

NORDIC NEWS

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RESEARCH SPOTLIGHT *by Bradley West, ND*

EPA, DHA, and GLA for the Treatment of ADHD

Research continues to link EPA, DHA, and GLA in children and adults to mood, thinking, reasoning, memory, behavior, and attention deficit disorders. Many studies have identified abnormalities in membrane fatty acids in subjects with attention deficit hyperactivity disorder (ADHD), and success has been reported using EPA and DHA. Fish oil + GLA has been shown to reduce a range of ADHD symptoms, including psychosomatic issues, anxiety, and cognitive problems. Animal studies have also shown that diet-induced lack of DHA in the brain leads to alterations in cognitive processes and ADHD-like behavior.

In a study just published in the July 2009 *Acta Paediatrica*, Swedish researchers found a clear link between fish consumption and higher cognitive scores among adolescent males, reporting that 15-year old males who ate fish at least once a week had higher cognitive scores than those who ate it less frequently.

Another recent study showed that although ADHD children consumed equivalent amounts of omega-3 and omega-6 fatty acids as control subjects, they nonetheless had significantly lower levels of DHA and total omega-3 fatty acids, higher omega-6 fatty acids, and a lower ratio of omega-3:omega-6 fatty acids than controls. This suggests that there are metabolic differences in fatty acid metabolism in ADHD children, and provides rationale for the use of omega-3 supplements.

Other studies have also indicated the importance of the ratio between omega-3 and the omega-6 arachidonic acid by giving high doses of omega-3 (equivalent to Japanese levels) to normalize behavior; while another possible explanation, or at least contributing factor, was shown when children with ADHD had higher exhalant levels of ethane in their breath, a non-invasive measure of oxidative damage to omega-3 fatty acids. In contrast, levels of butane, a marker of protein oxidation, were unaltered. This metabolic abnormality coupled with the western diet ratio imbalances may help explain the problem, as well as provide further rationale for omega-3 supplementation in the treatment of ADHD.

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