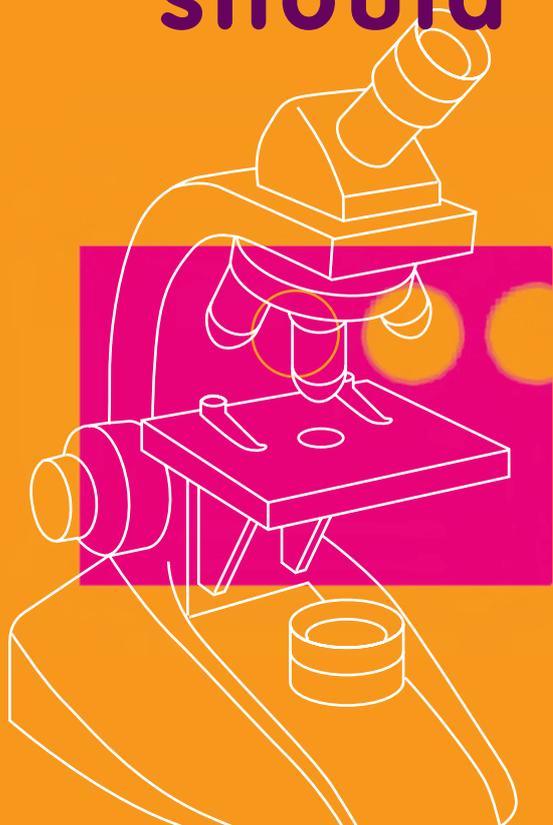


# What everyone should know about MS



AUSTRALIA

# Important

## Why is it important to know about multiple sclerosis?

Because  
it's the most common  
chronic central nervous  
system disease among  
young adults in Australia

and

MANY MORE PEOPLE -  
families, friends, carers - share  
the associated emotional,  
financial and physical  
effects.

**Young adults** are the most  
likely to get MS - during their  
most productive years.

By learning about MS,  
**you** can help people  
who have MS make  
the MOST of life.

**Thousands of Australians**  
have MS - **that's why!**

important

# What is multiple sclerosis?

MS is a **disease** of the **brain** and **spinal cord** (central nervous system).

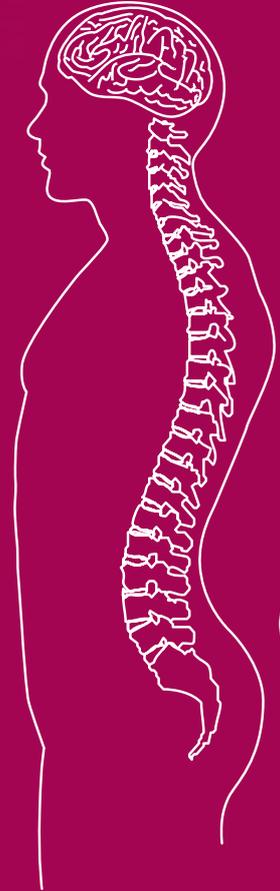
MS is called **multiple** because more than one part of the brain or spinal cord may be affected and because the disease is characterised by more than one attack.

Symptoms can be mild or severe and come and go unpredictably. Each person has a different disease course.

It's called **sclerosis** (meaning hardening or scarring) as an attack can leave scar tissue which disrupts the speed of the messages along the nerve fibres.

**Multiple sclerosis (MS)** interferes with the brain's ability to control such functions as vision, walking, etc.

**MS is not preventable or curable - yet!**  
**It is not contagious.**



# The effects of multiple sclerosis

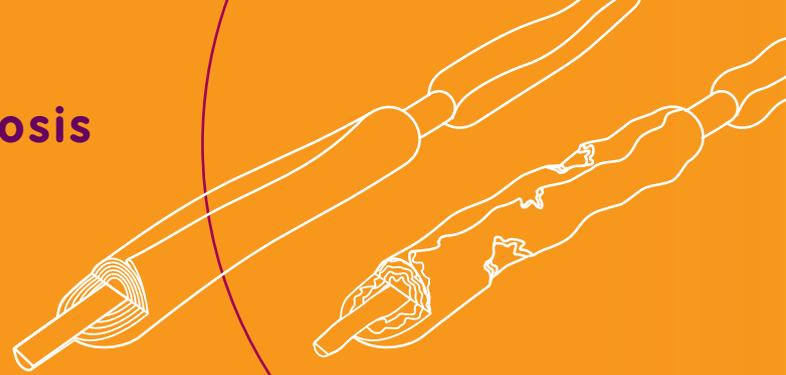
## HOW MS AFFECTS the central nervous system.

The central nervous system acts like a telephone switchboard, sending **messages** along the nerves to various parts of the body. These messages control all our daily activities.

## Multiple sclerosis disrupts the smooth flow of messages.

**Healthy nerve fibres** of the central nervous system are insulated by **myelin**, a fatty white matter which is necessary for the flow of messages.

**In MS**, damage may occur to myelin which covers the nerve fibres



in the central nervous system. This damage may block or distort the flow of messages, resulting in problems with sensation, memory and thinking, pain, numbness, altered feeling, weakness or loss of co-ordination.

## Body functions become uncontrolled because:

- Messages don't get through correctly.
- Messages go to the wrong area sometimes.

effects

# What causes multiple sclerosis?

It's a puzzle because the cause is unknown, no cure has been discovered and as yet there is no way to know who might get MS.

## Immune Reaction

Our bodies have a built-in **defence system**, which destroys "invaders" like viruses and bacteria.

- This defence system can backfire and start attacking the body's own cells: this is called an **autoimmune** reaction.
- MS might involve an autoimmune reaction in which the body attacks its own tissues by mistake.

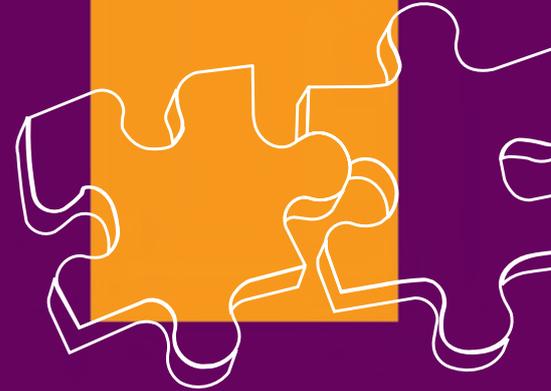
## Genetic Factors

Some people carry genes that make them more susceptible to MS. These could be genes that regulate immune reactions or genes that are responsible for producing components of the central nervous system.

## Triggers

There may be environmental triggers - particularly viral or bacterial infections - that trigger the autoimmune attack.

It is likely that immune response, genetic predisposition, environmental



factors, such as viral or other infections, may all contribute to the cause of MS.

## Who gets MS?

Since there's so much we don't know about MS, **we can't predict who might get it.**

**But we do know the following:**

### Young Adults

Symptoms usually appear between ages 20 to 50. MS onset is uncommon in people under 15 or over 55.

### Different types of MS

Some people recover after an attack (relapsing/remitting), while others have a worsening of symptoms without remission (progressive).

### People in the TEMPERATE ZONES

Multiple sclerosis occurs most often between 40° and 60° north and south of the equator. The closer an area to the equator, the fewer the cases of MS.



### Women

More women than men develop MS (approximately 3:1). MS isn't connected with pregnancy. Women with MS can have children.

who gets ms?

# Symptoms

**SYMPTOMS of MS vary greatly from person to person - and from time to time in the same person.**

**Symptoms might include:**

- Loss of **co-ordination**.
- Extreme **fatigue** or an unusual tired feeling.
- **Numbness and pain**, pins and needles or altered sensations.
- Loss of **bladder** or **bowel** control.
- **Weakness** of limbs.
- **Eye trouble** such as seeing double or uncontrolled eye movements.

- **Speech difficulties** such as slurring.
- **Problems** with memory and thinking.
- **Emotional** difficulties.
- **Shaking** of hands.

**Typical patterns** may be short periods of acute symptoms, followed by recovery or easing of these problems, often for months or even years. No one can predict the future course for any individual.

**Early symptoms** are usually slight and go away without specific treatment. But as time goes on, they may become more numerous and severe.

**Symptoms vary** depending on the part of the central nervous system affected. For example, MS in the spinal cord might cause weakness or numbness of the arms and legs.

**NOTE: Any of these symptoms could mean other illnesses.... CHECK WITH A DOCTOR!**



symptoms

# Diagnosis

Diagnosing multiple sclerosis can be difficult. But, it's made easier these days with modern diagnostic methods.

There is no one test for MS....

**Doctors** (usually neurologists), look for:

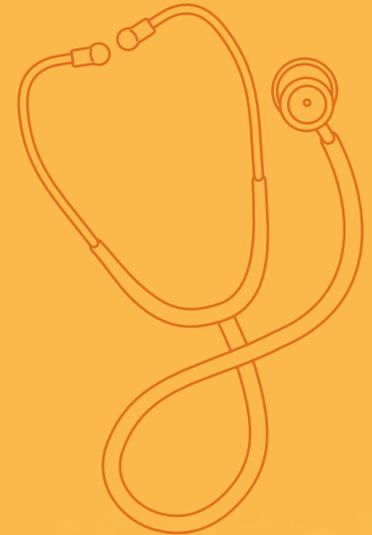
- Accurate and detailed clinical history, ie when did the symptoms occur, did they improve or progress?
- Evidence of central nervous system damage by examining the person for signs such as numbness, visual problems, weakness, fatigue, etc.

## Diagnostic tests

- MRI - brain and spinal cord scan.
- Tests for nerve conduction (eyes, muscles).
- Lumbar puncture - sample of the fluid that bathes the brain and spinal cord to look for antibodies.
- Other tests depending on the person's individual symptoms.

**Early symptoms** are often so slight that the person doesn't go to a doctor or the symptoms are not recognised as MS symptoms.

**Other diseases** of the nervous system have some of the same warning signs as MS.



diagnosis

## Lifestyle

Most people with MS can lead independent, active and satisfying lives.

**The impact of MS can be minimised with proper management.**

**A mild form of MS** occurs in some people with MS. They have few serious symptoms for many years after onset.

**Most** people with MS are still active and can take care of daily needs many years after diagnosis of MS.

**Life span** - most people with MS live a near-normal life span.

**Overall health maintenance** - people with MS need to stay active, eat a nutritious diet and get adequate rest.



lifestyle

# Treatment

There are currently **medications available** which alter the course of the disease.

## Immunotherapy

- Scientific studies have shown that these medications reduce the frequency and severity of attacks.
- These therapies do not repair damage that has occurred in the past, but they do reduce damage in the future.

## Medications for acute attacks

- Acute, severe attacks (also known as relapses

or exacerbations) or a sudden progressive decline may be treated with steroids (usually a short course of intravenous high dose methylprednisolone).

## Treatments for specific symptoms

- Symptoms may be managed by specific drug therapy or interventions such as physiotherapy, occupational therapy and speech therapy. For example, physiotherapy and exercise programs can help people with MS by relieving muscle tightness that may develop.

## Ongoing evaluation

is extremely important as needs and symptoms may change over time.

**MS therapy is most successful when undertaken with expert professional support and education.**



treatment

# Research

MS affects people in different ways, which makes researching MS a complex task. Scientists and medical researchers around the world are focusing their efforts on four main areas:

- **Cause(s) of MS.**
- **Stopping the disease process once it has started.**
- **Repairing the damage in the central nervous system (brain and spinal cord).**
- **Research into finding ways of better managing the disease.**

Topics under investigation include:

- **The contribution of genetic, physical and biological environments to the development of MS.**

- **The role of autoimmune blood cells in destroying myelin, the insulating material of the nerves.**
- **Limiting the development of permanent central nervous system damage in MS and repairing damaged myelin and nerves. The central nervous system is not easily able to repair itself and so researchers are aiming to develop methods which will assist in this process.**

Through such research, more and more is being learned about the disease mechanism at work in MS, which in turn should lead to more specialised treatments for people with MS.



research

## How you can help

You can help people with MS and their families.

- **Learn** the facts about MS and share them with others.
- **Join** a volunteer program and provide practical help.
- **Give** financial support, by becoming a financial member, donor, campaign worker and/or **MS Readathon** sponsor.

**People with MS** can contribute by promoting MS awareness in their State. Talk to your Society about enrolling in the MS Ambassador Program or representing the **MS Readathon** program in your local area.



how you can help

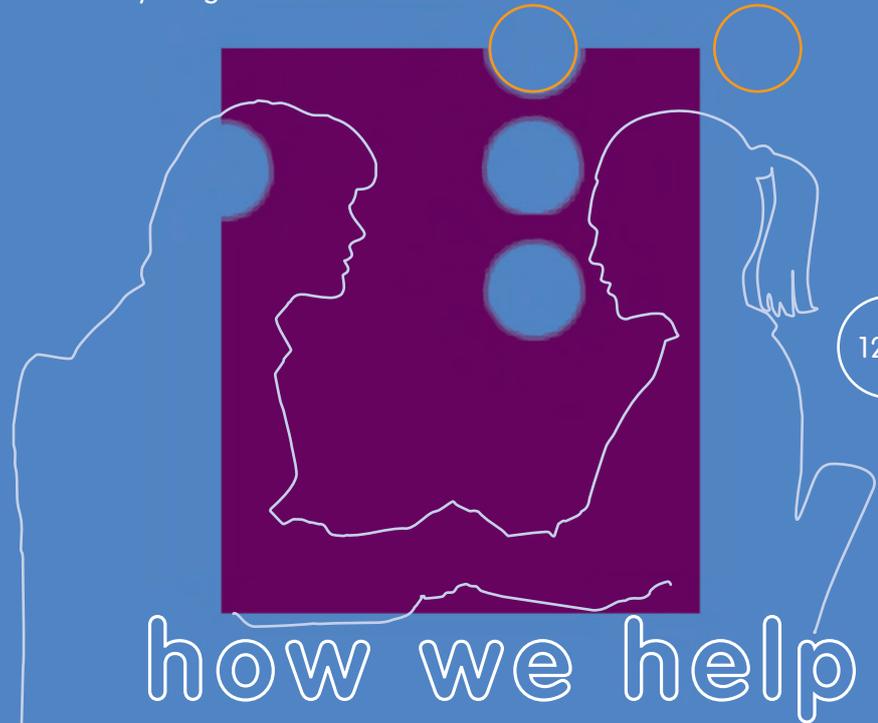
# How we help

## The Multiple Sclerosis Society provides:

- **Funds for research** into the cause, cure, prevention and treatment of MS.
- **Client services** designed to help people with MS live to their fullest potential.
- **Public education** to inform the public about the great economic toll MS exacts from people with MS, their families and their employers.
- **Provide information** and awareness of the disease to the community.
- **Professional education** by providing doctors and health care professionals with the most

recent information about MS management and diagnosis.

- **Programs and support** for people newly diagnosed with MS.



# Services

**Many services** are available to help people with MS and their families. For example:

- **Clinics and rehabilitation centres**
- **Advice and support**
- **Practical help/linking with other agencies**
- **Recreation programs and activities**
- **Physiotherapy/occupational therapy**
- **Counselling and vocational support**
- **Ongoing evaluation**
- **Continence advice**

Not all medical problems are due to MS - a doctor should be consulted to assess symptoms and prescribe treatment as necessary.

- **Seminars and conferences**

Keeping doctors, nurses, people with MS, families and therapists informed of the latest treatment methods.

- **Information**

- **For people newly diagnosed with MS**
- **Immunotherapy treatment**
- **Wellness programs**
- **Educational services**
- **Workshops**
- **Publications/Newsletters/Website**

The MS Societies provide information on all types of therapies and medications and will refer a person with MS to a health professional as appropriate.

Services may not be available in every State, please call your local Society for further information.

services

# How to find us

## **MS Australia**

**MS Information Line:**

**Freecall™ 1800 042 138**

**W: [www.msaustralia.org.au](http://www.msaustralia.org.au)**

## **MS Australia – ACT/NSW/VIC**

**E: [msconnect@msaustralia.org.au](mailto:msconnect@msaustralia.org.au)**

**W: [www.mssociety.org.au](http://www.mssociety.org.au)**

## **ACT Office**

Gloria McKerrow House

117 Denison Street

Deakin, ACT 2600

P: (02) 6234 7000

## **Sydney Office**

Studdy MS Centre

80 Betty Cuthbert Drive

Lidcombe, NSW 2141

P: (02) 9646 0600

## **Melbourne Office**

The Nerve Centre

54 Railway Road

Blackburn, Victoria 3130

P: (03) 9845 2700

## **MS Australia – Queensland**

**E: [info@msqld.org.au](mailto:info@msqld.org.au)**

**W: [www.msaustralia.org.au/qld](http://www.msaustralia.org.au/qld)**

286 Gladstone Road

Dutton Park, Queensland 4102

P: (07) 3840 0888

## **MS Australia – SA & NT**

**E: [ms@ms.asn.au](mailto:ms@ms.asn.au)**

**W: [www.ms.asn.au](http://www.ms.asn.au)**

110 Reservoir Road

Modbury, SA 5092

P: (08) 8396 0044

## **MS Australia – Tasmania**

**E: [aboutus@mstas.org.au](mailto:aboutus@mstas.org.au)**

**W: [www.msaustralia.org.au/tas](http://www.msaustralia.org.au/tas)**

15 Princes Street

Sandy Bay, Tasmania 7005

P: (03) 6220 1111

## **Multiple Sclerosis Society of Western Australia**

**E: [enquiries@mswa.org.au](mailto:enquiries@mswa.org.au)**

**W: [www.mswa.org.au](http://www.mswa.org.au)**

29 Parkhill Way

Wilson, WA 6107

P: (08) 9365 4888

## **Multiple Sclerosis Research Australia**

**Information Line: 1300 356 467**

**E: [info@msra.org.au](mailto:info@msra.org.au)**

**W: [www.msra.org.au](http://www.msra.org.au)**

293 Mowbray Road

Chatswood, NSW 2067

P: (02) 9468 8390



how to find us



AUSTRALIA

Original brochure produced by the National Multiple Sclerosis Society (USA).  
1989 Australian edition: text provided by courtesy of Scriptographic Publications Pty Ltd & © Channing L. Bete Co., Inc

Updated and amended by MS Australia

[www.msaustralia.org.au](http://www.msaustralia.org.au)

ISBN 0 9586902 7 8  
4th edition updated February 2010