Long-chain omega-3 fatty acids for indicated prevention of psychotic disorders: a randomized, placebo-controlled trial.


Department of Child and Adolescent Psychiatry, Medical University of Vienna, Vienna, Austria.

CONTEXT: The use of antipsychotic medication for the prevention of psychotic disorders is controversial. Long-chain omega-3 (omega-3) polyunsaturated fatty acids (PUFAs) may be beneficial in a range of psychiatric conditions, including schizophrenia. Given that omega-3 PUFAs are generally beneficial to health and without clinically relevant adverse effects, their preventive use in psychosis merits investigation.

OBJECTIVE: To determine whether omega-3 PUFAs reduce the rate of progression to first-episode psychotic disorder in adolescents and young adults aged 13 to 25 years with subthreshold psychosis.

DESIGN: Randomized, double-blind, placebo-controlled trial conducted between 2004 and 2007.

SETTING: Psychosis detection unit of a large public hospital in Vienna, Austria.

PARTICIPANTS: Eighty-one individuals at ultra-high risk of psychotic disorder.

INTERVENTIONS: A 12-week intervention period of 1.2-g/d omega-3 PUFA or placebo was followed by a 40-week monitoring period; the total study period was 12 months.

MAIN OUTCOME MEASURES: The primary outcome measure was transition to psychotic disorder. Secondary outcomes included symptomatic and functional changes. The ratio of omega-6 to omega-3 fatty acids in erythrocytes was used to index pretreatment vs posttreatment fatty acid composition.

RESULTS: Seventy-six of 81 participants (93.8%) completed the intervention. By study's end (12 months), 2 of 41 individuals (4.9%) in the omega-3 group and 11 of 40 (27.5%) in the placebo group had transitioned to psychotic disorder (P = .007). The difference between the groups in the cumulative risk of progression to full-threshold psychosis was 22.6% (95% confidence interval, 4.8-40.4). omega-3 Polyunsaturated fatty acids also significantly reduced positive symptoms (P = .01), negative symptoms (P = .02), and general symptoms (P = .01) and improved functioning (P = .002) compared with placebo. The incidence of adverse effects did not differ between the treatment groups.

CONCLUSIONS: Long-chain omega-3 PUFAs reduce the risk of progression to psychotic disorder and may offer a safe and efficacious strategy for indicated prevention in young people with subthreshold psychotic states. Trial Registration clinicaltrials.gov Identifier: NCT00396643.

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