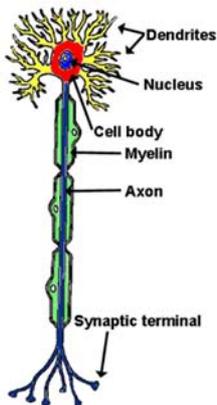


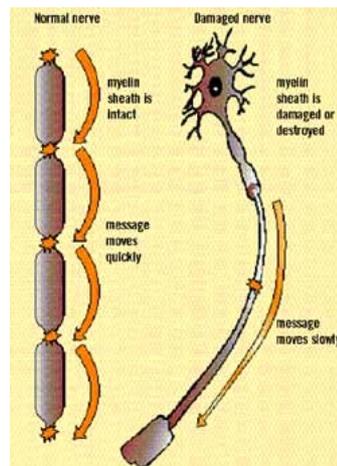
# MULTIPLE SCLEROSIS

**Definition:** A chronic often disabling disease of the CNS (Central Nervous System) characterized by intention tremor, scanning speech and nystagmus.<sup>1,2,5</sup>

**Pathophysiology:** It is generally accepted that MS is an auto-immune disease in which the body's own defenses attack the CNS. Viral infection elicits the production of anti-bodies which in turn produce cytotoxic (cell killing) effects within the CNS. The cytotoxic effect damages the oligodendrocytes (structure that produces the nerve sheath) surrounding the nerve. The damaged nerve slows nerve conduction and fatigues rapidly. Local inflammation, edema and infiltrates surround the damaged nerve which further decreases the nerve's capacity to carry impulses. The damaged nerve sheaths are then replaced by fibrous astrocytes and glial scars, at this stage the nerve itself becomes impaired.<sup>1,2,4</sup>



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This MRI scan shows multiple abnormal white areas that correspond to MS plaques.

[www.wendys-ms-site.com](http://www.wendys-ms-site.com)

**Affected People/Population:** Caucasians are affected predominantly followed by Africans. Age group of 20-40 are largely affected and there is a 15% of the patients have a positive familial history.<sup>1,2,4,7</sup>

**Medications:** Management is directed at over all disease process and symptoms. Immunosuppressant drugs such as ACTH and steroids are used to treat acute flare ups. Muscle relaxants such as baclofen are used to manage spasms and muscle spasticity. Pain relievers and oxybutynin for bladder control can be also used.<sup>1,2,3,4</sup>

**Surgery:** Management are often used for spasticity. This includes tendonotomies and neurosurgical ablative procedures.<sup>1,2,4</sup>

**Physical Therapy:** Rehabilitation stresses improvement of function— maximizing your ability at work, at home, and in the community. Rehab can address problems with walking, dressing and personal care, using mobility aids, or performing tasks at work. Rehabilitation is considered a necessary component of comprehensive, quality health care for people with MS, at all stages of the disease. These involves improvement of strength by carefully graded exercises, maintenance of joint motion by range of motion exercises and improving endurance.<sup>2,4,6,7</sup>

## References:

1. Neurology and Neurosurgery Illustrated by Lindsay and Bone 2<sup>nd</sup> Ed.
2. Physical Rehabilitation Assessment and Treatment by O'Sullivan and Schmitz 4<sup>th</sup> Ed.
3. Pharmacology by Jacob 2<sup>nd</sup> Ed.
4. Rehabilitation Medicine by De Lisa and Ganz 3<sup>rd</sup> Ed.
5. Merriam-Webster's Medical Dictionary 1995
6. Therapeutic Exercises by Kissner and Colby 4<sup>th</sup> Ed.
7. Krusen's Handbook of Physical Medicine and Rehabilitation by Kottke and Lehman, 4<sup>th</sup> Ed.