

Multiple sclerosis

Multiple sclerosis (MS) is the most common chronic disease of the central nervous system among young Australians. Victoria has more people with MS than any other state in Australia. MS is not contagious, but it is progressive and unpredictable.

MS occurs when the protective sheath (myelin) around the nerve fibres in the brain and spinal cord becomes damaged, causing random patches called plaques or lesions. These patches distort and interrupt the messages that are sent along these nerves. Sclerosis means scarring and the disease is labelled 'multiple' because the damage usually occurs at a number of points.

There are many different health effects of this disease and no two people will share the same symptoms. The cause of MS is unknown and, as yet, there is no cure. However, treatments are available to ease symptoms and slow down the course of the disease.

MS is a common disease

An estimated 2,500,000 people around the world have multiple sclerosis. These people are generally:

- Young adults – symptoms first appear between the ages of 20 and 50 years
- Female – 70 per cent of people with MS are female
- Caucasian – 98 per cent of people with MS are Caucasian
- Living in temperate zones – MS is generally more common between latitudes 40° and 60° north and south of the equator
- Have a relative with MS – between 10 and 20 per cent of people with MS have a relative with the disease, suggesting a genetic link.

Types of MS

MS can progress in different ways. Some people with MS may become seriously disabled. Others may have one or two attacks and then remain symptom-free for the rest of their lives. The frequency and severity of attacks cannot be predicted.

The different types of MS are:

- Relapsing-remitting MS – 85 per cent of people with MS start with this type of disease course. Acute episodes of neurological symptoms occur, which last for days, weeks or months, before completely or partially resolving. The intervals between attacks can vary widely but, on average, occur every one to two years
- Primary progressive MS – affects around 10 per cent of people with MS from the outset. They experience no relapses, but do have a gradual onset of disability, which does not recover or reverse
- Secondary relapsing-remitting MS – occurs in people who started with relapsing-remitting MS, but then the relapses become less regular or stop altogether. However, disability continues to increase. About 60 per cent of people who start with relapsing-remitting MS, develop secondary progressive MS after 15 years
- Relapsing progressive MS – this occurs in about five per cent of people from the outset, with relapses occurring and disability building up between relapses.

Symptoms of MS

The symptoms of MS are varied and unpredictable, depending on which part of the central nervous system is affected and to what degree. The relapsing-remitting form of MS is the more common. The person experiences attacks in which the symptoms are severe for a short time and then improve, often with an almost complete recovery.

The progressive form of MS is characterised by a steady worsening of symptoms without any remissions. The symptoms can be any combination of the five major health problems of MS, including:

- Motor control – muscular spasms and problems with weakness, coordination, balance and functioning of the arms and legs, tendency to drag one foot
- Fatigue – including heat sensitivity
- Other neurological symptoms – including vertigo, pins and needles, neuralgia and visual disturbances
- Continence problems – including bladder incontinence and constipation
- Neuropsychological symptoms – including memory loss, depression and cognitive (thought-related) difficulties.

Cause of MS

The immune system defends the body from attack by micro-organisms such as bacteria and viruses. In the case of MS, the immune system attacks its own myelin, causing disruptions to the nerve transmissions.

The trigger to the disease has not yet been discovered, but it is thought that genetic and environmental factors are involved. Research so far has found that, in nearly two thirds of cases, a relapse has been preceded by a viral illness.

Diagnosis of MS

Most of the symptoms of MS can also be caused by other conditions and do not automatically mean you will be diagnosed with MS. As yet, there is no single test to diagnose MS. A number of specialised tests may be necessary, including magnetic resonance imaging (MRI).

Treatment of MS

There are no medications to cure MS, but there are treatments that can shorten the duration of attacks or relapses, ease specific symptoms and slow the progression of the disease by reducing the rate of the attacks. The types of medications used depend on a number of factors, including the person's form of MS.

Some of the medication treatments available include:

- Immunotherapy – medications that are taken in the form of subcutaneous (under the skin), intramuscular or intravenous injection, or orally (by mouth). These medications slow the frequency and severity of attacks, which means the myelin sheaths are subjected to less damage. Immunotherapy works by modifying the activity of the immune system. This treatment is prescribed for people with relapsing-remitting MS
- Corticosteroids – taken either as pills or injections. These medications are used to shorten the duration of an MS attack by easing inflammation.

Treatment for specific symptoms of MS

Treatments for specific symptoms may include a range of treatments, including:

- Muscle problems – a combination of medications may ease muscle problems, including stiffness and tremors. Physiotherapy is also recommended
- Fatigue – some studies have found that medications used to treat the sleep disorder narcolepsy are helpful in controlling MS-related fatigue
- Neurological symptoms – visual disturbances can be helped with medications, including steroids

- Continence – treatment for continence problems may include special exercises, medications, continence aids (such as disposable pads) and certain dietary changes
- Neuropsychological problems – treatment for depression or anxiety may include counselling or medication. Memory problems and other cognitive difficulties can be better managed with professional help from a neuropsychologist.

Side effects of MS treatment

Possible side effects depend on the medications used. You should discuss any concerns with your doctor. Depending on the medication, side effects may include:

- Drowsiness
- Gastrointestinal upsets
- Fluid retention
- Swelling
- Flu-like symptoms
- Skin irritation at the site of injection
- Mood-altering effects.

Healthcare and MS treatment

A person with MS can better manage their symptoms with the help of a healthcare team, including:

- Physiotherapy – including tailored exercise programs to improve strength, coordination and flexibility
- Occupational therapy – to learn coping strategies and new energy-saving skills to ensure a more independent life. These may include the use of aids
- Neuropsychological therapy – including techniques to improve memory and cognitive skills
- Other therapies – as needed, such as speech therapists or eye specialists
- Nurses
- Social workers.

Alternative therapies and MS

Medications and physical therapies can be complemented by alternative therapies. Be cautious when investigating a complementary therapy and be sceptical of 'miracle cure' claims. Always ask your doctor for advice before starting any complementary treatment, as some complementary treatments may have negative interactions with medications you may be taking.

Some alternative therapies that may be helpful include:

- Acupuncture – a therapy of traditional Chinese medicine (TCM). Slender needles are inserted into the skin at particular points and, according to the theory, help to balance the person's Qi (pronounced 'chee') energy. While Western science can't explain how acupuncture works, numerous studies have found it is an effective treatment for a number of conditions. Acupuncture may help ease MS-related pain and reduce the severity of muscle spasms
- Chiropractic – some people have reported that chiropractic treatment relieves the symptoms of lower back pain through massage and manipulation of the spine
- Massage – including shiatsu, Swedish massage and acupressure. The skin is the largest organ of the body and is packed with nerve endings that respond to touch. Massage works by soothing the skin and relaxing tense muscles. Regular massages can help a person with MS to better manage muscle pain
- Meditation – is the deliberate clearing of one's mind to promote a sense of calm and heightened awareness. During meditation, the brain produces alpha waves. This brain state has been found to promote relaxation of the entire nervous system. Meditation is a powerful stress management therapy

- Yoga – there are many different varieties of yoga, but each one relies on structured poses (asanas) timed with breathing (pranayama). Yoga can help relieve stress, because concentrating on the postures and breathing acts as a strong form of meditation. The gentle sustained stretches also help to improve flexibility and reduce muscle stiffness
- Supplements – some studies suggest that evening primrose oil and fish oil supplements can measurably reduce the severity and length of an MS attack. However, these supplements don't seem to influence the frequency of attacks.

Ineffective alternative treatments for MS

While some alternative therapies may be helpful, some therapies have been proven through clinical trials to be ineffective as treatments for MS. These include:

- Replacing mercury dental fillings
- Hyperbaric oxygen therapy
- Vitamin supplements
- Special diets (other than a well-balanced, high-fibre, low-fat diet).

Where to get help

- Your doctor
- Neurologist
- MS Australia Tel. 1800 042 138

Things to remember

- Multiple sclerosis (MS) is an incurable disease of the central nervous system that can affect the brain, spinal cord and optic nerves.
- The effects of MS are varied and unpredictable, and no two people with MS will have the same symptoms.
- The principal aims of medications for MS are to shorten attacks, manage specific symptoms and slow the progression of disease by reducing the relapse rate.
- A person with MS can better manage their symptoms with help from a range of different healthcare professionals.

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MS Australia

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