

## The Colquhoun/Bunday Hypotheses

The Hyperactive Children's Support Group was the first to propose that fatty acid deficiency could be a factor in ADHD. The findings of this research were published in 1981.

Colquhoun I and Sunday S "[A Lack of EFAs as a possible cause of hyperactivity in children](#)" (*Medical Hypotheses*, 7(5), 1981)

The Colquhoun/Bunday hypotheses stimulated further studies and treatment trials which have generally supported the theory.

### Notable trials include

- [The Oxford-Durham Study A Randomised Controlled Trial of Dietary Supplementation in children with Developmental Coordination Disorder \(DCD\)](#). Richardson AJ, Montgomery P. *Paediatrics*. 2005 May 115 (5): 1360-6  
Researchers in the county of Durham, in association with colleagues at Oxford University, used the Equazen eye q Omega-3 fish oil supplement as the active treatment in an RCT of 117 school children with specific learning conditions. Significant improvements in reading, spelling and attention were found.
- Richardson AJ, Puri BK. [A randomized double-blind, placebo-controlled study of the effects of supplementation with highly unsaturated fatty acids on ADHD-related symptoms in children with specific learning difficulties](#). *Prog Neuropsychopharmacol Biol Psychiatry*. 2002 Feb;26(2):233-9
- Sinn N, Bryan J. [Effect of supplementation with polyunsaturated fatty acids and micronutrients on learning and behavior problems associated with child ADHD](#). *J Dev Behav Pediatr*. 2007 Apr;28(2):82-91.  
This RCT involved 132 school children and investigated the effect of supplementation with polyunsaturated fatty acids (PUFAs), along with micronutrient supplementation, on symptoms typically associated with childhood ADHD. The researchers found significant benefits for the core symptoms of ADHD: inattention, hyperactivity and impulsivity.
- Sinn, N. et al. [\(Cognitive effects of polyunsaturated fatty acids in children with attention deficit hyperactivity disorder symptoms: A randomised controlled trial\)](#). *Prostaglandins Leukot Essent Fatty Acids*. 2008 78 (4-5): 311-362.  
A subsequent statistical analysis of the data in the above trial revealed that the observed benefits accredited to PUFA supplementation on behaviour and ADHD-related symptoms, were mediated by cognitive improvements involved with the ability to focus and switch attention during tasks.
- Johnson M, Ostlund S, Fransson G, Kadesjö B, Gillberg C. [Omega-3/omega-6 fatty acids for attention deficit hyperactivity disorder: a randomized placebo-controlled trial in children and adolescents](#). *J Atten Disord*. 2009 Mar;12(5):394-401.

A child psychiatry clinic in Sweden used eye q to investigate how the

supplement may benefit learning and behavioural difficulties in children with a clinical diagnosis of ADHD. This 9-month RCT, with a cross-over at 3 months, involved 84 children aged 8-16 years. Although initially, no significant differences were immediately apparent between the supplementation and control groups, a subset of children typified by suffering from multiple, co morbid, disorders did show statistically significant improvements in symptoms following supplementation. A general trend towards greater improvement in those taking eye q compared to placebo was also observed

- Stevens LJ, Zentall SS, Deck JL, et al. [Essential fatty acid metabolism in boys with attention-deficit hyperactivity disorder](#). *Am J Clin Nutr*. 1995 Oct;62(4):761-8.
- Pereva H, Jeewandara KC, Seneviratne Gurage C. [Combined Omega-3 and Omega-6 Supplementation in Children with ADHD Refractory to Methylphenidate Treatment – a double blind placebo controlled study](#). *Journal of Child Neurology*. 2012 24: 747-753