

LipiDiDiet finds broadly sustainable effects of nutrient intervention in early Alzheimer's

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Trial participants who received a multnutrient formulation over an extended period of time showed a significantly less rapid deterioration in cognitive performance than the patients in a control group, who received only a placebo. These findings are from an ongoing European study

LipiDiDiet in which 311 patients in eleven hospitals have been monitored for three years. The research results have been published in the highly ranked international journal *Alzheimer's & Dementia*, the Journal of the Alzheimer's Association.

The early stages of Alzheimer's disease are characterized by a decline in brain and memory function, with short-term memory loss particularly affected. Patients and their families recognize these symptoms long before dementia occurs. "By examining the cerebrospinal fluid and by using magnetic resonance brain imaging techniques that can show the hippocampal shrinkage that is so typical of Alzheimer's disease, we are able to identify patients who are at this early (prodromal) stage," explains Tobias Hartmann, Professor of Experimental Neurology at Saarland University, who coordinates the European LipiDiDiet project. LipiDiDiet is a broad-based, long-term study of over three hundred participants who originally showed initial symptoms of memory impairment. The study was designed to investigate the effects of treating patients with a specially formulated medical food.

The previously published preliminary results showed that this nutrition-based intervention has a [positive impact](#) on the progression of the disease. "But it is only now, after three years of treatment, that we are seeing how extensive the significant differences between trial participants who received the active nutrient drink and those in the control group really are," explains Hartmann. Participants in the control group were given a placebo drink that was identical in terms of taste, texture and appearance. Neither the patients, nor the doctors and researchers knew who had been given the placebo and who had received the multinutrient drink. "We found that there was 20 percent less brain shrinkage in patients with Alzheimer's disease who received the nutrient cocktail than in those in the control group, which represents a significant slowing in the rate of brain atrophy. More importantly, we have demonstrated that over the three years of treatment, patients who were

given the multinutrient drink suffered between 40 and 70 percent less cognitive impairment than those who received the placebo," says Hartmann.

"The positive effects of the treatment were most pronounced in those patients who began taking the multinutrient formulation at the earliest prodromal stage of Alzheimer's disease. We were particularly surprised to discover that these positive effects increased the longer treatment continued and that this finding was observed not only with respect to memory, but also with other cognitive abilities," explains Professor Hartmann. Compared with those in the [control group](#), the subjects who received the multinutrient drink were better able to master typical day-to-day challenges, such as paying a bill, remembering a route or dealing with emergencies.

The multinutrient formulation given to the Alzheimer's patients in the LipiDiDiet study was the commercially available medical food "Fortasyn Connect," which contains a specific combination of essential fatty acids, vitamins and other nutrients. Specifically, Fortasyn Connect contains docosahexaenoic acid, eicosapentaenoic acid, uridine monophosphate, choline, vitamins B12, B6, C, E, and folic acid, phospholipids and selenium. Earlier preclinical research by the LipiDiDiet consortium and other laboratories, such as the Massachusetts Institute of Technology (MIT), has shown that these nutrients can reduce a number of the changes typically seen in the brains of Alzheimer's disease patients. Subsequent clinical studies demonstrated positive results from memory and EEG measurements that indicate increased brain activity in the trial participants that were given the nutrient drink.

Globally, around 47 million people are currently suffering from Alzheimer's disease or a similar neurodegenerative dementia, for which there is at present no known cure. Over the next 20 years, scientists expect this number to double, with forecasts suggesting that there will be

around 130 million sufferers in 2050. "Despite significant research efforts, we still do not have any medications that can cure early-stage Alzheimer's [disease](#). Some of these drugs are able to provide temporary relief for certain symptoms, but after a while the patients usually return to their earlier pre-treatment state. In light of this, the positive effects that we have been able to achieve with our special multinutrient drink are a major success. Our hope is that the significantly slower progression that we see in our patients will continue so that they can maintain their independence well into old age," says Tobias Hartmann.

More information: Hilkka Soininen et al. 36-month LipiDiDiet multinutrient clinical trial in prodromal Alzheimer's disease, *Alzheimer's & Dementia* (2020). [DOI: 10.1002/alz.12172](https://doi.org/10.1002/alz.12172)

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