

# What is the chronic smoldering process in MS?



## Our understanding of MS is evolving

Recent studies have improved our understanding of multiple sclerosis (MS) and how it leads to disability progression:

- Traditionally, MS treatments address the **acute process**, which causes relapses and MRI activity. However, this process does not fully explain MS disability progression
- Research now suggests that the **chronic smoldering process**, also known as smoldering neuroinflammation, is a key cause of disability progression

## Recognizing signs of the chronic smoldering process

The chronic smoldering process is thought to drive disability progression over time across relapsing and progressive forms of MS.

Because the process can happen gradually, symptoms may not be noticeable early on. However, it can get worse over time, increasingly affecting your daily life.

Disability progression can include a wide range of symptoms, such as:



Struggling to find the right words



Lacking the energy to do typical activities



Tripping or losing balance unexpectedly

Even if relapses and MRI activity are under control, disability progression may still happen due to the ongoing chronic smoldering process.



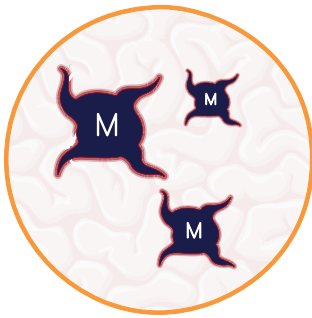
## Track your symptoms

If you notice changes that affect your daily activities, it may be a sign of the chronic smoldering process. These changes should be addressed to help manage your MS. Track your symptoms and discuss them with your healthcare provider.



# How the chronic smoldering process works

The chronic smoldering process begins in the brain and spinal cord:



Microglia are a type of cell that live only inside the brain and spinal cord.



In MS, these microglia become activated, and can gradually damage myelin and cells throughout the brain.



This damage leads to disability progression over time.

Unlike the acute process, the chronic smoldering process happens from the very start of MS and builds up over time, like a slow-burning fire.

Because the chronic smoldering process is not often seen or treated early on, it can lead to long-term disability progression.

## What this means for treatment

Today's MS treatments are not able to do both of the things believed to address the chronic smoldering process:

- Get inside the brain, where the process happens
- Make a meaningful impact on microglia, a cell involved in the process

To better address the unmet needs in MS management, we need to rethink our definitions of stability and disability progression. Ongoing research is exploring how to successfully target the chronic smoldering process to improve care for those living with MS.



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