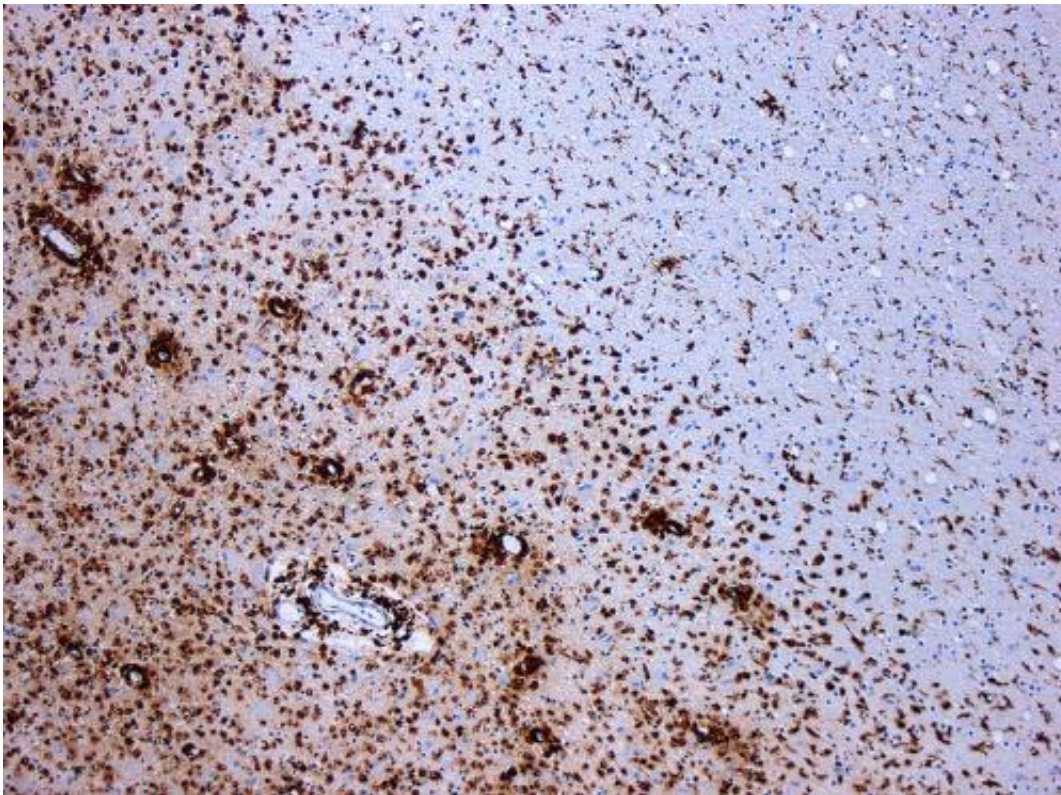


Healthy lifestyle linked to lower pain in multiple sclerosis sufferers

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Demyelination by MS. The CD68 colored tissue shows several macrophages in the area of the lesion. Original scale 1:100. Credit: [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/) Marvin 101/Wikipedia

A healthy lifestyle of regular exercise, no smoking and healthy diet is associated with lower pain in people with multiple sclerosis (MS), finds a study published in open-access journal *Frontiers in Neurology*. The

findings add to a growing body of evidence that modifiable lifestyle factors can help manage MS symptoms.

"Our study found strong associations between lifestyle and [pain](#) in people with multiple sclerosis," says Claudia Marck, one of the paper's authors. "Smokers are more likely to experience pain, and those that do [regular exercise](#) seem less likely to experience pain. We also see strong links between pain and the prevalence of anxiety and depression."

An estimated 2.5 million people worldwide have multiple sclerosis. The condition affects the nervous system, often causing [chronic pain](#) and a lack of mobility. The pain is normally treated with painkillers, but these can have side effects, are expensive and do not treat the cause of the pain.

In a search for ways to tackle the cause, Marck and colleagues at the University of Melbourne, Australia, investigated how modifiable lifestyle factors are associated with pain in MS—a relationship that has not previously been examined in detail.

The team surveyed more than 2,500 people with multiple sclerosis from across the world on their symptoms, lifestyle and social demographics, then looked for patterns in the responses.

Smokers were found to be twice as likely to report substantial pain than non-smokers with MS.

"With smoking, studies have shown a detrimental feedback loop," explains Marck. "In the long term, smoking has been reported to increase the likelihood of chronic pain. However, in the short term it dulls the pain, so this may motivate people with pain to smoke. Also, smokers, and especially those with depression, find it particularly hard to quit, as stopping smoking can initially increase [pain sensitivity](#)."

As in previous studies, the analysis also showed that people with multiple sclerosis who engage in more [physical activity](#) are less likely to experience pain.

"This association can be interpreted in two ways," says Marck. "As you might imagine, people are less likely to exercise if they are in pain. But on the other hand, exercise has been shown many times over to be beneficial in terms of [pain symptoms](#). Increased physical activity can increase [pain threshold](#) and tolerance, and so reduce the experience of pain."

In people with MS, the nerves lose their protective myelin coating. Previous studies have shown that exercise has neuroprotective and neuroregenerative effects. Marck adds, "This suggests that exercise can potentially reduce pain caused by damage to the nerves as it promotes brain and nerve health."

Despite this evidence, Marck is quick to note, "People with MS and pain may be more likely to fear physical activity and avoid doing it as it may cause them more pain. In avoiding physical activity, it is likely that they are making their health outcomes worse in the long term."

The study also found strong links with pain and the prevalence of anxiety and depression—two conditions for which people with [multiple sclerosis](#) are at higher risk of developing.

The team cannot claim that lifestyle factors are the cause of pain or explain the relationship between pain and anxiety or depression. However, due to the strong association between lifestyle and pain observed, and a large body of evidence pointing to overall health benefits, Marck advises that those with MS try exercise therapy, smoking cessation and a healthy diet, and to try to have a healthy weight.

She concludes, "Maintaining a healthy [lifestyle](#) can be hard for us all. For those with MS it is even more important as they have a higher risk of having poorer health and developing other conditions such as cardiovascular problems and diabetes. For those who struggle to initiate or maintain [healthy lifestyle](#) behaviors, seeking the support of a health professional will be invaluable."

The team are conducting further studies to understand the links between [exercise](#) and pain in those with MS. It is also hoped that these preliminary findings will spark further research and intervention studies to substantiate these observations.

More information: Claudia H. Marck et al, Pain in People with Multiple Sclerosis: Associations with Modifiable Lifestyle Factors, Fatigue, Depression, Anxiety, and Mental Health Quality of Life, *Frontiers in Neurology* (2017). [DOI: 10.3389/fneur.2017.00461](https://doi.org/10.3389/fneur.2017.00461)

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