



DIAGNOSIS OF MS USING MAGNETIC RESONANCE IMAGING (MRI)

This tool will help you and your doctor talk about how multiple sclerosis (MS) is diagnosed. A group of experts in neurology wrote guidelines—or strategies—discussing ways for doctors to diagnose MS earlier. The guideline is based on scientific evidence from medical reports.

Neurologists of the American Academy of Neurology (AAN), who specialize in diseases of the brain and central nervous system, believe that you should know about your condition and understand how it is diagnosed.

You may have many questions about your neurological condition such as:

- What type of disorder do I have?
- What are the symptoms of MS?
- How will the doctor know if I have MS?

► What is MS?

MS is an illness affecting the brain, the spinal cord, and the nerves used for sight. In people with MS, the outside layer of the nerves—called the *myelin*—is damaged by inflammation, which leads to scars. This stops the nerve signals from traveling through the brain and spinal cord.

► What are the symptoms of MS?

Warning signs are different depending on which parts of the nervous system are injured.

You may experience any of the following symptoms:

- Muscular: weakness, stiffness, clumsiness, or a lack of coordination
- Visual: blurred or foggy vision, pain, or blindness
- Sensory: tingling or numbness
- Balance: lightheadedness or a spinning feeling

Many other diseases can cause similar symptoms, so having the above difficulties does not necessarily mean a person has MS.

► How will the doctor know if I have MS?

Your doctor will ask about your medical history and do a neurological exam to rule out other diseases. Then he or she will look at a few warning signs. Your doctor will want to know:

- Have your symptoms happened more than once?
- Have your symptoms lasted at least one whole day?
- Have you had other nervous system symptoms in the past?

If your doctor thinks your symptoms suggest possible MS, he or she may order a *magnetic resonance imaging* test (MRI). MRI takes pictures of tissues that cannot be seen in regular X-rays, such as your internal organs. MRI finds types of tissue disease or injury, such as the damage seen in people with MS.

Studies show that MRI is effective in detecting signs of MS. Between 50% and 80% of patients with their first episode of MS have signs of MS on their first MRI test. If there are signs of MS on your first MRI, studies show that there is a greater likelihood you will develop additional difficulties from MS in the future.

► Talk to your neurologist

Together you and your doctor can determine what is important and what will work best for you as the diagnosis is made.

It is important that people with MS go back to their doctor when they have new symptoms. The new symptoms can indicate activity of the disorder. You should discuss treatment options for MS with your doctor. Ask your neurologist for more information and resources.



This is an educational service of the American Academy of Neurology. It is designed to provide members with evidence-based guideline recommendations to assist with decision-making in patient care. It is based on an assessment of current scientist and clinical information, and is not intended to exclude any reasonable alternative methodologies. The AAN recognizes that specific patient care decisions are the prerogative of the patient and the physician caring for the patient, based on the circumstances involved. Physicians are encouraged to carefully review the full AAN guidelines so they understand all recommendations associated with care of these patients.



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