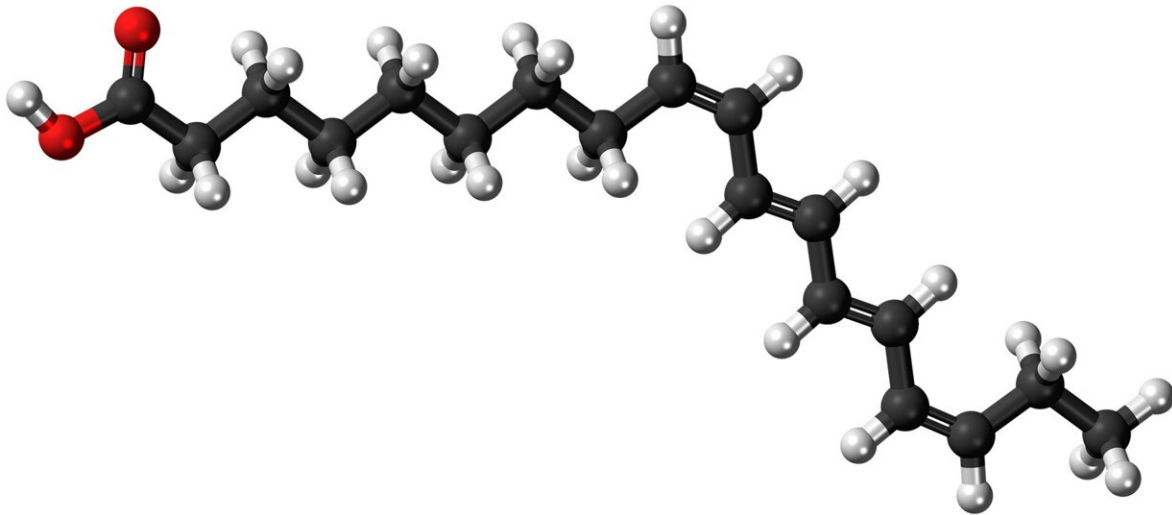


# Scientists investigate association between omega-3s and symptoms of psychosis in early adulthood

June 12 2024

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A new study, the largest of its kind, [published](#) in *Biological Psychiatry* today, tracked the blood test results of over 3,500 participants for a span of 17 years to explore a possible link between diet and mental health.

Led by Queen's University Belfast, the [longitudinal study](#), using data from the University of Bristol's Children of the 90s, examined how blood levels of omega-6 and omega-3 fatty acids, as well as a specific omega-3 fatty acid called [docosahexaenoic acid](#) (DHA), changed over time.

Working in collaboration with researchers from the University of Cambridge and RCSI University of Medicine and Health Sciences, the aim was to identify if, and how, these variations were related to the development of symptoms of psychosis in young adults aged 24.

Researchers tracked the participants, who are part of the Avon Longitudinal Study of Parents and Children (ALSPAC), also known as "Children of the 90s," from childhood into adulthood.

The fatty acid levels were measured in the blood tests collected from the participants throughout their lives, at the specific ages of 7, 15, 17 and 24 years old.

The findings reveal that those with persistently higher levels of omega-6 compared to omega-3 fatty acids in their blood, as well as consistently low DHA levels, had more psychotic experiences at age 24 compared to people whose levels remained average over this time period. Psychotic experiences include thoughts of paranoia or hearing sounds others cannot.

In addition, these participants also showed greater negative symptoms of psychosis. Negative symptoms include experiencing a loss of interest in activities, flattening of emotions and social withdrawal.

Adequate intake of omega-3 fatty acids is recommended for general

health, and the balance of omega-6 to omega-3s is thought to be important for various physical and [mental health](#) benefits.

Foods high in omega-3 include certain fish and seafood, some [vegetable oils](#), nuts, and high fat plant foods such as chia seeds, flaxseeds, brussels sprouts and more. Omega-6 fatty acids can be found in sunflower, safflower, soy, sesame, and corn oils.

Commenting on the significance of the findings, Dr. David Mongan, Academic Clinical Lecturer at Queen's University, said, "This inaugural study is important because the results suggest that optimizing fatty acid status during crucial stages of development, whether through diet or supplementation, warrants further investigation in relation to reducing psychotic symptoms in early adulthood."

Dr. Ben Perry, Department of Psychiatry, University of Cambridge added, "We've found an interesting link between higher ratios of omega-6 to omega-3 fatty acids during childhood and adolescence and an increase in experiences of psychosis in adulthood.

"We don't yet know why this should be case, but nor do we believe people should be concerned by these findings. Omega-6 fatty acids as part of a balanced diet are important nutrients and we would not recommend people cut them out of their diets. We hope future research will explore this possible link between diet and mental health in more detail."

In addition, Professor David Cotter, Professor of Molecular Psychiatry at RCSI said, "Building on our previous research, these findings reinforce our understanding of the important relationship between [fatty acids](#) and later mental health, particularly in how an imbalance between omega-6 and omega-3 can increase the risk of later psychotic experiences."

Commenting on the findings through the use of ALSPAC data, Principal Investigator, Professor Nic Timpson, added, "The health data that has been collected at Children of the 90s enables life-changing research and here is an example of a fascinating study with the potential to have an impact on future research which could help guide dietary advice."

**More information:** David Mongan et al, Longitudinal trajectories of plasma polyunsaturated fatty acids and associations with psychosis-spectrum outcomes in early adulthood, *Biological Psychiatry* (2024).  
[DOI: 10.1016/j.biopsych.2024.04.004](https://doi.org/10.1016/j.biopsych.2024.04.004)

Provided by University of Bristol

Citation: Scientists investigate association between omega-3s and symptoms of psychosis in early adulthood (2024, June 12) retrieved 21 June 2024 from  
<https://medicalxpress.com/news/2024-06-scientists-association-omega-3s-symptoms.html>

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