

What's the Evidence?

Complementary and Alternative Therapies for ADHD – Omega 3 supplements

Key findings

- The evidence presented in a recent, comprehensive systematic review suggests that omega 3 supplements could have a small positive benefit for children with ADHD.
- Current NICE and SIGN (Scotland) guidance does not recommend these supplements for the treatment of ADHD.
- The authors of the review suggest that more high quality randomised controlled trials are needed to further investigate this positive effect.

What were we asked?

A survey of parents of children with Attention Deficit Hyperactivity Disorder (ADHD) indicated that they were interested in the evidence for whether omega 3 fatty acid supplements reduce symptoms in children and young people with ADHD.

What did we do?

We searched a range of academic databases (Cochrane Library, Psychinfo, Pubmed) to find the most recent systematic reviews and randomised controlled trials (RCTs) investigating this research question. The search was first conducted in 2012, and updated in April 2013. There is more information about research terms and what they mean on our website www.pencru.org.

Omega 3 supplements

What are Omega 3 and 6 supplements?

- Omega 3 is a type of polyunsaturated fatty acid (PUFA) found in oily fish and some seeds and nuts.

- Omega 3 is required in our diet for several processes in the body and is necessary for good health.
- The Food Standards Agency recommends two portions of fish are consumed per week including one portion of oily fish, high in omega 3 (trout, mackerel, salmon, fresh tuna) on their [website](#).¹
- Although omega 3 occurs naturally in certain foods it is also prepared and sold as a dietary supplement.
- Omega 6 is another type of PUFA which must also be taken in through diet. Omega 6 also plays a vital role in the body and is found in poultry, eggs, vegetable and sunflower oils and some nuts and cereals.

What evidence was found?

A high quality systematic review published in 2013 summarised the evidence from eleven randomised controlled trials that had studied the effects of omega 3 and 6 supplements on ADHD symptoms in children.²

This review described a thorough search strategy for relevant studies.

- Five trials involved omega-3 supplements,³⁻⁷ two used omega-6 supplements,^{8,9} and the remaining four trials involved both omega-3 and omega-6 supplements.¹⁰⁻¹³
- Trials that had included children aged 3-18, with a diagnosis of ADHD or meeting the accepted criteria for an ADHD diagnosis, were included in the review.
- Studies must have compared omega 3 or omega 6 supplements for ADHD to a control group receiving treatment as usual or a placebo.
- The outcome measure was change in ADHD symptom severity from pre- to post-treatment.

In nine of the studies, less than 30% of participants were taking pharmacological ADHD medication. The results from these nine studies were combined in a meta-analysis. This is a way of combining results from several smaller studies into one more reliable result.

The initial meta-analysis suggested that omega supplements had a small but statistically significant beneficial effect on ADHD symptoms in children.

The findings were still significant when only those results obtained by 'blinded' assessors were included in the analysis. Results from a blinded assessment are less susceptible to bias because an assessor may rate the effects of the intervention differently if they are aware of the treatment.

These findings appear to confirm results from an earlier systematic review published in 2011, which suggested that omega supplements might have a positive impact on ADHD symptoms in children.¹⁴

Our recommendations

Currently, both NICE in England and SIGN in Scotland do not recommend fatty acid supplements for the treatment of ADHD in children.^{15,16}

The evidence presented in the systematic review published in 2013 does suggest that omega 3 and 6 supplements may have small positive benefits for children with ADHD.

However, these results do not mean that omega supplements will have a noticeable benefit for all children with ADHD.

Further high quality randomised controlled trials are recommended from the authors of the best available evidence. Future studies should focus on outcomes which are relevant to families.

We would like to hear your feedback on this summary – please email us at pencru@exeter.ac.uk if you have any comments or questions.

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