

Lifestyle study highlights key differences in relapsing and progressive onset MS

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Patients with relapsing onset Multiple Sclerosis (MS) who consumed alcohol, wine, coffee and fish on a regular basis took four to seven years longer to reach the point where they needed a walking aid than people who never consumed them. However the study, published in the April issue of the *European Journal of Neurology*, did not observe the same patterns in patients with progressive onset MS.

The authors say that the findings suggest that different mechanisms might be involved in how disability progresses in relapsing and progressive onset MS.

Researchers asked patients registered with the Flemish MS Society to take part in a survey, which included questions on themselves, their MS and their current consumption of alcohol, wine, coffee, tea, fish and [cigarettes](#).

The 1,372 patients who agreed to take part were also asked to indicate whether they had reached stage six on the zero to ten stage Expanded Disability Status Scale (EDSS) and, if so, when this had happened.

"MS is a chronic, often disabling disease that attacks the [central nervous system](#)" explains lead author Dr Marie D'hooghe from the National MS Center at Melsbroek, Belgium. "The clinical symptoms, progression of disability and severity of MS are unpredictable and vary from one person to another.

"Two major MS onset types can be distinguished. Progressive onset MS is characterised by a gradual worsening of [neurological function](#) from the beginning, whereas patients with relapsing onset [MS patients](#) experience clearly defined attacks of worsening neurologic function with partial or full [remission](#).

"EDSS 6 is an important milestone in the development of MS as it is the point at which patients need support to walk a reasonable distance."

The patients who took part were aged between 17 and 89 years-of-age:

- 65% (893) had relapsing onset MS. 76% were female, with an average age of 50 years. Age at MS onset averaged 31.5 years and disease duration averaged 19 years.
- 35% (479) had progressive onset MS. 62% were female, with an average age of 59 years. Age at MS onset averaged 37 years and disease duration averaged 21 years.

The researchers analysed how long it had taken people to reach EDSS 6 and compared those who reported moderate consumption of fish, alcoholic and non-alcoholic drinks and cigarettes with those who reported occasional or no consumption. This showed that:

- Just over half (51%) had reached EDSS 6 after an average disease duration of 20 years. The percentage was much higher for people with progressive onset MS (80%) than relapsing onset (36%).
- Patients with relapsing onset MS who consumed moderate amounts of alcohol (one drink a week or more) reached EDSS 6 seven years later than people who did not drink at all and wine drinkers reached it four years later than those who did not drink

wine. The time differences were insignificant in people with progressive onset MS.

- Daily coffee consumption delayed reaching EDSS 6 by five years in people with relapsing onset MS, but there were no significant differences in people with progressive onset MS. Drinking tea daily produced insignificant results in both groups.
- People with relapsing onset MS who ate fish two or more times a week reached EDSS 6 seven years later than those who ate it less than once a month. It made no difference whether the fish was lean or fatty.

The time differences quoted above did not take into account gender, age at onset and treatment, which are known to affect disability progression in MS. But even after adjusting for these factors, the hazard risk analysis for time to sustained EDSS 6 (where 1.0 was the reference number for zero consumption) showed that:

- The hazard risks for relapsing onset MS were significantly lower for a number of factors: moderate alcohol (0.61), moderate wine (0.67), daily coffee (0.60), occasional coffee (0.60), fish at least twice a week (0.60) and fish at least once a month (0.63).
- Daily cigarette smoking raised the risk to 1.35 in relapsing onset MS.
- The only hazard risk of any statistical significance for progressive onset MS was 1.56 for patients who preferred fatty fish, compared with those who preferred lean fish.

The paper contains full details of the suggested mechanisms that may be involved in the links between consumption and disease progression.

"Although our findings show a number of associations between consumption and disease progression, it is important that [patients](#)

recognise that this does not imply that certain food and drinks provide a protective effect as other factors may be involved" stresses Dr D'hooghe.

"Our study does, however, provide valuable pointers for future research as it reinforces the theory that different mechanisms may be involved in the progression of disability in relapsing and progressive onset MS."

More information: Alcohol, coffee, fish, smoking and disease progression in multiple sclerosis. D'hooghe et al. *European Journal of Neurology*. 19, pp616-624. (April 2012).
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