ECHO
Environmental influences on Child Health Outcomes
A program supported by the NIH

Study Summary

ECHO Study Shows Fish Consumption and Omega-3 Supplement Use Uncommon During Pregnancy

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Who sponsored this study?

The Environmental influences on Child Health Outcomes (ECHO) Program, Office of the Director, National Institutes of Health supported this research.

Why was this study needed?

Omega-3 fatty acids are essential nutrients for supporting positive health outcomes. Getting enough of these nutrients during pregnancy is vital for child health and neurodevelopment and may also improve other pregnancy outcomes. Prior research on the demographic characteristics associated with fish and supplement use during pregnancy has been limited, involving fewer participants and older data that may not represent current intake.

What were the study results?

During the study, about 25% of pregnant participants did not eat any fish or ate it less than once per month. Older participants were more likely to eat fish. Participants who were non-Hispanic Black, non-Hispanic Asian, or Hispanic ate less fish on average when compared to those who identified as non-Hispanic White. Participants categorized as overweight were also less likely to eat fish. Only about 1 in 6 pregnant participants reported taking omega-3 supplements. Supplement use was more common in participants who were older and had more education, had a lower body mass index (BMI), and ate fish.

What was the study's impact?

One-quarter of participants in this large, nationwide study rarely or never consumed fish during pregnancy, and omega-3 supplement use was uncommon, even among those who did not consume fish. Given the role of omega-3 fatty acids in preventing preterm birth and supporting child health and neurodevelopment, experts recommend pregnant people get at least 500 mg of omega-3 fatty acids per day through supplements or consuming fish that is low in mercury.

Learn more about the FDA's and EPA's current recommendations for eating fish during pregnancy here.

Who was involved?

This study included 10,800 pregnant people enrolled in 23 ECHO research sites that collected information on fish consumption and 12,646 participants at 35 ECHO research sites that collected information on omega-3 supplement use. Information on fish consumption and omega-3 supplement use was collected from pregnant participants from 1999 to 2020.

What happened during the study?

The researchers collected information on fish intake during pregnancy and grouped participants based on the frequency of their fish consumption: never or less than once per month, once per month to less than once per week, one to two times per week, or more than twice per week. The researchers also collected information on participants' omega-3 supplement intake. They then compared participant fish consumption and supplement use information across various demographic and lifestyle characteristics, including age, race, ethnicity, education, weight, and smoking status.

Note: Results reported here are for a single study. Other or future studies may provide new information or different results. You should not make changes to your diet without first consulting your healthcare professional.

What happens next?

Future research may examine how fish consumption during pregnancy relates to childhood developmental outcomes such as autism-related traits.

Where can I learn more?

Access the full journal article titled "Demographic and health characteristics associated with fish and n-3 fatty acid supplement intake during pregnancy: results from pregnancy cohorts in the ECHO program" in *Public Health Nutrition*.

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