What everyone should know about MS
Why is it important to know about multiple sclerosis?

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!

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.
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.
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.
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.
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!
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.
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.
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.
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 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.
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 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.
How to find us

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