

Abstract

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Project DyAdd: Fatty acids in adult dyslexia, ADHD, and their comorbid combination.

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OBJECTIVE AND METHODS: In project DyAdd, we compared the fatty acid (FA) profiles of serum phospholipids in adults with attention deficit hyperactivity disorder (ADHD) (n=26), dyslexia (n=36), their comorbid combination (n=9), and healthy controls (n=36). FA proportions were analyzed in a 2x2 design with Bonferroni corrected post hoc comparisons. A questionnaire was used to assess dietary fat quality and use of supplements.

RESULTS: Results showed that ADHD and dyslexia were not associated with total saturated FAs, monounsaturated FAs, or n-3 polyunsaturated FAs (PUFAs). However, those with ADHD had elevated proportions of total n-6 PUFAs (including gamma-linolenic and adrenic acids) as compared to those without ADHD. Dyslexia was related to a higher proportion of monounsaturated nervonic acid and a higher ratio of n-6/n-3 PUFAs. Among females none of the associations were significant. However in males, all the original associations observed in all subjects remained and ADHD was associated with elevated nervonic acid and n-6/n-3 PUFA ratio like dyslexia.

CONCLUSIONS: Controlling for poorly diagnosed reading difficulties, education, dietary fat quality, or use of FA supplements did not generally remove the originally observed associations.

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