

# Multiple Sclerosis

## FACT SHEET

- Multiple sclerosis (MS) is a chronic, neurological disease. It is thought to be an autoimmune disease in which the body's immune system attacks healthy areas of the nervous system. The nervous system contains a substance called *myelin*. It is similar to insulation protecting electrical wires because it surrounds and protects nerve fibers. In MS, random patches of inflammation occur sporadically in the brain and/or spinal cord, causing a breakdown of this myelin sheath, a process called demyelination. Demyelination results in plaques or lesions along the myelin sheath that interfere with nerve conduction.
- MS has three primary disease courses:
  - **Relapsing-remitting (RRMS)**: This course is characterized by partial or total recovery after attacks (also called exacerbations, relapses, or flares). This is the most common form of MS. Seventy to 75 percent of people with MS are initially diagnosed with a relapsing-remitting course.
  - **Secondary progressive (SPMS)**: Generally this form follows a relapsing-remitting course, and marks the point in which MS becomes steadily progressive. Attacks and partial recoveries may continue to occur. Natural history data indicates if not treated, of those individuals who start with RRMS, more than 50 percent will develop SPMS within 10 years; 90 percent within 25 years.
  - **Primary progressive (PPMS)**: This progressive course of the disease is the most rare, and from onset, the patient's symptoms progress without remission. Fifteen percent of people with MS are diagnosed with PPMS, although doctors usually make the diagnosis after the person has been living for a period of time with progressive disability but not acute attacks.
- The cause of MS is not known. Researchers believe the combination of heredity, the immune system, and possibly a virus may play a role in a person developing multiple sclerosis. Individuals may inherit a *susceptibility* to the disease, but not the disease itself.
- Most people experience their first symptoms of MS between the ages of 20 and 40. Symptoms of MS include loss of vision, double vision, stiffness, weakness, imbalance, numbness, pain, problems with bladder and bowel control, fatigue, sexual changes, speech and swallowing difficulties, emotional changes, and intellectual impairment. Each person living with MS may experience a different set of symptoms.

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- While there currently is no cure for MS, there are viable, effective treatment options for relapsing-remitting MS. The National Multiple Sclerosis Society (NMSS) issued a consensus statement in the fall of 1998 calling for anyone with a confirmed diagnosis of relapsing-remitting multiple sclerosis to discuss initiating therapy with their doctor.
- With immunomodulating drug therapy and lifestyle management, the frequency of MS relapses may be reduced. Many people with MS are able to lead highly productive and fulfilling lives, raising families, working full time, and participating in a wide variety of activities. Life expectancy for people with MS generally is only reduced by about five years on average. Doctors encourage people to remain active. Appropriate vigorous exercise actually has shown a positive effect on early and mild to moderate MS.
- In the United States, an estimated 350,000 people have been diagnosed with MS. The true number of cases may be even higher due to patients' reluctance to have the disease reported and the uncertainty in diagnosis.
- In general, women are affected with MS at almost twice the rate of men. Caucasians are more than twice as likely as other races to develop the disease. MS is five times more prevalent in temperate climates, such as the northern United States, than in tropical regions.

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