

# About Relapsing Remitting Multiple Sclerosis (RRMS)

## What is Multiple Sclerosis (MS)?

An autoimmune, chronic and **inflammatory condition** that affects the central nervous system (CNS).

The most common type of MS is **relapsing-remitting (RRMS)** which affects 85% of all patients.<sup>1</sup>

There is currently **no cure for MS**, but it is possible to manage the symptoms with medications and other treatments.

## Symptoms

The most common symptoms of MS include:<sup>2,3</sup>



Fatigue



Difficulty walking



Incontinence



Vision problems, such as blurred vision



Muscle spasms



Numbness or tingling in different parts of the body



Problems with balance and coordination



Difficulty swallowing



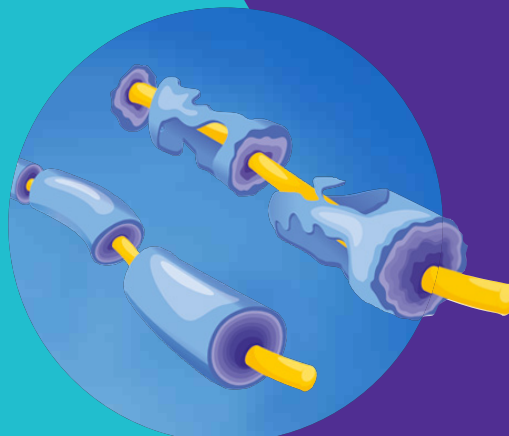
Problems with thinking, learning and planning

## Cause

**B and T lymphocytes and cytokines** have a central role in normal immune function and in the pathophysiology of MS.

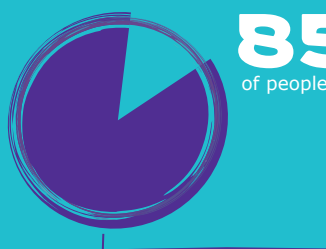
**The body's immune system attacks myelin** disrupting the information flow along the nerves, and scarring the myelin sheath.

**A combination of genetic and environmental factors** may trigger the condition.<sup>5</sup>



# About RRMS

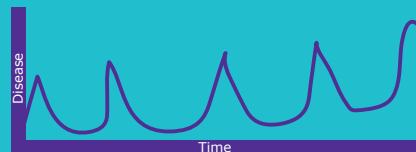
## Relapsing remitting MS (RRMS)



A relapse is defined by the appearance of new symptoms, or the return of old symptoms, for a period of 24 hours or more.



**Relapses** (symptom attacks) are followed by **remissions** (period of recovery) in RRMS.<sup>6,7</sup>



## How common is MS?

2.3 million people suffer from MS  
**WORLDWIDE**<sup>7</sup>

**About 15%**  
of those with MS also have a relative with MS<sup>4</sup>

Incidence of MS is **more than twice as high** in women compared with men<sup>4</sup>

Most people are diagnosed **in the prime of their life**, between the ages of



**20 & 40**

Often meaning women of child-bearing age are affected<sup>4</sup>



## Treatment

- **Managing specific MS symptoms**
- **Treating acute relapses of MS symptoms** with steroid medication
- **Disease modifying drugs (DMDs)** which reduce the number of relapses as well as reducing their severity



Although many treatments exist there is a need for an effective therapy without the risks associated with continuous immunosuppression and which reduces the need for frequent treatment switches.

Many current high-efficacy treatment options involve continuous suppression of the immune system, which can lead to side effects such as increased risk of infections and malignancy.<sup>8,9</sup>



These can also involve a substantial treatment administration and monitoring burden (e.g. regular blood tests to check immune cell changes)

1. MS Society. Relapsing Remitting (RRMS). <https://www.mssociety.org.uk/what-is-ms/types-of-ms/relapsing-remitting-rrms> Accessed February 22, 2017. 2. Multiple Sclerosis: MedlinePlus Medical Encyclopedia. U.S National Library of Medicine. <https://www.nlm.nih.gov/medline-plus/ency/article/000737.htm>. Accessed February 22, 2017. 3. Luzzio C, Dangond F. Multiple Sclerosis. Medscape. <http://emedicine.medscape.com/article/1146199-overview>. Accessed February 22, 2017. 4. Multiple Sclerosis: Hope Through Research. National Institute of Neurological Disorders and Strokes. [http://www.ninds.nih.gov/disorders/multiple\\_sclerosis/detail\\_multiple\\_sclerosis.htm](http://www.ninds.nih.gov/disorders/multiple_sclerosis/detail_multiple_sclerosis.htm). Accessed May 3, 2016. 5. MS Society. Causes of MS. <https://www.mssociety.org.uk/what-is-ms/information-about-ms/causes>. Accessed February 22, 2017. 6. Mayo Clinic Staff. Multiple Sclerosis. Overview. 2015. Mayo Clinic. <http://www.mayoclinic.org/diseases-conditions/multiple-sclerosis/home/ovc-20131882>. Accessed February 22, 2017. 7. University of Maryland Medical Center. Multiple Sclerosis. University of Maryland Medical Center. <http://umm.edu/health/medical/reports/articles/multiple-sclerosis>. Accessed February 22, 2017. 8. Francis G. Mult Scler. 2014; 20: 471-480. 9. Stuve O. Ann Neurol. 2006; 59: 743-747

