

Lifestyle Check: fat and MS

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Diets, love them or hate them, social media is a buzz with them. They are a staple for click bait on the internet and media outlets love controversial diet headlines. While possibly well meaning, this can often lead to confusing and contradictory information doing more harm than good.

MS, like some other chronic diseases, is caused by a complex interaction between our genes and our environment, in turn, setting off an immune response in those affected, leading to destruction or degradation of myelin. Food plays a large part of the environmental factor of the equation and is therefore vitally important to have accurate diet information that is based on sound scientific evidence. Unfortunately, too often fad diets that appear in the media are based on studies with an extremely small number of participants or on flawed studies lacking robust methodologies to eliminate confounding factors.

Another common issue with dietary information is its oversimplification. People often don't understand the diverse types of fats and other complex dietary components and as a result lump them all together. To help sift through the chaff, Australian researchers lead by Dr Prudence Tetley, from the Menzies Institute for Medical Research, Tasmania, has been investigating the role of different types of fats and a person's body mass index (BMI) on the risk of MS relapses and disease progression.

The scientists used the MSLong study which followed 279 people who had one demyelinating event or one suspected MS attack. These participants were originally part of the Ausimmune study, an [MS Research Australia supported study](#), which is now called AusLong. Using this population, the scientist took blood samples, and body measurements at two, three and five years after the first possible signs of MS. They then determined the participant's BMI and the levels of a number of different types of fat and cholesterol in the blood, include LDL (often referred to as bad cholesterol), HDL, ApoA-I, ApoB and other triglycerides. The data was then analysed considering age, gender and medications.

The results now [published](#) show that an individual's BMI was associated with an increased risk of relapses. For each 5kg/m² increase in BMI, there was a 25% increase risk of a relapse. Similar risks were found when using just the hip and waist measurements. Not only was there a risk of relapses but there was also an increased risk of developing disabilities in those who were heavier than what is considered in the healthy range.

When looking at the fat levels in the blood, things were a little complicated. Higher levels of triglycerides were associated with a higher risk of relapse and a higher risk of disability. Whereas higher levels of non-HDL cholesterol and higher ratios of HDL to total cholesterol were associated with an increase in yearly disability, but not rate of relapse. It is important to highlight, that dietary fat in MS (or any other dietary component) is a risk factor, in that they increase the likelihood of MS, or relapses of MS but are not the direct and only cause of MS.

These results suggest that lower HDL cholesterol and losing weight to be in the healthy range could reduce the accumulation of disability. It is important to note if you are considering changing your diet, registered dieticians can help guide people to healthy eating while ensuring all important nutrition necessities are met.