

DHA levels found to be abnormally low in patients with epilepsy

- 04/05/2004 - Omega-3 fatty acids have been associated with numerous health benefits, from brain development and preventing memory loss to suppressing tumors and cutting heart disease. But according to new findings in the US, one particular fatty acid, docosahexaenoic acid (DHA), is found at abnormally low levels in patients with uncontrolled epilepsy, suggesting DHA supplementation in the diet could potentially help control seizures.

Demand for omega-3 fatty acids – notably found in fish - has surged in recent months on the back of increasing scientific evidence for the benefits to consumer health.

DHA is essential for the development of the nervous system and visual abilities in babies and for the proper functioning of the brain in adults. The human body cannot produce sufficient amounts of DHA for the needs of the eye and brain consequently it must be consumed through foods, such as cold water fatty fish, or in supplemental form.

The small US study, carried out by researchers at Emory University School of Medicine, was based on 41 people with 'refractory complex partial seizures' - a common type of seizure that develops in one brain region and is resistant to antiepileptic medication - compared to a control group of 57 healthy participants.

Both groups had blood drawn and analysed for levels of DHA. After complete analyses, the researchers report that they found 'significantly lower levels of DHA' in the red blood cell membranes of the group with uncontrolled epilepsy - 2.74 per cent - when compared to DHA levels in the healthy group - 3.46 per cent.

"By determining a deficiency in the red blood cell membranes in these patients, we infer that brain cell membranes are also depleted of this normal fatty acid," said researcher Dr. Thomas Henry at Emory. *"Future studies are needed to determine if DHA supplementation can help control seizures in this patient population,"* he concluded.

According to the World Health Organization, it is likely that around 50 million people in the world have epilepsy at any one time. The lifetime prevalence of epilepsy - the number of people presently in the world who have epilepsy now or have had it in the past or will experience it in the future - is approximately 100 million people.

The results of the study were presented at the American Academy of Neurology last week in San Francisco.