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November 18, 1996  
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## Multiple Sclerosis

Multiple sclerosis is one of the most misunderstood diseases of this century. Since it's discovery, there is still no known causes, no proven treatments, and no known cure, yet it affects possibly five hundred thousand people in the United States alone. People need to learn more about this disease so it can be brought to the attention of the nation.

Multiple Sclerosis is a disease of the central nervous system. It destroys the fatty myelin sheath that insulates your nerve cells. Without this insulation, nerve communication is disrupted. The body then makes this worse by repairing it, and clogging the area with scar tissue. Signals going from your brain and brain stem, such as muscle coordination signals or visual sensation signals, are slowed greatly, or just blocked off. Thus, a person afflicted with Multiple Sclerosis can suffer any number of symptoms.

Researchers are not sure yet as to the cause of Multiple Sclerosis. There is a kind of deadlock among scientists and doctors whether it's hereditary, viral, or a combination of the two, with the disease being hereditary, but with a viral trigger, or just a simple chemical imbalance in the immune system. One thing is certain, though. Some sort of defect in the immune system causes white blood cells to attack and destroy the myelin sheath.

There are five main types of Multiple Sclerosis. The first type is Benign Multiple Sclerosis. It is the least severe, has little progression, and takes up twenty percent of all cases. The second type is Benign Relapsing-Remitting Multiple Sclerosis. It carries symptoms that fluctuate in severity, mild disability, and it makes up thirty percent of the total. The third type is Chronic Relapsing Multiple Sclerosis. It is characterized by disability that increases with each attack, and it is the most common with forty percent of all cases. Chronic Progressive Multiple Sclerosis is the fourth type. It has continuous disability that worsens as time goes by, and ten percent of all cases are this. The last type is a very rare class called Acute Progressive Multiple Sclerosis. This kind can kill in weeks or months, in contrast with the usual years or decades.

Due to the type of disease and the areas it affects, there are a great number of possible symptoms. These symptoms can fool the most experienced physician into thinking that it is a psychological disease. The most common symptoms are bouts of overwhelming fatigue, loss of coordination, muscle weakness, numbness, slurred speech, and visual difficulties. These symptoms may occur for a number of years before one is actually diagnosed, and these symptoms will appear with little or no warning. Attacks of these symptoms appear most often three to four years after the first incident.

Multiple Sclerosis is diagnosed by a number of ways. Most of the time, the first test done is an MRI -- Magnetic Resonance Imaging Scanner. This test maps out your brain and looks for areas that have been scarred over, or 'plaques', and usually takes an hour. White spots on normally gray areas usually signify a plaque. Next, a lumbar puncture, more commonly known as a spinal tap, is done. This test involves some discomfort, and although the actual puncture lasts only fifteen minutes, the procedure can leave the patient disabled for anywhere from two hours to two weeks. About a week after the spinal tap is done, a series of three tests are performed to measure the time it takes for impulses to travel through your brain and nerves. These tests are known separately as the Visual Evoked Potential Test, the Auditory Evoked Potential Test, and the Electrodiagnostic Test. The Visual Evoked

Potential Test, or V.E.P., records the brain wave patterns and reaction time with alternating patterns on a nearby monitor. The Auditory Evoked Potential Test, or A.E.P., uses pulses of sharp 'clicks' to time your reactions. In the final test, the electrodiagnostic, an electric current is passed through certain pressure points, and sensors on the head, chest, and back record just how fast the impulses are transmitting through your body and brain. With the positioning of the sensors, the technician can determine where a slowdown, if any, is occurring.

The disease cannot be cured, and treatments are few. There is no common treatment that researchers can agree on. Some swear by diet treatments, which have been found by patients in nonclinical studies to slow or arrest the advancement of Multiple Sclerosis. Usually the diet therapies involve a few months eliminating allergic foods from your diet, and since foods that are slightly allergic are usually your favorite foods, it's a very hard treatment to stick to. Others swear by drugs and the like, such as ACTH (adrenocorticotrophic hormone), which is the most commonly prescribed treatment, or copolymer I and cyclosporine, which have shown promise in laboratory studies.

The statistics of Multiple Sclerosis are puzzling at best. For example, the fact that there are many more cases in the northern latitudes than in the southern latitudes is one thing that confuses researchers. As you approach the equator, patients suffering with Multiple Sclerosis are almost zero. Also, most victims are between the ages of twenty and forty-five years old, with the majority of them being women. Multiple Sclerosis also affects more people of the Caucasian persuasion. Multiple Sclerosis affects an estimated three hundred fifty to five hundred thousand Americans, with eight thousand more cases being reported each year. Fortunately, the average life span of a patient with Multiple Sclerosis is seventy-five percent of normal, and only a quarter of all diagnosed will ever need a wheelchair.

Multiple Sclerosis is one of the most confusing diseases that has ever afflicted mankind. More and more possible treatments are found, but still no cure. So people with Multiple Sclerosis must learn to live with the disease, learn to cope. And others should learn more about the disease, so it isn't ignored in the future.