

Profile: multiple sclerosis in australia



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Significance

Multiple sclerosis (MS) is a neurological disorder which attacks the central nervous system, including the brain and spinal cord (National Multiple Sclerosis Society, 2013). MS is an inflammatory, autoimmune, demyelinating disease that is caused by the immune system attacking myelin, the fatty substance that insulates nerves. These nerves enable rapid transmission of electrical impulses, which are smooth, prompt and co-ordinated movements which permit actions to be performed with little conscious effort (Multiple Sclerosis International Federation, n. d.). However, with individuals living with MS, the loss of myelin, also known as demyelination, disrupts the ability of nerves to conduct electrical impulses to and from the brain, thus creating the various symptoms of MS. The sites where myelin is missing, lesions or plaques, appear as scarred areas (Multiple Sclerosis International Federation, n. d.). Sclerosis is a Greek word meaning 'hardened tissue or scars' and multiple means 'many or several'. Therefore, multiple sclerosis in literal terms means many scars (Multiple Sclerosis International Federation, n. d.).

Multiple sclerosis is classified as a chronic disease as it's ongoing for the rest of a person's lifetime; the symptoms may get progressively worse overtime; multiple risk factors, although the majority are still unknown; the disease may lead to disablement, requiring walking aids, wheelchairs or carers, and the cause of the disease is still relatively unknown.

Prevalence in Australia

Recent population statistics in Australia show that in 2009 approximately 23, 700 Australians were living with multiple sclerosis (Australian Bureau of Statistics, 2013). According to the Australian Bureau of Statistics (2007), the state with the highest prevalence of MS was Tasmania with 75 out of every 100, 000 people affected.

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“ Females were more likely to report having MS than males, with an estimated three quarters of all people with the condition being female” as stated by the Australian Bureau of Statistics (2013). MS is more prevalent in Caucasians compared to any other ethnic group. In 2009 it was found that 95% of all individuals with MS speak English or European languages in their household (Australian Bureau of Statistics, 2013).

There is a small number of deaths from the underlying cause of multiple sclerosis, in 2012 32 males and 100 female deaths were registered (Australian Bureau of Statistics, 2012). Australia (2012) discovered that 1 in 20 Australians will be unfortunately touched by MS through a family member, friend or co-worker who is living with the disease.

Approximately the amount of “ people with MS has increased from 2. 1 million in 2000 to 3 million in 2013” (Multiple Sclerosis International Federation, 2013). This increase could be due to the increase of awareness and advancement of medical technology in detecting lesions in the brain or spinal cord. Compared to Australian MS prevalence, North America (140 per 100, 000) and Europe (108 per 100, 000) have the highest prevalence worldwide. The lowest prevalence in the world is in Sub-Saharan Africa (2. 1 per 100, 000) and East Asia (2. 2 per 100, 000) as stated by Multiple Sclerosis International Federation (2013).

Causes and Risk Factors

The cause of the immune system attacking myelin is still relatively unknown, however there are various theories. Most medical researchers believe the disease occurs in people who have a genetic predisposition and surrounding environmental factors (NHS, 2013).

There is no single gene that causes MS, thus it's not classified as a genetic condition. Studies have shown that individuals related to someone with MS are more susceptible to developing the disease. Researchers believe that different combinations of genes may

developing MS more probable in people (NHS, 2013).

Risk factors that may bring the onset of MS include gender, females are more likely to be diagnosed with MS compared to males; between the age of 20 and 50, developing MS before the age of 15 or after the age of 50 is a rare occurrence; geographical location further from the equator, studies has shown that it's more likely to occur in countries further from the equator, for instance " MS is relatively common in the UK, North America and Scandinavia, but rare in Malaysia or Ecuador" (NHS, 2013); Caucasians are more likely to MS than other ethnic groups (University of Maryland Center, 2012).

Prevention and Management

Unfortunately at this point in time, there is no cure for multiple sclerosis or a way to prevent it or the attacks. However, there is various prescribed medication to slow the frequency and severity of attacks, thus myelin is exposed to less damage, this is done through immunotherapy medication, it works by changing the activity of the immune system. It is often given to people with Relapsing-Remitting MS (MS Australia, n. d.). Methylprednisolone is a type of steroid medication taken to control the severity of an attack, it eases inflammation at the affected area. Immune suppressants are occasionally used for people with progressive MS (MS Australia, n. d.). Physiotherapy and stretching exercises are helpful in the management of muscle function and mobility (Rietberg, Brooks, Uitdewaal, & Kwakkel, 2004).

Further information

Symptoms of MS affect individuals uniquely as each person does not experience the same symptom and the symptoms change overtime. Most people with MS will experience more than one however no one person would have all the symptoms. Some of the most common symptoms include fatigue, this is the most common side effect of MS; visual problems

as blurring or double vision; balance and coordination problems including trouble walking; loss of balance, tremors and weakness; disrupted short term memory, difficulty concentrating; numbness and 'pins and needles' as well as muscle stiffness and pain (Australia Queensland, 2013).

There are four types of multiple sclerosis categorised. Hooper (2011) states the first is Relapsing-Remitting MS (RRMS), approximately 85% of people are diagnosed with this. RRMS involves clearly defined acute attacks where symptoms worsen or new ones appear. These attacks are followed by a period of remission of symptoms where the symptoms do not worsen or progress.

Primary-Progressive MS (PPMS) involves the progression of disability from onset, without any acute attacks. It is estimated about 10% of people are diagnosed with PPMS.

Secondary-Progressive MS (SPMS) follows after a period of Relapsing-Remitting MS. SPMS involves gradual worsening during and between attacks, and fewer attacks accompanied by progressive disability. "Most people who are diagnosed with RRMS will make the transition into SPMS at some point" (Hooper, 2011). The last type of MS is Progressive-Relapsing (PRMS), this is a uncommon form of MS, only 5% of people are diagnosed with PRMS. PRMS involves progression from onset with occasional acute attacks.

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