

**Multiple sclerosis** 

# Overview about Multiple Sclerosis

Multiple sclerosis (MS) is a chronic neurological disease that affects the central nervous system (brain and spinal cord), causing damage to the membrane surrounding neurons called myelin. This leads to stiffness in the cells and hence triggers slowed or interrupted functioning of mobile neurotransmitters between the brain and body organs.

The symptoms of MS, the onset of which is usually unanticipated neither by the patient nor by those around them, vary in severity depending on the affected area, and how acute the condition is.



## What are the symptoms of multiple sclerosis?

- Numbness in limbs
- Loss of balance
- Weakness or muscle cramps
- Blurred vision or vision duplication or inability to distinguish colors
- Weakness and fatigue after mild physical activity
- Difficulty speaking
- Impaired memory, and reduced ability to make decisions

#### When to see a doctor

See a doctor if you experience any of the above symptoms for unknown reasons.

### How is multiple sclerosis diagnosed?

- MS is diagnosed by examining the symptoms and linking them to when and how they occurred.
- Assessment of the patient's health condition, and checking their medical history are also necessary for MS diagnosis.
- Clinical examinations
- Some lab tests (e.g. blood test)
- Taking a sample of spinal fluid to analyze it and detect any abnormal changes
- Brain MRI
- Neurotransmitters measurement test



#### What are the risk factors?

These factors may increase your risk of developing multiple sclerosis:

- Age. MS can occur at any age, but onset usually occurs around 20 and 40 years of age. However, younger and older people can be affected.
- Sex. Women are more than two to three times as likely as men are to have relapsing-remitting MS.
- Family history. If one of your parents or siblings has had MS, you are at higher risk of developing the disease.
- Certain infections. A variety of viruses have been linked to MS, including Epstein-Barr, the virus that causes infectious mononucleosis.
- Race. White people, particularly those of Northern European descent, are at highest risk of developing MS. People of Asian, African or Native American descent have the lowest risk.
- Climate. MS is far more common in countries with temperate climates, including Canada, the northern United States, New Zealand, southeastern Australia and Europe.
- Vitamin D. Having low levels of vitamin D and low exposure to sunlight is associated with a greater risk of MS.
- Certain autoimmune diseases. You have a slightly higher risk of developing MS if you have other autoimmune disorders such as thyroid disease, pernicious anemia, psoriasis, type 1 diabetes or inflammatory bowel disease.

 Smoking. Smokers who experience an initial event of symptoms that may signal MS are more likely than nonsmokers to develop a second event that confirms relapsing-remitting MS.

### **Complications:**

- Muscle stiffness and cramps
- Leg muscle paralysis
- Problems in the bladder and intestines
- Forgetfulness and loss of concentration
- Depression
- Epilepsy

#### **Treatment**

There is no cure for multiple sclerosis. Treatment typically focuses on speeding recovery from attacks, slowing the progression of the disease and managing MS symptoms. Some people have such mild symptoms that no treatment is necessary.



# Living with multiple sclerosis:

- Take a rest.
- Exercise.
- Sclerosis symptoms and episodes are sometimes triggered by exposure to heat (e.g. unprotected exposure to the sun, bathing with hot water, exposure to hot air, etc.). The MS patient is, therefore, recommended to avoid exposure to heat where applicable.
- Adopt a healthy, balanced diet that would help you maintain a healthy weight, strengthen your immunity, and maintain your bone health.
- Avoid stress.

