

Effect of presymptomatic BMI, dietary intake, alcohol on ALS

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Presymptomatic patients with the neurodegenerative disease amyotrophic lateral sclerosis (ALS) consumed more daily calories but had lower body-mass index (BMI) than those individuals without ALS in a study in the Netherlands that also looked at risk for the disease and associations with food and alcohol intake, according to an article published online by *JAMA Neurology*.

The cause of ALS is poorly understood. Diet is highly modifiable but previous studies have not identified a consistent nutrient that modifies susceptibility to ALS and contradictory results exist for the association with [fat intake](#).

Jan H. Veldink, M.D., Ph.D., of the University Medical Centre Utrecht, the Netherlands, and colleagues used a 199-item food frequency questionnaire to study premorbid (pre-illness) dietary intake and the risk of ALS.

The study was conducted from 2006 to September 2011 and included all patients with a new diagnosis of ALS. The final analysis included 674 patients and 2,093 control patients without ALS.

The authors found presymptomatic total calorie intake in patients was higher compared with those individuals in the control group (average 2,258 vs. 2,119 kcal/day) and presymptomatic BMI was lower in patients (25.7 vs. 26).

The study analysis also suggests that higher premorbid intake of total fat, saturated fat, trans-fatty acids and cholesterol was associated with an increased risk of ALS, while higher [alcohol intake](#) was associated with a decreased risk. No significant associations were found between dietary intake and survival.

The authors note limitations in their study that include the use of a questionnaire, which is prone to recall bias by participants.

"The combination of independent positive associations of a low premorbid [body mass index](#) and a high fat intake together with prior evidence from ALS mouse models ... and earlier reports on premorbid body mass index support a role for increased resting energy expenditure before clinical onset of ALS," the study concludes.

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