

Multiple Sclerosis

A Quick Guide



[Contents](#)

Table of Contents

[Cover Page](#)

[Multiple Sclerosis In A Nutshell](#)

[Facts Surrounding Multiple Sclerosis](#)

[Multiple Sclerosis Diagnosis](#)

[MS Symptoms – Problems With Vision, Balance, Coordination, Bladder, Bowel, And Sexual Dysfunctions](#)

[Multiple Sclerosis Symptoms- Cognitive, Sensory And Motor Symptoms](#)

[Multiple Sclerosis Treatments And Therapies](#)

[The Different Faces Of Multiple Sclerosis](#)

[Tips On Handling Multiple Sclerosis](#)

[About Us](#)

Multiple Sclerosis in A Nutshell

Disseminated Sclerosis, more popularly known as Multiple Sclerosis, is the disease of the Central Nervous System (the main component of which is the brain and the spinal cord). It is widely accepted as an autoimmune disease, a result of the body attacking its own structures, wherein the cells of the body and the immune system and its chemicals which were supposed to protect the body against invasion of disease-causing components attack the myelin sheath or the covering of the nerve cells instead. Thus causing damage or demyelination, scars or sclerosis and inflammation.

Although multiple sclerosis affects men, women are at higher risks of developing this autoimmune disease, making them 2 to 3 times more likely to develop the condition. It is typically found among people aged 20 to 50 years old.

The myelin sheath that is largely affected by this disease is the protective insulation of the neurons. Without this, it would be quite impossible for the neurons to transmit nerve impulses between each other. Thus, patients of multiple sclerosis suffer from phlegmatic transference of nerve signals which make them somewhat incapable of responding to external and internal stimuli, somewhat unable to interpret sensations correctly and their body movements become less coordinated. Like damages to electrical wires, multiple sclerosis prevents the fast delivery of brain signals to all parts of the body.

No one is certain what causes this disease. What is only known is that it is a product of an abnormal immune system response which turns out to be harmful to the protective coating of the neurons. Theories such as a triggering illness, virus or other agents during childhood are being tested though.

Diagnoses to determine the presence of the disease are not conclusive though they may show strong indications of the presence of multiple sclerosis. Tests such as MRI and analysis of the cerebral fluids may potentially establish the onset of the disease. The best thing physicians and specialists can do is to rule out other conditions that may evoke the same symptoms.

Demyelination may happen at any time, to any part of the brain and the spinal cord with no known reason. The location of the damage determines what symptoms will manifest and how severe the symptoms will be. Thus, making each episode or relapse different from one person to another and from one occasion to another. There are common symptoms though which include fatigue, severe headache, weakness and numbness of the extremities, loss of balance, lack of coordination,

visual problems, incontinence due to loss of bladder control, loss of bowel movement control, depression and other severe emotional conditions, difficulty of speaking, and minor and severe cognitive problems. The combination of these symptoms differs on which parts of the brain or the spinal cord are damaged and how severe the damage is.

While multiple sclerosis can advance to more aggravated stages where functions are seriously debilitated, it is, nevertheless, neither fatal nor contagious. Though many deaths have been associated with the diseases due, in part, to its capacity to lessen life expectancy.

Healing after a relapse may occur. However since damages to the myelin sheath are permanent, there is a high possibility that the effects of such damages are permanent. There is very small chance of reverting to the pre-onset conditions even with medications and therapies. There are currently no available cures for this disease though symptom-control treatments can be availed to provide short-term relief. On-going clinical trials and research are yet to bring new lights to the nature of the disease and treatments.



Facts Surrounding Multiple Sclerosis

There are plenty of things medical scientists, researchers, neurologists and physicians know about the nature of multiple sclerosis, but there are also plenty of other things that they do not know. In this article, facts surrounding MS are presented.

The disease is caused by the damages on the protective insulation or the myelin sheath of the neurons – This one thing is sure, the disease roots from an abnormal immune system response that damages the myelin sheath or the protective insulation of the neurons. It is not definite though what causes this autoimmune response.

It runs in the family – There are strong indications that this condition is determined by a specific genetic make-up. Research is yet to establish though which genes play the part in the expression of the disease. People who have relatives who possess this condition are twice more susceptible to the onset of multiple sclerosis than those who belong in the general population.

Women are at higher risk of developing the condition – Women are 2 to 3 times more likely to develop the condition. The reason for this is not definite though.

People who live in places at higher altitudes are more susceptible to the development of the disease – There are higher incidences of multiple sclerosis near the earth's poles than near the equator. Explanation for this is yet to be established. Nonetheless, researchers and scientist are entertaining the idea that environment may trigger the onset of the condition.

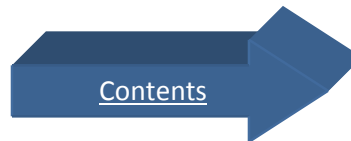
Multiple sclerosis is not fatal or contagious but it can definitely decrease life expectancy – The condition is capricious, yes, but it does not pose dangers to other people apart from those who have already developed it. Though it may not cause death, it may be instrumental to shorter lifespan.

Multiple sclerosis is a disease that seems to have young adults as its main target – People who are aged between 20 to 50 years old oftentimes experience the onset of strange symptoms. And by the time they get older, they experience far more difficult symptoms that limit their capacity to function well.

Its symptoms are unpredictable – It would be impossible for you to climb the stairs today but you could possibly run around the town tomorrow. You may not be able to close the car door properly today but you will be able to do the shopping tomorrow. You may feel great today but the next day, you would feel like you have been hit by a truck. Symptoms are just different each day.

Attacks of symptoms are different from one day to another and its severity and the level of debilitation it brings vary from time to time – Symptoms may progress one day, health the next day. There are periods of bad days and good days which reflect the relapse, remission and progression in severity of the condition. It is the nature of the disease to manifest in various, oftentimes, dissimilar manners.

People who suffer from multiple sclerosis live with the certainty that their condition is unpredictable - One day may be different from another and it is never certain whether today will be as bad or as good as the day following it. Because of these fluctuations in the characteristics of the symptoms experienced, people with this condition often find it hard to function normally, to plan for the future with a degree of decisiveness and to enjoy daily living.



Multiple Sclerosis Diagnosis

Multiple sclerosis is a very frustrating condition. With the current lack of diagnostic procedures, tests and examinations that can provide clear-cut evaluations, many physicians find it hard to establish the presence of multiple sclerosis. Because of this, patients suffer both from the symptoms of the conditions and the confusion these symptoms bring. Though patients feel that "something" is seriously wrong about them, that "something" is typically not hard to miss.

Symptoms of multiple sclerosis may be transient, mild or similar with other conditions. Attacks are intermittent and hard to understand. The nature of the disease itself is barely understood. All these add in to the extended suffering of patients.

The best option current medical science can provide when it comes to diagnosing this condition is by way of ruling out other diseases that possess symptoms similar with multiple sclerosis. While this is helpful, it provides somewhat inconclusive evidence. Doctors will try to evaluate the medical history of the patient, presence of co-morbid disorders and illnesses, and other factors. Only after other conditions were ruled out will the doctors present the possible presence of multiple sclerosis. After this, the neurologist will examine the patient based on the following:

Whether or not the patient had experienced two or more relapses at different points in time;

Whether or not the patient shows signs of demyelination in two or more areas of the central nervous system; or,

Whether or not the patient had experienced at least one relapse, have at least one indication of lesions of the myelin sheath on either the brain or the spinal cord, and laboratory tests provide results consistent with those commonly observed among patients of multiple sclerosis.

If indications are strong, diagnosis can be made. But even when the patient scored positive with the aforementioned criteria, it is still not evidence enough to fully ascertain the presence of the disease. For patients who experience symptoms that come and go, and those who have experienced only one relapse, further examinations will be recommended after a certain period of time, thus extending the uncertainty of diagnosis.

On top of these, it is not uncommon to utilize diagnostic tests and examinations to evaluate the symptoms. MRI or Magnetic Resonance Imaging, examination of brain fluids and evoked potentials are used to prove the presence of the disease. Though these are helpful, these can only create strong suggestions with respect to the onset of the condition. The extent of damage and the location of damage on the central nervous system cannot be assessed through these tests.

A specialist or a neurologist would only give diagnosis once definite signs of the disease are identified, otherwise, a series of tests may be undergone or recommendation to other doctors may be given. Or worse, the patient will be left to agonize on his condition without clearly knowing what he is suffering from. This creates serious problems for the patients.

For most, the inability of doctors to give clear evaluations of their conditions makes it doubly difficult and exasperating. Some patients go beyond the belief that they have gone crazy while others continually suffer with symptoms that increase in severity over time without medications or treatments.

While all these are true, the fact that some forms of diagnosis is present are somehow sufficient to extend help to the sufferers.



Multiple Sclerosis Symptoms – Problems with Vision, Balance, Coordination, Bladder, Bowel, and Sexual Dysfunctions

Patients of multiple sclerosis are not only bothered by symptoms related with sensory, motor and cognitive functions, they also suffer from dysfunctions of the bladder and bowel functions, problems with coordination as well as balance, impairments of the eyes, and sexual dysfunctions. Below are the more detailed symptoms relating to these problems. Each symptom is placed under a specific category with accompanying brief descriptions.

VISUAL SYMPTOMS

Eye pain, this may be due in part to a condition called Trigeminal Neuralgia, a condition that shoots up painful sensations rooting from the dysfunction of one of the Trigeminal nerves of the face. Eye pain may also be experienced during eye movements.

Blurry vision, is the decreased capacity of the eyes and their optic nerves to define the images they perceive

Diminished perception to colors, the lack of capacity to perceive bold colors

Blindness, which may be partial or full blindness

Double Vision or Diplopia, is a very common visual problem associated with multiple sclerosis which is caused by lesions incurred on the brainstem whereby the cranial nerves connecting the eyes and the brain are attached.

Jerky Eye Movements or Nystagmus, these are the involuntary and rapid eye movements typically manifested by patients of multiple sclerosis

Ocular Dysmetria, which is characterized by constant overshooting of eye movements

Lack or decreased eye coordination

Sensation of flashing lights during eye movements. This may also be the resulting response to a sudden noise

Afferent Pupillary Defect (APD), or Marcus-Gunn pupil is a condition that is characterized by the inability of the eyes to dilate properly in response to light intensities.

BALANCE AND COORDINATION SYMPTOMS

Dysdiadochokinesia, is a medical condition where the ability to perform rapid and alternating movements are affected

Dysmetria, is oftentimes related to one's inability to calculate scale and distance.

Dystonia, is a movement disorder associated with impaired neurological functions. This is characterized by abnormal posture, repetitive movements and constant jerking and twisting during attempts to maintain a posture.

Intention tremor, is characterized by tremor occurring during voluntary movements. This is worsened during movements.

Impairment or loss of coordination, or ataxia is a condition that results from problems with processing sensory and motor inputs as well as in the production of responses to these.

Speech Ataxia (stuttering), this refers to problems involving the coordination of speech

Vestibular Ataxia, this results into nystagmus, incoordination and vertigo, which involves a host of symptoms including vomiting, dizziness and nausea. This is caused by the formation of lesions on the vestibular nuclei and the brainstem.

BLADDER-, BOWEL-, and SEXUAL-RELATED SYMPTOMS

Bladder Spasticity or muscular hypertonicity results from the continuous sending of brain signal to certain muscles, causing them to continuously contract and tighten

Constipation is a medical and a very common condition that involves the hardening of the feces, thus leading to difficult bowel movement

Detrusor-Sphincter Dyssynergia

Erectile Dysfunction, Anorgasmy and retrograde ejaculation are all sexual-related symptoms of the condition rooting from dysfunctions of impulse transference

Fecal Urgency and incontinence is the inability to control the involuntary muscles of the anus, thereby leading to uncontrolled defecation.

Frequent Micturation, simply known as frequent urination.

Frigidity or Hypoactive Sexual Desire Disorder is a condition that refers to the decreased capacity to maintain sexual functions and activities

OTHERS

Fatigue, for no apparent reason. MS patients typically report of unexplained over-exhaustion.

Gastroesophageal Reflux or heartburn

Sleeping disorders or inability to fall into sleep or maintain sleep

Uhthoff's Symptom, is a condition whereby temperature rises during hot baths, exercise and other activities causing the exacerbation of other symptoms



Multiple Sclerosis Symptoms- Cognitive, Sensory and Motor Symptoms

Multiple sclerosis is a capricious disease – its symptoms vary on a case to case basis. Thus, each attack or relapse is unique and symptoms can manifest in various ways. It may crop up from cognitive problems while others may feel disabilities resulting from loss or diminished motor functions. To better understand the symptoms of this condition, listed below are the most common general symptoms observed among MS patients.

COGNITIVE SYMPTOMS

Anxiety

Bipolar syndrome, a psychological disorder which is, in general, characterized by a passive-aggressive attitude

Cognitive dysfunction , which may involve difficulty of word recall or of substituting one word for another, problems related to the clarity of memory, and forgetfulness.

Dementia, which is characterized by on-going decline of cognitive functions which affects memory, language, attention as well as problem-solving abilities

Depression, often a psychological response that results from constant irritability, frustration and generally unhealthy emotions

Emotional disability, may be caused by the inability to cope to the emotional problems rooting from other symptoms of multiple sclerosis

Mood swings, a result of sporadic flow of nerve impulses, a person with multiple sclerosis may suffer from erratic mood swings. Patients report of constantly and rapidly changing moods.

Sense of euphoria

Speech impairment and reduced speech comprehension without loss of capacity to speak or Aphasia and Dysphasia

SENSORY SYMPTOMS

Anaesthesia, while this is more commonly associated as the drug used for numbing sensation useful during invasive operations, this, however, is generally classified as the loss of feeling or numbness in some parts of the body of an MS patient.

L'Hermitte's, otherwise known as Barber Chair Phenomenon, is a condition characterized by an electric sensation that runs through the spinal cord to the limbs. This is typically felt after bending the head backwards or forwards.

Neuropathic pain, or neuralgia is a pain that is caused by the non-activation of pain receptor cells in the body. This is an unusual pain that may root from messed up system of transferring brain signals from one neuron to another.

Paraesthesia, or parasthesia is a skin-related sensation where the skin feels tickled, numbed or pricked with no apparent physical cause. This is more commonly recognized as the sensation of "pins and needles".

Proprioceptive Dysfunction, it is a sensory processing disorder that leads to constant falling, tripping and other uncontrolled movements. It roots from dysfunctional sensory feedback.

Trigeminal Neuralgia, or prosopalgia is a neuropathic condition that causes painful sensations of the ear, eyes, nose, lips, scalp, teeth, forehead and jaw. In short, it is pain associated with any of the three Trigeminal nerves found on the face.

MOTOR SYMPTOMS

Footdrop, a condition where the foot drags uncontrollably when walking

Involuntary muscle cramps and spasms which are attributed to irregular flow of nerve impulses to the muscle tissues

Loss of muscle tone which results to stiffness, movement restriction and pain in the limbs. Also called spasticity

Muscle atrophy which may result from lack of muscle activities or use

Muscle weakness, otherwise called paresis (all types specifically monoparesis, hemiparesis, quadraparesis, and paraparesis), more popularly distinguished as mild or partial paralysis

Posture problems, Restless Leg Syndrome, tics and involuntary muscle jerking which result from the irregularity of nerve impulses

Problems with reflexes

Speech problems such as slurred speech or dysarthria

Total or near total loss of muscle strength



Multiple Sclerosis Treatments and Therapies

While it is true that there is currently no permanent relief from multiple sclerosis, there are, however, varieties of treatments and therapies that go beyond conventional medicine. In this article, we would look at the treatment options as well as complementary and alternative treatments that are commonly advised by physicians.

Drug Treatments

There are specific drugs and medications for each type of multiple sclerosis. However, usually, one drug may be prescribed for Secondary Progressive MS may be prescribed for Relapsing/Remitting MS. For reference, here are the general categories of medications for MS:

Commonly prescribed drugs such as Interferon Beta 1a and 1b, and Glatiramer Acetate

Chemotherapeutic Agents

Corticosteroids & ACTH or Adrenocorticotrophic Hormone

Medications for altered sensations

Pain relievers

Medications for treating depression, insomnia and anxiety

Medications for fatigue

Medications for urinary and other bladder-related dysfunctions

Drugs for bowel-related problems

Drugs for sexual dysfunctions

Medications for tremors, tics, spasticity and clonus

Vaccinations and anti-virals

Drugs for vertigo

Experimental drug treatments such as Eliprodil and Diaminopyridine are mainly focused on improving the transmission of nerve signals from one neuron to another. Other experimental drugs aim to prevent the spread of viral infections.

Complementary Therapies

These therapies are normally inclusive of popular alternative therapies that are also commonly used for other diseases and disorders. Because many of such conditions are not yet fully understood and therefore lack appropriate treatments and cures, the scientific community presents other options within the non-conventional paradigm. Among these therapies are herbal remedies, acupuncture, yoga, aromatherapy, emotional healing, reflexology, meditation, chiropractic treatments, Pilates, hypnotherapy, homeopathy, use of antioxidants, and others. Many patients of multiple sclerosis find relief through these therapies which make them very likely choices as treatments. While they may not totally remove the symptoms or prevent them from relapsing, these treatment options, however, can relieve the patient from the pains and discomforts brought about by the symptoms.

Counseling, Telephone Counseling

Parts of a patient's treatment are the face-to-face counseling and counseling over the phone or telephone counseling. These are commonly known as talk therapies. The main goal here is to provide emotional and psychological support for the sufferer. What's good about these treatments is that the counselor fully understands the condition and may add considerably in the patient's capacity to handle his disease.

Treatment against fatigue

Fatigue is commonly experienced by patients of multiple sclerosis, no matter what the type or how severe is the form. Thus, patients are encouraged to conquer this by doing some remedies such as proper dieting, conservation of energy, participating in regular workouts, and stress management.

Supplements

There are basically a few categories of supplements that may prove effective against multiple sclerosis and its symptoms. They are the vitamins A, B, C, D and E, trace minerals magnesium, manganese, zinc, copper, selenium and calcium, and oils such as fish oil, flax oil and EPO.

The aforementioned treatment methodologies are evidence enough that there are varieties of treatment options presented for individuals suffering from this condition. As there is currently no concrete knowledge on how to attack against the disease, the effectiveness of these modalities are uncertain. They are reassurances at best.

To fully maximize the treatments, one should seek the help of a professional who is knowledgeable in this field. It is advised that patients of multiple sclerosis undergo treatments as necessary.



The Different Faces of Multiple Sclerosis

Multiple sclerosis is an autoimmune disease wherein through a mechanism that is yet to be understood, the immune system attacks the myelin sheath of the neurons. This sheath is the protective insulator of the neurons that allows for easy transfer of nerve impulses from one brain cell to another.

There are several forms of multiple sclerosis and for the most parts, the different kinds of MS are categorized under four types. They are as follows:

RRMS or Relapsing/Remitting Multiple Sclerosis

As its name suggests, this type is characterized by intermittent relapses (or exacerbation, or attacks of symptoms). During such relapses, new symptoms may arise while old symptoms subside or worsen. Since MS differs from one case to another, it is hard to distinguish which symptom will occur on a certain relapse and what new symptoms are to be expected. There really is no way of telling.

After the relapse, remission will follow. Remission is when the patient will undergo partial or complete recovery from the effects of the exacerbations.

The process of relapse may last anywhere from one day, two days, a week, a month, a year and so on. And the recovery period may come instantaneously or gradually. Most people who have this autoimmune disease first undergo RRMS which oftentimes hits at their early adulthood, though it is not rare to find cases when onset happens during middle age.

SPMS or Secondary Progressive Multiple Sclerosis

After the onset of the disease, patients may either feel no more symptoms or their symptoms will progressively worsen in between relapses. In this type, the patient may experience a mixture of good and bad days. Some patients who are still in the early phase of SPMS may still experience distinguishable relapses but as the disease worsens, remission lessens while the symptoms aggravate. At this point, no recovery may be expected. SPMS typically happens after a decade or so of having the condition.

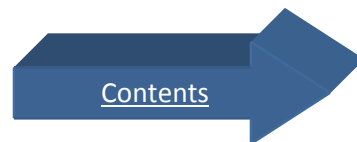
PRMS or Progressive Relapsing Multiple Sclerosis

This type is still characterized by relapse and remission. However, with each relapse, the condition and symptoms worsen. It progressively follows a debilitating course.

PPMS or Primary Progressive Multiple Sclerosis

This can be considered as the basic type of multiple sclerosis, which follows the similar progression of other chronic diseases. The onset of symptoms leads on to continuous worsening of each attack. The sad part is, there are no remissions in this type. Instead, there may be periods when the severity of symptoms level off. Like with SPMS, this type is marked with good and bad days but the good days are just a little less inconvenient. This type differs from most types as it tends to affect people whose ages are anywhere from 30 to 50 years old and it is most typically seen among men, unlike secondary progressive and relapse/remitting types.

There are other forms of multiple sclerosis, some of them are sub-types of the more common ones while some of them are completely different from those already mentioned. Benign MS, for example, is a sub-type of RRMS wherein the onset is not marked by successive relapses and remissions. Instead, the patient may experience no symptom for as long as 15 years. Malignant MS, on the other hand, is a type where the period from onset to advanced severity happens in a very short period of time. Fortunately, this is a very rare type. Each type of MS requires different forms of treatments, therapies and handling. It is therefore very important to first know what the type is.



Tips on Handling Multiple Sclerosis

With Multiple Sclerosis, there will be days when you are feeling quite well and there are days when you are not feeling okay. There will be bouts of symptoms which may occur at anytime of the day, several days at a time during when these symptoms may not feel the same as they were yesterday. They may be much worse or they may be totally different. To help you cope with the irregular changes in the symptoms and their severity, we have prepared the following tips:

Practice deep breathing – Sometimes the only relief you will get is the ability to control your breathing. So try doing deep breathing. Fill in your lungs with as much air as you could and slowly exhale.

Improve your strength – If your body allows it, do some strength training. Though the fatigue you are experiencing roots from neural dysfunction, it would still help to augment your sometimes incapacitated body with building some lean muscles.

Avail some counseling – Whether it's over the phone or face-to-face, counseling still works well in providing emotional and psychological assistance to the patient. Sometimes, these are the only things that can relieve the sufferer from the physiological and psychological tolls of multiple sclerosis.

Do some creative visualization – A number of MS patients do this and many of them agree that it can help. Creative visualization is the process of creating mental images that may elicit various sensations. A good exercise is to imagine that you are bound by something, say rubber bands. One by one, try to mentally visualize that you are removing these bands from yourself. Be sure to incorporate and be sensitive to the sensations associated with this exercise.

Address your physical problems with physical therapy – Try improving your balance, the pain you experience, your body's lack of coordination, the weakness of your limbs, and your muscular spasms through the help of a physical therapist.

Don't rely on a wheelchair – As much as possible, refrain from using aids such as crutches and wheelchairs. For most patients, these are unnecessary; it should be the same for you. Instead, allow your legs, hips and lower back to develop strength.

Inquire about steroids – If your symptoms include blurriness or pain in the eyes, ask your doctor about steroids. These should help relieve the discomforts.

Try the alternatives – Consider alternative medicines and treatments. These may not be backed by scientific studies, nonetheless, there are anecdotal evidences that they work in the management of this condition and its symptoms.

Seek the help of your counselor concerning your home/place of work – There should be no second guessing on this. Your home or workplace must be safe for you at all times. Seek a counselor to give you guidance.

Seek help- There are pharmaceutical companies, support groups and organizations that can help you with respect to your treatments. There are also organizations that provide financial help. Do not hesitate to approach them.

Frustrated and stressed out? – There are stress management techniques and stress therapies available at your disposal. Sometimes, they do not cost a penny. Try to incorporate them in your treatment options.

Exercise – Keeping an active body may divert your attention from the pain.

There is so much you can do with your condition so there is no reason for you to give in to suffering. Seek your options, now.



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