

Abstract

Arch Gen Psychiatry. 2010 Feb;67(2):146-54.

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

Amminger GP, Schäfer MR, Papageorgiou K, Klier CM, Cotton SM, Harrigan SM, Mackinnon A, McGorry PD, Berger GE.

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.

PMID: 20124114

