

# Scientists connect DHA to warding off symptoms of Parkinson's

27/11/2007 - **Scientists have linked what has become the brain health staple of the supplement industry - the omega-3 fatty acid DHA - to yet another application, this one for Parkinson's disease.**

In a study on mice researchers from Université Laval in Canada claim to have demonstrated a protective effect of a diet rich in omega-3 fatty acids on the neurodegenerative disease.

It is estimated that four million people worldwide Parkinson's. Approximately 10,000 people in the UK are diagnosed with the disease each year, according to the Parkinson 's Disease Society, while the National Parkinson Foundation estimates that in the US 60,000 new cases are diagnosed annually, adding to the 1.5 million Americans who already have the disease.

The condition is characterized by the death or impairment of neurons in the brain that produce the chemical dopamine, which is responsible for the coordination of muscles and movement. Symptoms of the disease become debilitating and include tremors, rigidity and difficulty balancing. While the disease usually develops after the age of 65, 15 percent of diagnosed cases occur under the age of 50.

The Université Laval research team say its findings could help prevent the disease and potentially slow down its progression.

The researchers found that when mice were fed an omega-rich diet, they seemed to be immune to the effect of the toxic compound MPTP that causes the same damage to the brain as Parkinson's.

*"This compound, which has been used for more than 20 years in Parkinson's research, works faster than the disease itself and is just as effective in targeting and destroying the dopamine-producing neurons in the brain,"* said researchers.

Subsequently, the group of mice fed an ordinary diet developed symptoms of the disease when injected with MPTP. This included a 31 percent drop in dopamine-producing neurons and a 50 percent decrease in dopamine.

According to the researchers, among the mice that had been given omega-3 supplementation - in particular [DHA](#) (docosahexaenoic acid) - omega-3 fatty acids replaced the omega-6 fatty acids in their brains.

Due to the fact concentrations of other omega-3s had maintained levels in both groups of mice, the researchers suggested the protective effect against Parkinson's indeed came from DHA.

*"This demonstrates both the importance of diet on the brain's fatty acid composition and the brain's natural inclination for omega-3 fatty acids,"* said researchers.

A potentially negative finding for fatty acids from the study however, is the conclusion drawn by the researchers that a brain containing a lot of omega-6 fatty acids may in fact be more susceptible to Parkinson's.

In a balanced diet, the ratio between omega-6 and omega-3 fatty acids should be 4 to 1, say the Université Laval team. However, the average Western diet contains ten to 20 times more omega-6's than omega-3's.

*"In North America, the average intake of DHA is between 60 to 80 mg a day, while experts recommend a daily minimum of 250 mg,"* said Calon. *"Our results suggest that this DHA deficiency is a risk factor for developing Parkinson's disease, and that we would benefit from evaluating omega-3's potential for preventing and treating this disease in humans."*

Omega-6 fatty acids are found in foods rich in vegetable oil or animal fat. These fatty acids are already under suspicion for their role in the body's inflammatory response, cardiac disease, arthritis, and Alzheimer's.