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More support for omega-3 calming ADHD kids

22/06/2006- Supplements of omega-3 and omega-6 improved the attention span and hyperactivity scores of young Australians, and was rated better than the common medication Ritalin.

The study adds to a growing number of studies looking at the effect of fish oils on the behaviour and learning of kids, and reports in the UK suggest the British government may even be considering omega-3 and omega-6 food supplements in schools.

Conversely, concerns were raised in the House of Lords recently about the use of Ritalin to help kids suffering from Attention Deficit Hyperactivity Disorder (ADHD). Prescriptions for the drug, chemical name methylphenidate, are reported to have increased from 2,000 in 1991 to over 300,000 in 2005.

ADHD is thought to affect between three to seven per cent of children in the UK, with the problem continuing into adulthood for as many as 60 per cent of sufferers. Boys are reported to be three times more likely than girls to suffer from ADHD, according to the National Attention Deficit Disorder Information and Support Service (ADDISS).

The new study from the University of South Australia recruited 132 kids with ADHD aged 7 to 12 for the randomised, placebo-controlled, double-blind intervention trial.

For the first 15 weeks of study, the kids were given daily supplements of either polyunsaturated fatty acids (omega-3 and omega-6, 3000 milligrams per day), PUFAs plus multivitamins and minerals, or placebo capsules (palm oil).

After 15 weeks the placebo group crossed-over to the PUFA plus multivitamins and minerals supplement, and the other groups remained constant.

The supplement, provided by Equazen Nutraceuticals, was derived from high-EPA marine fish oil and virgin evening primrose oil (GLA). The eyeq capsules formulation contained Eicosapentaenoic acid (EPA), Docosahexaenoic acid (DHA), GLA, and vitamin E.

Parents were asked to rate their child's condition after 15 and 30 weeks with the 14 ADHD scales of the Connor's Parent Rating Scales. After 15 weeks of eyeq supplements, improvements were recorded in 9 out of 14 scales.

"Supplementation with PUFA over 15 weeks resulted in significant improvements compared to placebo in parent ratings of core ADHD-related behavioural and cognitive difficulties, namely inattention, hyperactivity and impulsivity, with medium to large effect sizes, and also in ratings of oppositional behaviour," reported the researchers, led by Natalie Sinn.

After 30 weeks (placebo group switching to eyeq supplements) the parental ratings of behaviour improved significantly in 10 out of 14 scales.

"The fish oil groups continued to improve after taking the supplement for a further 15 weeks. According to the data the multivitamin/mineral supplement had no additional effects," said Sinn.

The researchers also compared the effects of Ritalin to the effects observed by fish oil supplements. Using a comparison figure from a meta-analysis (CMAJ, 2001, Vol. 165, pp.1475-1488), Sinn and her co-workers calculated that the Ritalin had a total effect on the ADHD index of 0.54.

A larger effect value of 0.59 was calculated for the group that took the fish oil supplements for the whole 30 weeks, while the placebo group that switched to fish oil after 15 weeks had an effect value of 1.03.

"There is no known evidence that medication provides any benefits beyond four weeks, whereas in the present trial symptoms continued to improve after 15 weeks of supplementation," said the South Australian team.

It should be noted that when teachers were asked to rate the behaviour of the children no effects were recorded. The researchers downplayed these results, saying that parental ratings were more valid.

The mechanism behind the supplement's effect seems to be specific to the type of omega oil. EPA is proposed to function by increasing blood flow in the body. It is also suggested to affect hormones and the immune system, both of which have a direct effect on brain function.

DHA on the other hand, is involved in the membrane of ion channels in the brain, making it easier for them to change shape and transit electrical signals.

This is not the first time that omega-3 supplements have been linked to improvements in attention and decreased hyperactivity. A British-based study, led by Dr Madeleine Portwood at Durham Local Education Authority, reported in March that three months of supplementation the teenagers' inattentiveness fell from an average of 94 at the start of the trial to a mere 17 per cent at the end.

The Portwood trial also used Equazen eyeq in the same doses, but followed a smaller sample population.

Dr Portwood, responded to the results of the Australian study, saying that is was more support for the benefits of fish oil on behaviour and learning.

"This study shows once again that omega-3 can have a very beneficial effect for children with concentration and behaviour problems. We have seen from our trials in the Durham area that when these symptoms are addressed the children can access the good quality teaching provided by schools and see an improved academic performance," said Portwood.

Nick Giovannelli of the Hyperactive Children's Support Group also welcomed the results.

"This new study adds to the mounting evidence that nutrition is safer and more effective than stimulant medication," he said.

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