

## Healthier lifestyle linked to lower disability levels in MS



There is a great deal of interest in the MS community as to whether taking control of lifestyle factors can change disease outcomes, and there is certainly growing evidence that factors such as smoking, physical activity, and the presence of other health conditions can affect disease course. However, this area of research is a difficult one with so many variable factors needing to be taken into account.

A recent study that has added to the growing evidence for an association of lifestyle factors with

disability levels, has just been published in the journal [Plos One](#) by the research group of Professor George Jelinek at the University of Melbourne.

The research involved a survey of 2469 people with MS from 57 countries. The survey asked questions about their MS diagnosis, age, gender, educational status, disability level and other factors such as smoking, alcohol use and medication. The survey included several validated measurement questionnaires to assess diet and exercise levels.

Diet was assessed using a Dietary Habits Questionnaire that provides a rating of the healthiness of diet on a 100 point scale designed for cardiac rehabilitation patients. Exercise was assessed using the International Physical Activity Questionnaire.

The population analysed in the study did have an unusually healthy lifestyle with higher than average scores for diet, low levels of smoking and a high proportion were moderately or highly physically active. Around 30% practiced meditation and the majority were using vitamin D and omega 3 fatty acids supplements. Only 10% of the group had major disability due to their MS.

The way participants were recruited to the study may account for this high level of healthy behaviours, as they were predominantly recruited via the Overcoming MS program run by Professor Jelinek, the lead author of the study and were likely to already have a high interest in lifestyle changes. The Overcoming MS Program advocates for adoption of a plant and fish-based diet, stress reduction, increasing vitamin D and sunlight exposure, exercise and disease modifying medications where appropriate and recommended by a neurologist.

Of the less controllable factors, increasing age and disease duration were associated with higher levels of disability. Living further from the equator and the number of other health conditions the individual had were also associated with higher levels of disability.

Of the modifiable risk factors, better diet, not smoking, higher levels of exercise, omega-3 supplementation and disease modifying drug use were associated with lower levels of disability.

For every 30 point improvement in the 100 point diet measure, there was a 28% lower odds of being in the moderate disability compared to the low disability group. Use of plant-based omega 3 supplements was also more common in the group with low levels of disability than those with major disability, but fish-oil based omega-3 supplementation did not seem to show the same association.

Being a current or former smoker was also associated with higher levels of disability which is consistent with other studies, one of which recently showed that quitting smoking after a diagnosis of relapsing remitting MS was associated with a significant delay in the time to reach a diagnosis of secondary progressive MS (read more [here](#))

People who had used disease modifying drugs in the preceding 12 months or more were also significantly more likely to be in the low level of disease category than the major disability category.

The researchers also looked at the association of lifestyle factors with relapses in the sub-group of 1493 participants with relapsing remitting MS. They found fewer factors were associated with risk of relapses, and when other factors were taken in to account, only better scores on the diet scale, plant-based omega-3 supplementation, disease modifying drug use and fewer co-morbidities showed an association with fewer relapses.

As this study takes a snapshot of healthy behaviours and disability levels at a single point in time for this group of people, the study cannot identify whether these health behaviours were the cause of, or the result of the differences in disability levels. However, it does indicate some very interesting associations that would benefit from further research.

The authors plan to follow these participants over the coming years with repeated surveys which will help to identify whether healthy behaviours are associated with better disease outcomes over time. Definitive clinical trials that show whether changing health behaviours leads to changes in disease outcomes are also needed.

A number of studies supported by MS Research Australia, including the [AusImmune study](#) and the ongoing [Australian MS Longitudinal Study](#) are also studying the role that lifestyle factors may play in MS.

We are also very encouraged to note that our sister organisation in the USA, the National MS Society has recently announced funding for a clinical trial of the Swank and Wahls diets which will look at the impact of these diets primarily on fatigue in MS. More information [here](#).

These studies are crucial to empower people with MS to know what changes they can make to optimise their own health and what to expect from the range of lifestyle changes that they can implement themselves.