Reference:

A 5 Month Open Study with Long-Chain Polyunsaturated Fatty Acids in Dyslexia


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Summary:

Dyslexia is a particular reading disability arising from a defect in the processing by the brain of graphic symbols. It changes the processing of written material by the brain and, as such, is a linguistic problem which is not related to any lack of intelligence. Considerable variability is exhibited across children with dyslexia; they generally read at lower levels as compared to children of similar ages. The overall long-term outlook for children with dyslexia is widely mixed. Early identification as well as support systems and appropriate treatment programs have shown to be very helpful.

This present ‘open-pilot’ trial was conducted in a group of 20 dyslexic children in Sweden having an average age of 12 years. By assessing speed reading scores, all children exhibited poor to pronounced difficulties with reading and writing. Assessments of the children and their parents were completed at baseline and after 6, 12 and 20 weeks of omega-3 supplementation with quantitative evaluations performed by word-chain testing before and after 4 months of supplementation to assess word decoding (speed of reading) and letter decoding (motoric-perceptual speed). The daily supplementation provided 480 mg of DHA plus 108 mg of EPA (from fish oil) along with a lower level of GLA (gamma-linolenic acid, omega-6) from evening primrose oil.

The considerable improvement (by 60%) in the reading test was observed (from an average of 1.76 before the study to 2.82 after supplementation) along with a 23% improvement of the
motoric-perceptual velocity (from an average of 3.76 to 4.65 after supplementation). The authors concluded that long-chain polyunsaturated fatty acid supplementation for 5 months provides positive and clear beneficial effects on variables usually impaired by dyslexia.

Dr. Holub's Comments:

While the present results are very promising with respect to the potential improvement of dyslexia omega-3 fatty acid supplementation (as DHA/EPA), it should be pointed out that this is an 'open pilot' study with no control group (placebo) as is typically included for fully-controlled randomized clinical trials. It remains to be determined whether the inclusion of a placebo group, as well as an omega 3 treatment group, and a corresponding study with larger numbers of children with dyslexia may show similar results. The present study also raises the question as to whether the DHA alone and/or the concomitant presence of EPA, and possibly also the much smaller amounts of GLA, may individually or collectively have contributed to the overall findings. Nonetheless, the present results do strongly suggest the importance for extended and well-controlled clinical trials in children with dyslexia to better assess any potential effects of individual omega-3 fatty acids and/or combinations thereof at various levels of intake and duration. It is noted that the level of intake for DHA/EPA combined (588mg/day) is well above current average intakes in Europe and North America (100-150 mg/day) and many other countries but do overlap with intakes in a significant portion of the population in Japan.