Omega-3/Omega-6 Fatty Acids for Attention Deficit Hyperactivity Disorder: A Randomized Placebo-Controlled Trial in Children and Adolescents

Johnson, M., Östlund, S., Fransson, G., Kadesjö, B. & Gillberg, C. (2008) Journal of Attention Disorders, first published on April 30, 2008 as doi:10.1177/1087054708316261

The objective: To assess whether omega 3/6 fatty acid supplementation was effective in the treatment of Attention Deficit Hyperactivity Disorder (ADHD) and its comorbid conditions in children and adolescents.

The study: 75 Swedish children and adolescents participated in a 6 month randomised, double-blind, placebo-controlled trial with one-way crossover.
For the first 3 months participants received either an omega 3/6 supplement (6 x Equazen eye q™ capsules per day) or a placebo (olive oil). From 3 months to the end of the trial all participants received omega 3/6 supplementation. Assessment of ADHD symptoms was made before treatment, and at 3 and 6 months using the investigator-rated ADHD Rating Scale IV - Parent Version (ADHD-RS-IV) and the Clinical Global Impression (CGI) scale of symptom severity and impairment.

Inclusion: Children and adolescents were included in the study if they met DSM-IV criteria for diagnosis of ADHD of any subtype, scoring at least 1.5 standard deviations above the age norm for their diagnostic subtype using norms for the ADHD Rating Scale IV – Parent Version (ADHD-RS-IV).

Exclusion: Children and adolescents with a diagnosis of full symptom autism, psychosis, bipolar disorder, uncontrolled seizure, hyper- or hypothyroidism, significant other medical conditions, weight below 20 kg, alcohol or drug abuse, those on any psychoactive drugs or omega 3 supplementation in the previous 3 months were not included.

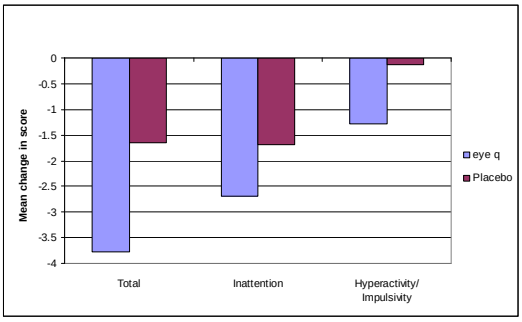
Participants: 35 participants aged 8-18 years had ADHD combined subtype and 40 had ADHD inattentive subtype. The majority (78%) had at least one comorbid diagnosis, including reading/writing difficulties (43%), developmental coordination disorder (31%) and oppositional defiant disorder (24%).

A summary of the key findings from the paper:

Effects of Equazen eye q on ADHD symptoms

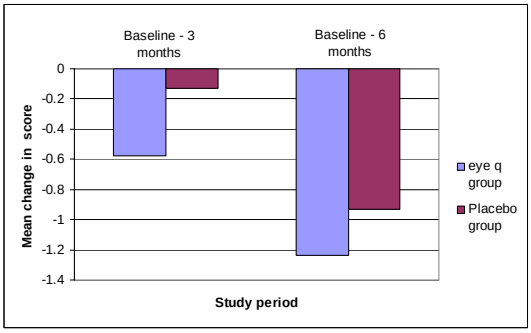
Overall there was a trend for a greater reduction in the total, inattention and hyperactivity scores on the ADHD-RS scale in the treatment group taking Equazen eye q compared to the placebo group during the first 3 month study period. A similar trend was observed in the second study period for the group who received Equazen eye q in both periods compared to those who received placebo initially.

Mean change in ADHD-RS scores after 3 months:



A similar improvement was seen in CGI scores, and the reduction in scores in the group taking Equazen eye q was significantly greater than in the placebo group at the end of the first 3 month study period.

Mean change in CGI scores:



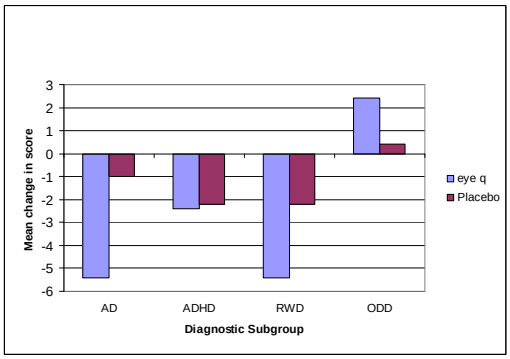
Responders to Equazen eye q

At the end of the first 3 month study period 26% of the group taking Equazen eye q and 7% of the placebo group were clinically meaningful responders, having more than 25% improvement in ADHD symptoms as measured on the ADHD-RS scale. At this time four of the responders in the Equazen eye q group (12%) had more than 50% reduction of ADHD symptoms compared to none in the placebo group. At the end of the study 47% of participants were responders, and amongst these were 7 participants (12%) who had a reduction in symptoms of more than 50% symptoms.

Analysis according to diagnostic subgroups revealed that responders were significantly more frequent in the attention deficit disorder (ADD) (inattentive) group than in the ADHD combined group.

Among the associated conditions responders tended to be more frequent among participants with a neuro-developmental disorder such as reading/writing difficulties, developmental coordination disorder (DCD), learning difficulties or autistic symptoms. There were no responders amongst participants with other comorbid conditions such as oppositional defiant disorder (ODD).

Mean change in symptom scores on ADHD-RS from 0 - 3m in diagnostic subgroups:



AD = inattentive subtype, ADHD = combined subtype, RWD = reading/writing difficulties, ODD = oppositional defiant disorder

It may be that omega 3/6 treatment is specifically more effective for children and adolescents with an ADD (inattentive) subtype and those with a comorbid developmental condition such as DCD or reading/writing difficulties.

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