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## Types of MS

Four disease courses have been identified in multiple sclerosis: clinically isolated syndrome (CIS), relapsing-remitting MS (RRMS), primary progressive MS (PPMS), and secondary progressive MS (SPMS).



 Managing MS

## Getting the care you need

Managing MS is an ongoing process, beginning with the very first symptoms and continuing throughout the disease course. It's never too soon or too late to think about how to access high quality care. Knowing what to look for, where to find it, and how to work effectively with your doctor and other health professionals is essential to your health and quality of life.



## Overview

While there is no way to predict with any certainty how an individual's disease will progress, four basic MS disease courses (also called types or phenotypes) have been defined by the International Advisory Committee on Clinical Trials of MS in 2013: clinically isolated syndrome, relapsing remitting, secondary progressive and primary progressive. In 2020, the same committee published a clarifying paper, highlighting the need for time framing the modifiers "activity" and "progression" and guidance for using the terms "worsening" or "progression" to describe the disease.

Although not considered a course of MS, radiologically isolated syndrome (RIS) has been used to classify those with abnormalities on MRI of the brain and/or spinal cord consistent with lesions of MS - not explained by another diagnosis - and who also have no past or current neurological symptoms or abnormalities found on neurological exam. Often these individuals have had an MRI because of other symptoms, such as headache, and were found to have lesions that appear similar to those seen in MS.

A 2020 study found a little over half of people with RIS go on to develop MS within ten years. There are no specific treatment guidelines for RIS and additional research is needed to further define what factors increase the likelihood that someone with RIS will develop MS. Monitoring of MRI and neurological symptoms, and neurological examination are generally recommended to quickly identify changes. If the

# Clinically Isolated Syndrome (CIS)



CIS is a first episode of neurologic symptoms caused by inflammation and demyelination in the central nervous system. The episode, which by definition must last for at least 24 hours, is characteristic of multiple sclerosis but does not yet meet the criteria for a diagnosis of MS because people who experience a CIS may or may not go on to develop MS.

When CIS is accompanied by lesions on a brain MRI (magnetic resonance imaging) that are similar to those seen in MS, the person has a high likelihood of a second episode of neurologic symptoms and diagnosis of relapsing-remitting MS. When CIS is not accompanied by MS-like lesions on a brain MRI, the person has a much lower likelihood of developing MS.

The 2017 diagnostic criteria for MS make it possible to diagnose MS in a person with CIS who also has specific findings on brain MRI that provide evidence of an earlier episode of damage in a different location and indicate active inflammation in a region other than the one causing the current symptoms. As MRI technology improves, the diagnosis of MS will be made more quickly and easily. In the meantime, individuals with CIS who are considered at high risk for developing MS may now be treated with a disease-modifying therapy that has been approved by the U.S. Food and Drug Administration (FDA) for that purpose. Early treatment of CIS has been shown to delay onset of MS.

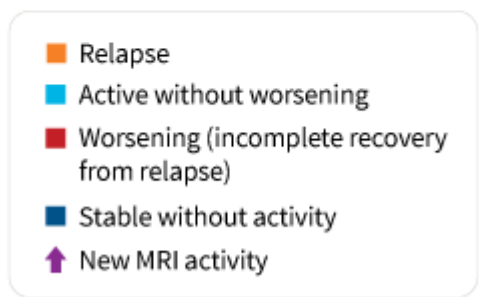
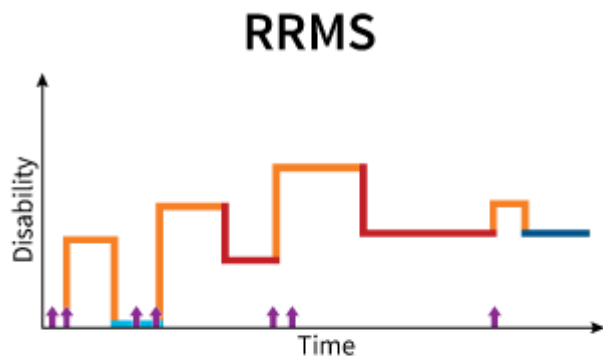
[Read More About CIS](#)

## Relapsing-remitting MS (RRMS)

RRMS – the most common disease course – is characterized by clearly defined attacks of new or increasing neurologic symptoms. These attacks – also called relapses or exacerbations – are followed by periods of partial or complete recovery (remissions). During remissions, all symptoms may disappear, or some symptoms may continue and become permanent. However, there is no apparent progression of the disease during the periods of remission. RRMS can be further characterized as either **active** (with relapses and/or evidence of new MRI activity over a specified period of time) or **not active**, as well as **worsening** (a confirmed increase in disability following a relapse) or **not worsening**.

Approximately 85 percent of people with MS are initially diagnosed with RRMS.





Source: Lublin et al., 2014.

This graphic shows the kinds of disease activity that can occur in RRMS over time; however each person's experience with RRMS will be unique. Following a relapse, the new symptoms may disappear without causing any increase in level of disability, or the new symptoms may partially disappear, resulting in an increase in disability. New lesions on MRI, as shown by the arrows, often occur as part of a relapse. However, new MRI lesions indicating MS activity may also occur without symptoms of which the person is aware.

[Learn More About RRMS](#)

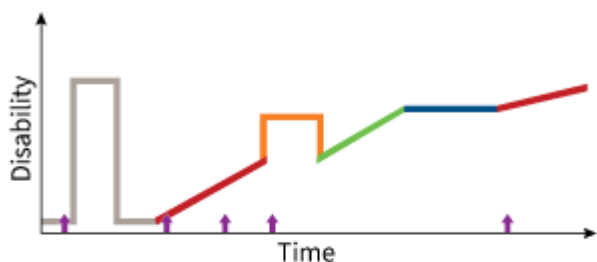
## Secondary progressive MS (SPMS)

SPMS follows an initial relapsing-remitting course. Some people who are diagnosed with RRMS will eventually transition to a secondary progressive course in which there is a progressive worsening of neurologic function (accumulation of disability) over time. SPMS can be further characterized as either **active** (with relapses and/or evidence of new MRI activity during a specified period of time) or **not active**, as well as **with progression** (evidence of disability accumulation over time, with or without relapses or new MRI activity) or **without progression**.





## SPMS



- RRMS
- Active (relapse or new MRI activity) with progression
- Active (relapse or MRI activity) without progression
- Not active with progression
- Not active without progression (stable)
- ↑ New MRI activity

Source: Lublin et al., 2014.

This graphic shows the kinds of disease activity that can occur in SPMS over time; however each person's experience with SPMS will be unique. SPMS follows after relapsing-remitting MS. Disability gradually increases over time, with or without evidence of disease activity (relapses or changes on MRI). In SPMS, occasional relapses may occur, as well as periods of stability.

[Learn More About SPMS](#)

## Primary progressive MS (PPMS)

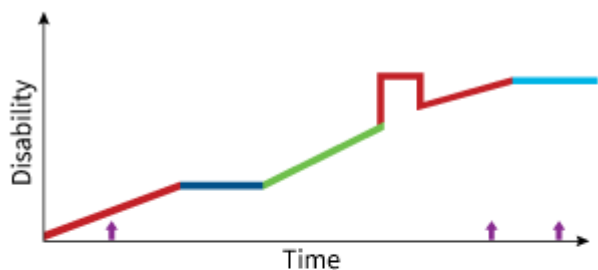
PPMS is characterized by worsening neurologic function (accumulation of disability) from the onset of symptoms, without early relapses or remissions. PPMS can be further characterized as either **active** (with an occasional relapse and/or evidence of new MRI activity over a specified period of time) or **not active**, as well as **with progression** (evidence of disability accumulation over time, with or without relapse or new MRI activity) or **without progression**.

Approximately 15 percent of people with MS are diagnosed with PPMS.





## PPMS



- Active (relapse or new MRI activity) with progression
- Not active without progression (stable)
- Not active with progression
- Active without progression
- ↑ New MRI activity

Source: Lublin et al., 2014.

This graphic shows the kinds of disease activity that can occur in PPMS over time; however each person's experience with PPMS will be unique. PPMS can have brief periods when the disease is stable, with or without a relapse or new MRI activity, as well as periods when increasing disability occurs with or without new relapses or lesions on MRI.

[Learn More About PPMS](#)

## Treatments for MS

There are more than a dozen [disease-modifying therapies](#) approved by the U.S. Food and Drug Administration (FDA) to treat all types of MS. Each drug has an indication from the FDA for the type of MS it can be used to treat. There are currently more treatments available for relapsing forms of MS than progressive forms. Scientists around the world are actively working to find more effective treatments for progressive forms of MS -- and addressing the challenges of progressive MS is a primary target of the [Society's research strategy](#).

## Additional resources

[MS Classifications Revised- Momentum article](#)

