicine called [ocrelizumab](#) can help some people with primary progressive MS. This medicine is a type of disease-modifying therapy and is also used in people with relapsing-remitting MS. It doesn't cure the disease, but it might slow it down. This medicine might also help some people with relapsing-remitting MS.

Doctors can also treat symptoms of MS. So it's important to tell your doctor or nurse about all your symptoms, even if you do not think they have anything to do with MS. For example, if you feel depressed, leak urine, or have sex problems, tell your doctor or nurse. That way, he or she can offer you treatments to deal with those specific symptoms.

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## What if I want to get pregnant?

Talk to your doctor before you start trying to get pregnant. Certain MS medicines should **not** be used during pregnancy, because they are not safe for a baby. Other MS medicines might be OK to use during pregnancy, if necessary. Some doctors recommend going off MS medicines right before and during pregnancy when possible. If you have an MS attack while you are pregnant, you can still safely take steroids to deal with symptoms.

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## What will my life be like?

If you were recently diagnosed with MS, try to stay positive. In most people, the disease progresses very slowly. On average, it takes many years before MS causes serious disability. Plus, the medicines used to treat MS are often very good at preventing attacks. Some people with relapsing-remitting MS can go many months or even years between attacks. Even so, it's impossible to say how fast symptoms will get worse for any one person.

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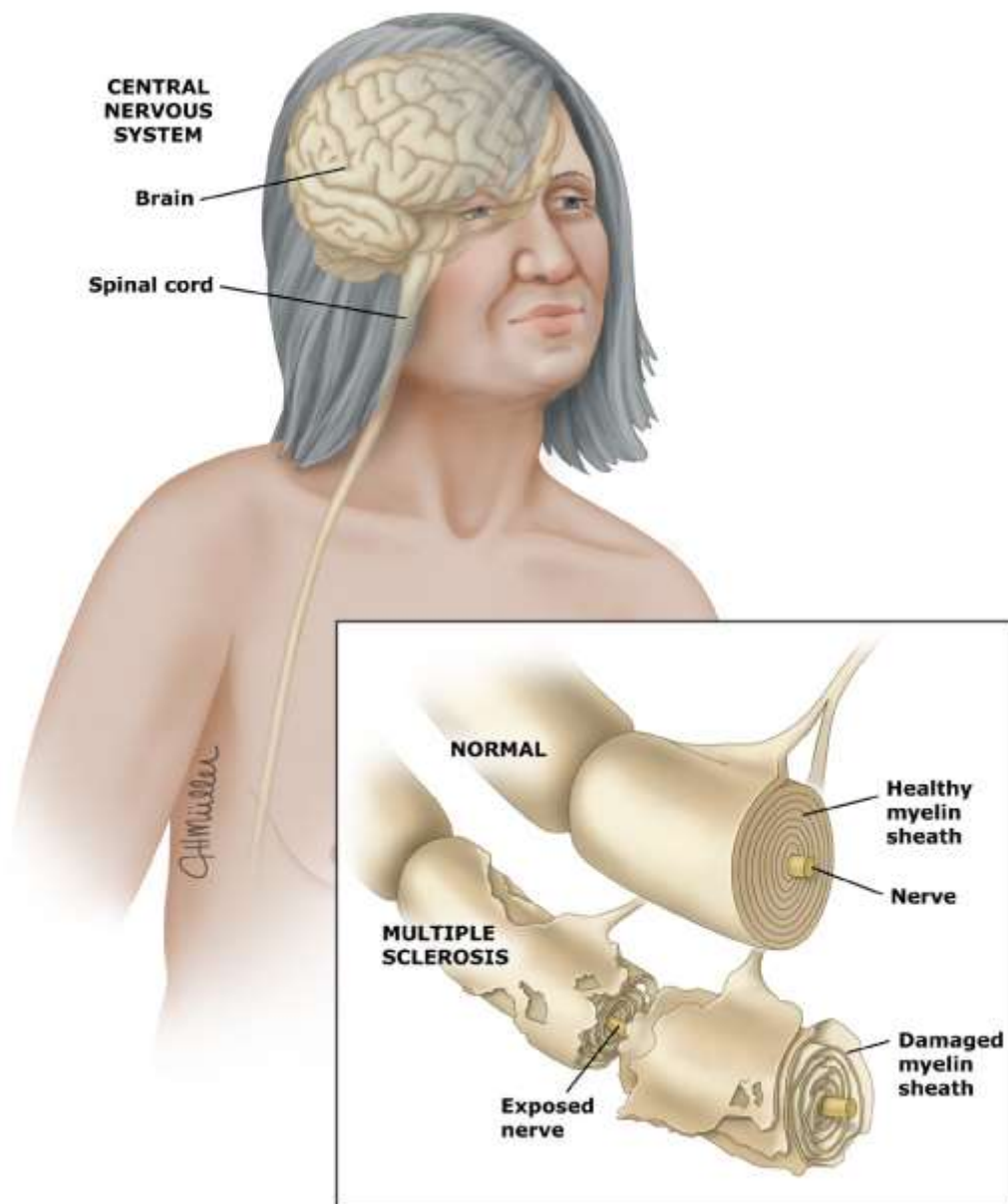
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## GRAPHICS

### Multiple sclerosis



In multiple sclerosis, the immune system attacks nerve cells in the brain and spinal cord. These nerve cells work kind of like electrical wires. They carry electrical signals and are wrapped in insulation that helps the electrical signal move quickly down the nerve. This "insulation" is made of a material called myelin. Multiple sclerosis damages this myelin, so the nerve cells cannot carry signals very well.

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