Multiple Sclerosis: Hope Through Research

Request free mailed brochure

Table of Contents:

Introduction

Although multiple sclerosis (MS) was first diagnosed in 1849, the earliest known description of a person with possible MS dates from fourteenth century Holland. An unpredictable disease of the central nervous system, MS can range from relatively benign to somewhat disabling to devastating as communication between the brain and other parts of the body is disrupted.

The vast majority of patients are mildly affected, but in the worst cases MS can render a person unable to write, speak, or walk. A physician can diagnose MS in some patients soon after the onset of the illness. In others, however, physicians may not be able to readily identify the cause of the symptoms, leading to years of uncertainty and multiple diagnoses punctuated by baffling symptoms that mysteriously wax and wane.

Once a diagnosis is made with confidence, patients must consider a profusion of information—and misinformation—associated with this complex disease. This brochure is designed to convey the latest information on the diagnosis, course, and possible treatment of MS, as well as highlights of current research. Although a pamphlet cannot substitute for the advice and expertise of a physician, it can provide patients and their families with information to understand MS better so that they can actively participate in their care and treatment.

Return to Index

What is Multiple Sclerosis?

During an MS attack, inflammation occurs in areas of the *white matter** of the central nervous system in random patches called *plaques*. This process is followed by destruction of *myelin*, the fatty covering that insulates nerve cell fibers in the brain and spinal cord. Myelin facilitates the smooth, high-speed transmission of electrochemical messages between the brain, the spinal cord, and the rest of the body; when it is damaged, neurological transmission of messages may be slowed or blocked completely, leading to diminished or lost function. The name "multiple sclerosis" signifies both the number (multiple) and condition (sclerosis, from the Greek term for scarring or hardening) of the *demyelinated* areas in the central nervous system.

How Many People Have MS?

No one knows exactly how many people have MS. It is believed that, currently, there are approximately 250,000 to 350,000 people in the United States with MS diagnosed by a physician. This estimate suggests that approximately 200 new cases are diagnosed each week.

Return to Index

Who Gets MS?

Most people experience their first symptoms of MS between the ages of 20 and 40, but a diagnosis is often delayed. This is due to both the transitory nature of the disease and the lack of a specific diagnostic test—specific symptoms and changes in the brain must develop before the diagnosis is confirmed.

Although scientists have documented cases of MS in young children and elderly adults, symptoms rarely begin before age 15 or after age 60. Whites are more than twice as likely as other races to develop MS. In general, women are affected at almost twice the rate of men; however, among patients who develop the symptoms of MS at a later age, the gender ratio is more balanced.

MS is five times more prevalent in temperate climates—such as those found in the northern United States, Canada, and Europe—than in tropical regions. Furthermore, the age of 15 seems to be significant in terms of risk for developing the disease: some studies indicate that a person moving from a high-risk (temperate) to a low-risk (tropical) area before the age of 15 tends to adopt the risk (in this case, low) of the new area and vice versa. Other studies suggest that people moving after age 15 maintain the risk of the area where they grew up.

These findings indicate a strong role for an environmental factor in the cause of MS. It is possible that, at the time of or immediately following puberty, patients acquire an infection with a long latency period. Or, conversely, people in some areas may come in contact with an unknown protective agent during the time before puberty. Other studies suggest that the unknown geographic or climatic element may actually be simply a matter of genetic predilection and reflect racial and ethnic susceptibility factors.

Periodically, scientists receive reports of MS "clusters." The most famous of these MS "epidemics" took place in the Faeroe Islands north of Scotland in the years following the arrival of British troops during World War II. Despite intense study of this and other clusters, no direct environmental factor has been identified. Nor has any definitive evidence been found to link daily stress to MS attacks, although there is evidence that the risk of worsening is greater after acute viral illnesses.

Return to Index