

What is MS? - The AIMS Guide

What's MS? Multiple sclerosis overview, diagnosis and MS treatment options

Want to know what MS is? Need to know more about multiple sclerosis, the symptoms, the potential MS causes? Want to get a diagnosis and the range of potential treatments? - Read on to find out more about MS

[What is MS \(Multiple Sclerosis\)?](#)

[What are the symptoms of MS?](#)

[What causes MS?](#)

[MS advice and getting an MS diagnosis](#)

[Types of MS](#)

[MS remedies and cure](#)

What is Multiple Sclerosis

MS, or Multiple Sclerosis, is a long-term illness that causes many different major and minor symptoms in sufferers. It may impact your spinal cord, brain and the eye's optic nerve. MS often causes short and long-term issues with eyesight, balance, walking and muscle control.

Lesions can form anywhere on the brain or spinal cord in MS; this means that MS disease symptoms and severity are usually different for each individual. Some people have mild symptoms and do not require therapy (initial symptoms can sometimes be mild and hard to diagnose). Others may have problems performing normal tasks and difficulty with movement or getting around.

MS occurs when your immune system mistakenly attacks myelin, thinking it's a foreign body. Myelin is a fatty sheath-like substance that wraps around your nerve pathways to safeguard them from damage - a little like the insulated coating on an electrical wire. Where this nerve protection is

missing or damaged, your nerves can eventually become damaged - this damage presents as white matter lesions in an MRI scan.

When this tissue and nerve damage occurs, your brain cannot send signals through your body properly. The nerve damage can slow down or stop the signals completely, potentially causing issues with movement and feeling in your body, along with the many other symptoms experienced in MS.

What are the symptoms of MS?

The central nervous system connects everything that your body does to the signals to and from your brain. This means that your symptoms are driven by which part of your central nervous system is damaged.

That is why Multiple Sclerosis and its symptoms often differ from one person to another. The most common symptoms are: -

- Trouble walking or standing
- Muscle spasms or muscle weakness
- Feeling tired and drained
- Pain, or constant aching
- Vision problems, double vision, optic neuritis, focus problems, sometimes only in one eye
- Numbness, lack of feel or tingling “pins and needles” sensations
- Bad bladder or bowel control
- Brain fog, memory and concentration problems
- Sexual problems
- Depression

The initial symptoms often start between the ages of 20 and 40. However, people are often diagnosed between 40 and 50, and women are three times more likely to be diagnosed with MS.

Early symptoms of MS can often be mistaken for other health problems, with many people not seeking a medical diagnosis initially. Potential early signs of multiple sclerosis should not be ignored; talk to your GP if you have recurring symptoms.

Most individuals with MS suffer regular attacks, known as relapses, during which the illness becomes markedly worse. These are usually followed by instances of recovery when symptoms improve. MS' long term behaviour and symptoms are different for each individual. Some people can have long periods of remission but, for many, the disease continues to get worse as time passes.

What causes multiple sclerosis?

IS MS hereditary? Ethnicity and MS

Doctors do not know for certain what causes MS; it is not inherited genetically and passed on to children. Present research suggests that there are over 100 different genes that may impact on your chances of getting MS. As well as family history having very little statistical bearing on MS, ethnic background also has little bearing.

Environmental factors and MS

There are many things that appear to make getting the disease more likely, and environmental factors may play a role in MS. The further away from the equator you live in your formative years, the higher the statistical chances of getting multiple sclerosis. There is building evidence that shows that having low levels of vitamin D, especially when young, increases the risk of MS. This is linked to an increased rate of MS where there is less sun, as vitamin D is mainly made from exposure to bright sunlight.

Infections and MS

Some people may get MS after they have experienced a virus. Studies show that the Epstein-Barr virus or the human herpesvirus 6, which can cause the immune system to stop working normally, can be a factor. These diseases may potentially trigger the illness or trigger MS relapses.

Lifestyle and MS

Smoking and lifestyle choices have also been identified as risk factors that can raise the threat of MS. Research shows that, statistically, you are more likely to get Multiple Sclerosis if you smoke or are exposed to passive smoking. There is also evidence that suggests that stopping smoking can slow down the progression of RRMS to secondary progressive MS.

There is also evidence from studies showing that obesity increases the risk that you'll develop MS. This is also related to the vitamin D research, as many overweight people have low vitamin D levels. Although there is no direct link between obesity and MS, it is another potential factor that can increase the risk of getting MS.

How is MS diagnosed?

It can be quite difficult initially to diagnose Multiple Sclerosis. The early signs of MS can be very similar to several other autoimmune diseases and some nervous system conditions. If your GP thinks you're potentially suffering from Multiple Sclerosis, then they will usually refer you to a neurologist.

As there is no single MS test that specifically identifies the disease, the hospital neurology department will ask you about your general health history. They will then assess you for key indicators of nerve damage in your brain, spinal cord and optic nerves. The tests to assess and diagnose MS usually comprise: -

Neurological and body function tests

These test your balance, vision, strength, reflexes and coordination, assessing for nerve damage based on your reactions versus normal healthy behaviour.

Blood tests

To rule out or identify diseases that have similar symptoms to MS; e.g. Lyme Disease, vitamin deficiencies, AIDS or neuromyelitis optica.

A lumbar puncture

A test to analyse a sample of the fluid that surrounds the spinal column and brain. The sample will often reveal certain proteins and antibodies (oligoclonal bands) that show the immune system is fighting a disease in the spinal column/brain.

Evoked potential test

This test measures the electrical activity in the brain, based on how your eyes react to light patterns. This can show if your brain taking longer than normal to receive messages via the nervous system.

Magnetic resonance imaging (MRI) scan

MRI scans use magnetic fields to produce detailed images of your body. They view any damage to the myelin sheath around nerves in the spinal cord and brain. This is often used to confirm a potential Multiple Sclerosis diagnosis.

Types of MS

MS usually begins in one of two ways, either: -

- With symptoms appearing and then disappearing again (relapsing attacks)
- Slow progression of, sometimes minor, symptoms that gradually become worse and worse

They key different types of Multiple Sclerosis are broken down into:

Relapsing Remitting MS

This is by far the most common form of Multiple Sclerosis, with in excess of 8 out of 10 individuals initially diagnosed with the "relapsing remitting" type of the disease.

In RRMS, symptoms can generally appear and worsen over a couple of days. They can continue for weeks to months, then gradually improve or go completely into "remission" over a similar time period. An individual with relapsing remitting MS will have regular episodes of similar, new or worsening symptoms, called "relapses".

The symptoms may not reappear for a long time, which is why many people don't initially seek a diagnosis. Even when there is a relapse, the symptoms could again vanish completely, with or without therapy. Although, over time, it is more likely that some of the symptoms will persist.

Over a period of years (often decades), some, but not all, individuals with relapsing remitting Multiple Sclerosis will go on to develop secondary progressive MS. In this kind of MS, symptoms will gradually worsen over time with fewer or no periods of remission.

Between 50-90% of individuals with relapsing remitting MS will go on to develop secondary progressive MS over 15-25 years. The longer you have relapsing remitting MS, the higher the likelihood of secondary progressive MS developing.

Primary progressive MS

A much smaller proportion of Multiple Sclerosis sufferers start their MS with a gradual worsening of symptoms.

Approximately 1 in 10 people with MS are diagnosed with primary progressive MS, where their symptoms gradually worsen over time. The key difference here is that there are no periods of remission. There are usually periods in which the condition seems to stabilise and not progress any further.

MS remedies and cure

There is currently no cure for MS in terms of a treatment that will halt progression and reverse symptoms for everyone with the disease. MS is a lifelong condition, and individual treatment depends very much on the type of disease and the symptoms an individual has. However, the prognosis for Multiple Sclerosis patients has become much better since with the advent of HSCT and other therapies. It should also be noted that long-term studies suggest that MS only has a minor impact on life expectancy.

Potential treatments for MS

There are several treatments that have been developed that are shown to help control the disease and the symptoms in some cases. These are: -

- A five-day course of steroids at home to help recovery from relapses
- A similar steroid course of injections administered in hospital
- Specific remedies for individual MS symptoms. These vary widely depending on the prevailing symptoms and would need to be discussed with your GP or neurologist
- Disease modifying drugs or disease modifying therapies (DMDs or DMTs) : these are treatments to slow the progression of MS and reduce the damage to the myelin sheath around the nerves
- Beta interferon injections, to reduce relapses in relapsing remitting MS
- There are several other drugs and therapies licensed by NICE for reducing the impact of MS. The options would need to be discussed with a healthcare professional, your GP or neurologist, before deciding on the best treatment, based on your symptoms and the potential side effects

The official NHS position on Multiple Sclerosis treatment

The NHS position on the treatment of Multiple Sclerosis is that “Unfortunately, there’s currently no treatment that can slow the progress of primary progressive MS or secondary progressive MS in the absence of relapses. Many therapies aiming to treat progressive MS are currently being researched.”

You can read more on the NHS HSCT for MS criteria here:

The AIMS position on MS and HSCT

As you may have realised, this is a charity with a focus on HSCT for MS, and the AIMS position is slightly different.

The studies and clinical trial results we’ve seen from those who’ve had HSCT treatment show that it is very successful at halting the progress of Multiple Sclerosis. There’s a very high success rate of over 80% for people with relapsing remitting MS having their progression halted.

You can find out more about HSCT in our HSCT FAQs section.