

## Cognition and emotions

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MS can impact the life span by about 5-10 years, and the majority of people diagnosed will live to an age at which they will also experience age-related changes.

Differentiating between the effects of MS and age-related changes can be difficult, since many of the symptoms of MS – including fatigue, pain, depression, cognitive changes, visual disturbances and mobility difficulties – are common in normal ageing. Over the past 15 years, researchers have begun to explore the relationship between ageing

and MS. Generally, two views have emerged. The first is that ageing and MS are two detrimental processes that exacerbate each other. The second is that as people age, they are better able to manage their disease and its symptoms.

### Experience of ageing with MS

Insightful information has been gathered from interviews asking individuals with MS directly about their experience with ageing. One study found that most older individuals with MS report

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feeling that they are ageing successfully. This perspective was ascribed to gained wisdom, established meaningful activities and relationships, and the ability to deal with changing capabilities that comes with age. Additionally, many individuals in this study reported that being older made it easier to cope with their MS symptoms, as there are reduced societal expectations for physical and cognitive fitness in older adults. For example, there is less pressure for older adults to participate in physical activities, such as helping a friend to move home, or to have high cognitive performance, such as perfect memory. A long-term study found that individuals with MS reported that over time, their disease felt more predictable as they became accustomed to their symptoms and how their bodies functioned with them.

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This same study found that social engagement, access to health care, healthy lifestyle habits, and maintaining independence at home were critical components of health-related quality of life in older people with MS. Generally, interview based studies suggest that individuals who report ageing successfully with MS have established adaptive mind-sets and appropriate support systems.

## **Cognitive functioning**

In a survey study looking specifically at cognitive functioning, more than half of people with MS between 45 and 88 years old reported that cognitive difficulties interfered somewhat with their daily life. Remarkably, individuals who reported cognitive difficulties were, on average, younger than individuals who did not, suggesting that cognitive difficulties may have less impact with age. This study also asked caregivers to evaluate individuals' cognitive functioning. About one third of the caregiver-patient pairs disagreed on the presence of cognitive difficulties. Half of these disagreements were that the caregiver

reported cognitive difficulties in a patient who did not report them. Interestingly, the longer the individual had been diagnosed with MS, the more likely there was to be a discrepancy between them and their caregiver in reporting cognitive difficulties. These findings suggest that as individuals with MS age, they may become accustomed to their cognitive difficulties, and thus become less aware of them.

This study also found that people who reported cognitive symptoms were also more likely to be depressed. This finding emphasises that depression should continue to be monitored throughout the lifetime of people with MS, as the relationship between depression and cognitive difficulties in MS has been reported in a number of studies. This topic will be further explored later on in the article.

## **Cognitive changes with ageing**

Studies using neuropsychological measures of cognition have also illuminated how cognition changes as people with MS age. One study examining individuals aged 45 to 81 found that almost half of their sample exhibited some cognitive impairment. In this study, information processing speed, attention and learning/memory were more likely to be impaired than executive functioning (the mental processes that help connect past experience with present action, such as planning, organising, strategising).

However, according to a recent review, cognition appears to deteriorate fairly slowly in MS compared to other neurological conditions, such as Alzheimer's, with its decline predicted by a progressive course type and increasing disability. One study examining mental processing speed found that although individuals with MS had slower processing speeds than people without MS, the rate of slowing of their processing speed as they aged was comparable to that of non-MS ageing adults. Such findings suggest that individuals with MS are likely develop cognitive difficulties during the course of their disease, but their cognitive decline due to ageing will be similar to that of the general population.

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## Ageing and depression

While 50 percent of people with MS will experience depression in their lifetime, only a few studies have



examined depression as a function of age in MS. At least two studies have found results that suggest depression decreases with age. One of the studies found that in a large sample of people with MS, relatively younger age was associated with more symptoms of depression. A second study found that older adults with MS had fewer symptoms of depression than younger adults with MS. After examining measures of helplessness and psychological vulnerability in their sample, the authors concluded that the decrease in depression seen with ageing was not due to differences in thoughts or attitudes, but rather that older patients were less emotionally reactive.

Unfortunately, the results between ageing with MS and depression are mixed, as at least two recent studies have found that depressive symptoms increase with age. It is possible that both of these findings are valid, as MS affects people uniquely, and may be better predicted by how factors such as disability and coping (known to relate to depression) change as individuals age. Fortunately, depression in MS is not inevitable, and it is highly treatable.

## Conclusion

Many individuals with MS report adjusting well to ageing and attribute this to factors including familiarity with their symptoms, gained wisdom, meaningful activities and relationships, healthy lifestyle choices, accessible health care, and reduced societal expectations.

Although cognitive difficulties affecting mental processing speed, attention and memory are present in most older adults with MS, rates of decline in these areas appear to be similar to rates of decline in healthy ageing.

How depressive symptoms change as a function of ageing remains unclear, with some studies indicating that depressive symptoms decrease with age and others suggesting the opposite. These studies suggest that depressive symptoms may be best explained by factors such as disability and coping, and how these variables respectively change during the ageing process.

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