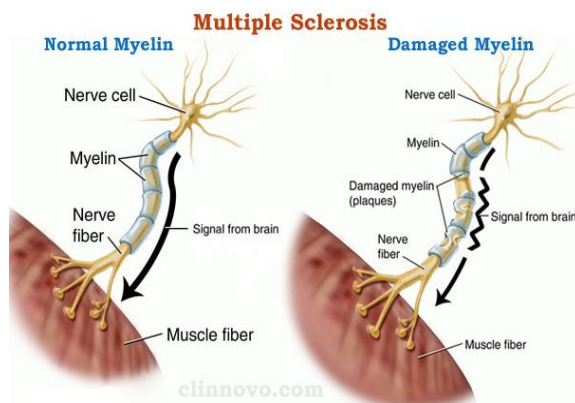


Who Gets MS? (Epidemiology)

- While MS is not contagious or directly inherited, epidemiologists have identified factors in the distribution of MS around the world that may eventually help determine what causes the disease.
- MS is thought to affect more than 2.3 million people worldwide. While the disease is not contagious or directly inherited, epidemiologists — scientists who study patterns of disease — have identified factors in the distribution of MS around the world that may eventually help determine what causes the disease. These factors include gender, genetics, age, geography and ethnic background.



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Multiple sclerosis (MS) involves an immune-mediated process in which an abnormal response of the body's immune system is directed against the central nervous system (CNS), which is made up of the brain, spinal cord and optic nerves. The exact antigen — or target that the immune cells are sensitized to attack — remains unknown, which is why MS is considered by many experts to be "immune-mediated" rather than "autoimmune."

Within the CNS, the immune system attacks myelin — the fatty substance that surrounds and insulates the nerve fibers — as well as the nerve fibers themselves.

The damaged myelin forms scar tissue (sclerosis), which gives the disease its name.

When any part of the myelin sheath or nerve fiber is damaged or destroyed, nerve impulses traveling to and from the brain and spinal cord are distorted or interrupted, producing a wide variety of symptoms.

- The disease is thought to be triggered in a genetically susceptible individual by a combination of one or more environmental factors.
- People with MS typically experience one of four disease courses, which can be mild, moderate or severe.

Myelin

Myelin – the protective coating around nerve fibers in the central nervous system – is a primary target of the immune attack in MS.

Immune-Mediated Disease

MS is considered to be an immune-mediated disease in which the body's immune system mistakenly attacks myelin in the central nervous system.

T Cells

In MS, immune system T cells pass from the bloodstream into the central nervous system to attack the myelin coating around nerve fibers.





Challenges of epidemiological studies

Epidemiological studies are challenging for several reasons:

- MS can be difficult to diagnose. Since there is no single test for MS, the diagnosis can be missed, delayed or even incorrect.
- MS is not a “reportable” disease, which means that the government does not require physicians to inform any central database when they make the diagnosis. Without this kind of centralized reporting system, there is no easy way to count people with MS.
- Data from earlier epidemiological studies may not accurately represent the current MS population because the investigators used different methods for identifying and counting people with MS, as well as different strategies for analyzing their data.

Therefore, all epidemiological numbers are estimates.

Summarizing epidemiological estimates

Although more people are being diagnosed with MS today than in the past, the reasons for this are not clear. Likely contributors, however, include greater awareness of the disease, better access to medical care and improved diagnostic capabilities. There is no definitive evidence that the rate of MS is generally on the increase.

Most people are diagnosed between the ages of 20 and 50, although MS can occur in young children and significantly older adults.

MS occurs in most ethnic groups, including African-Americans, Asians and Hispanics/Latinos, but is more common in Caucasians of northern European ancestry.

MS is at least two to three times more common in women than in men, suggesting that hormones may also play a significant role in determining susceptibility to MS. And some recent studies have suggested that the female to male ratio may be as high as three or four to one.

Types of MS

Four disease courses have been identified in multiple sclerosis: clinically isolated syndrome (CIS), relapsing-remitting MS (RRMS), primary progressive MS (PPMS), and secondary progressive MS (SPMS).

Relapsing-remitting MS (RRMS)

RRMS – the most common disease course – is characterized by clearly defined attacks of new or increasing neurologic symptoms. These attacks – also called relapses or exacerbations – are followed by periods of partial or complete recovery (remissions). During remissions, all symptoms may disappear, or some symptoms may continue and become permanent. However, there is no apparent progression of the disease during the periods of remission. At different points in time, RRMS can be further characterized as either active (with relapses and/or evidence of new MRI activity) or not active, as well as worsening (a confirmed increase in disability over a specified period of time following a relapse) or not worsening.

Secondary progressive MS (SPMS)

SPMS follows an initial relapsing-remitting course. Most people who are diagnosed with RRMS will eventually transition to a secondary progressive course in which there is a progressive worsening of neurologic function (accumulation of disability) over time. SPMS can be further characterized at different points in time as either active (with relapses and/or evidence of new MRI activity) or not active, as well as with progression (evidence of disease worsening on an objective measure of change over time, with or without relapses) or without progression.

Primary progressive MS (PPMS)

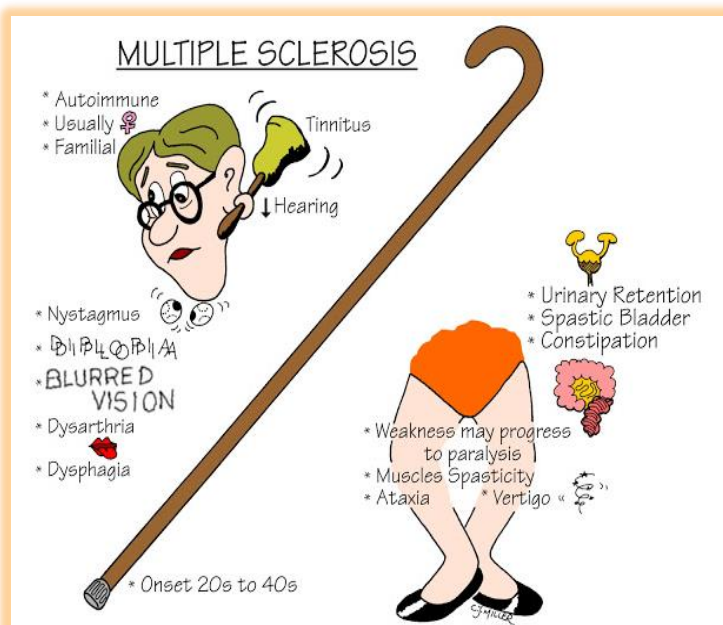
PPMS is characterized by worsening neurologic function (accumulation of disability) from the onset of symptoms, without early relapses or remissions. PPMS can be further characterized at different points in time as either active (with an occasional relapse and/or evidence of new MRI activity) or not active, as well as with progression (evidence of disease worsening on an objective measure of change over time, with or without relapse or new MRI activity) or without progression.

Treatments for MS

The available disease-modifying therapies used to treat MS are approved by the U.S. Food and Drug Administration (FDA) to treat “relapsing forms” of MS, which include RRMS as well as progressive MS in those individuals who continue to experience relapses. At the present time, we do not have therapies that have been approved to treat PPMS without relapses. Scientists around the world are actively working to find effective treatments for progressive forms of MS and addressing the challenges of progressive MS is a primary target of the Society’s research strategy.

Getting the care you need

Managing MS is an ongoing process, beginning with the very first symptoms and continuing throughout the disease course. It’s never too soon or too late to think about how to access high quality care. Knowing what to look for, where to find it, and how to work effectively with your doctor and other health professionals is essential to your health and quality of life.



****Monthly Message**** Develop better food and lifestyle habits for your body. Learn proper portions (no larger than your palm) and remember to do so for the glory of God. He is able to help you if you allow him to. Be a blessing to others and share this valuable information.

In His service,
H-3 ministry

1 Corinthians 10:31 "So whether you eat or drink or whatever you do, do it all for the glory of God" (NIV)

References: <http://www.eatrightpro.org/resources/media/press-releases/national-nutrition-month>; <https://www.sgna.org/Events/Colorectal-Cancer-Awareness-Month>; <http://www.medicinenet.com/script/main/art.asp?articlekey=16422>; <http://gi.org/wp-content/uploads/2016/02/ACG-2016-CRC-Key-Messages-and-Talking-Points-UPDATE.pdf>