

Fatty acid deficiency linked to autism

03/06/2005 - **Omega-3 supplements could help children with autism manage some of their symptoms, believe Scottish researchers, who have recorded a deficiency of certain fatty acids in autistic children.**

The researchers believe that higher levels of the enzyme phospholipase, seen in preliminary studies on blood samples from autistic children, may metabolise fatty acids in these children more quickly than in those without the condition.

This could impact the levels of omega-3 fats like DHA and the omega-6 fatty acid ARA. Both are crucial to mental health, development and also fight off infection.

The researchers at the universities of Stirling and Edinburgh have received a grant to launch a new, controlled trial to confirm their initial findings and find out whether supplements could help rectify this deficiency.

The number of children diagnosed with autism has increased dramatically over the past ten years across developed countries. The UK's Medical Research Council report in 2001 quoted a prevalence rate for autism of 1 in 166 of the UK population while the National Autistic Society, a charity, suggests the rate may be even higher.

While some of the increase can be explained by a widening of diagnostic criteria the majority of the increase is currently unexplained, just as the cause of the disease is not yet understood either.

In a pilot study, published in the October issue of *Prostaglandins Leukotrienes and Essential Fatty Acids* last year, the Scottish team reported higher levels of type 4 phospholipase, an enzyme that metabolises phospholipids, and is also seen at increased levels in schizophrenia patients.

"Increased metabolism affects all fatty acids, including long-chain omega-3s but also the omega-6 ARA. If you stabilise the membrane by adding more omega-3s you tend to reduce deficiency," lead researcher Dr Gordon Bell told NutraIngredients.com.

The parents of children involved in the pilot study also reported that when they gave their children supplements of the fatty acid EPA, they saw better sleeping patterns, cognition, eye contact and sociability. However this study was not matched with controls.

A new two-year trial, backed by £125,335 in funding, will measure the blood fatty acid levels in 50 children with autism and compare them to samples from non-autistic children, as well as a control group with development problems.

This will reveal whether the fatty acid deficiency is directly related to autism or also present in all children with development delay.

The research will also offer a better insight into the potential benefits of taking omega-3 supplements.

"We are not suggesting a cure or treatment here, more a potential for managing the symptoms," noted Dr Bell.

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