



## Multiple Sclerosis (MS)

### MU Patient Education Series

#### Definition:

Multiple sclerosis (MS) is an autoimmune disease in which your body's immune system degrades the myelin sheath covering your nerves. This sheath serves as protection for your nerves and damage to it can lead to communication errors between your central nervous system (consisting of your brain and spinal cord) and other areas of your body. MS is often a debilitating condition and can lead to the corrosion of your nerves themselves. The experience and symptoms of MS can vary from person to person depending on the severity of the condition and the specific nerves that are affected. Currently, there is no cure for MS, but there are treatments to help relieve certain symptoms and slow the progression of the condition.

#### RISK:

There are a number of factors that can possibly increase your risk for acquiring MS. Some of these factors include:

- **Heredity** — if a member of your immediate family has MS, you have about a 1-3% chance of acquiring the condition. Also, if your identical twin has the condition, you have a higher risk of developing it
- **Age** — you are more likely to develop MS between 20-40 years of age
- **Gender** — women are almost two times more likely to develop MS
- **Infections** — there are certain infections that can make you more likely to acquire MS
- **Geographic location and ethnicity** — these factors have been linked to the development of MS. It has been seen that those who come from Northern Europe have a higher chance of developing MS

#### SIGNS/SYMPTOMS:

As previously mentioned, MS symptoms typically vary from person to person. This happens because damage to certain nerves causes different effects, and not everyone undergoes damage in the same



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nerve location. However, many symptoms are experienced by almost all MS patients. Some of these symptoms include:

- Doubled or blurred vision
- Pain and tingling sensation in parts of your body
- Fatigue
- Dizziness
- Feelings of shock when you move certain parts of your body
- Numbness in certain limbs
- Weakness
- Tremor
- Unsteady or shaky sensation
- Slurring of your words

The onset of MS usually includes cycles of remission and relapse of symptoms. Sometimes, in less severe cases, there is no relapse after the first MS symptom attack.

### DIAGNOSIS/TESTS:

There are several tests that can be performed in order to diagnose MS. Your doctor will likely review your medical history and symptoms, perform a physical exam and then proceed to order diagnostic tests. Some of the tests your doctor may perform include:

- Blood tests
- Spinal tap—your doctor will insert a needle in your lower back to extract spinal fluid. This fluid will help detect the abnormalities associated with MS
- MRI—this test will give your doctor detailed pictures of your central nervous system (brain and spinal cord) and will help reveal damage to your nerves
- Evoked potential test—this test will help show damage to your nerves by applying electrical impulses to your limbs

### TREATMENT/CARE:

MS does not yet have a cure. However, there are certain treatment approaches that aim to treat MS attacks, control MS symptoms and slow the progression of MS.

Treating MS attacks:

- Plasmapheresis—this is also called a plasma exchange. The goal of this treatment is to separate your blood cells and plasma in order to add a treatment solution to your blood
- Corticosteroids—used to decrease inflammation



### CONTROLLING MS SYMPTOMS:

- Muscle relaxants
- Physical therapy
- Dalfampridine—medication to be taken orally that can improve walking ability and speed. Seizures can be a side effect of this medication
- Medications to reduce other symptoms such as:
  - Fatigue
  - Muscle pains
  - Depression
  - Bladder problems
- Rest and exercise regularly
- Eat a healthy diet
- Aim to control your stress

### SLOWING THE PROGRESSION OF MS:

- Beta interferons—drugs such as Avonex, Betaseron, Extavia and Rebif. These drugs have been seen to help slow the progression of MS and decrease the severity of symptoms. If you do decide to use these drugs, be sure to check in with your physician often for side effects are common
- Fingolimod—medication taken by mouth that helps to reduce immune system attacks of your nerves
- Glatiramer acetate—another medication that helps to reduce immune system attacks of your nerves. This medication is used by injecting it into your skin
- Natalizumab—this medication also interferes with the immune system's attacks on your nerves. This is often a last resort medication choice
- Teriflunomide

### CALL YOUR HEALTHCARE PROVIDER IF:

As you can see, there are several means by which you can control your MS symptoms. However, if not managed and cared for correctly, MS can easily complicate. Some of the complications often seen with MS include epilepsy, muscle spasms and depression. Be sure to call your healthcare provider immediately if you notice any changes or complications.

#### **DISCLAIMER:**

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