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Use of Cod Liver Oil During the First Year of Life Is Associated With Lower Risk of Childhood-Onset Type 1 Diabetes: A Large, Population-Based, Case-Control Study

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Abstract

Background: In Norway, cod liver oil is an important source of dietary vitamin D and the long-chain n-3 fatty acids eicosapentaenoic acid and docosahexaenoic acid, all of which have biological properties of potential relevance for the prevention of type 1 diabetes.

Objective: The main objective was to investigate whether the use of dietary cod liver oil or other vitamin D supplements, either by the mother during pregnancy or by the child during the first year of life, is associated with a lower risk of type 1 diabetes among children.

Design: We designed a nationwide case-control study in Norway with 545 cases of childhood-onset type 1 diabetes and 1668 population control subjects. Families were contacted by mail, and they completed a questionnaire on the frequency of use of cod liver oil and other vitamin D supplements and other relevant factors.

Results: Use of cod liver oil in the first year of life was associated with a significantly lower risk of type 1 diabetes (adjusted odds ratio: 0.74; 95% CI: 0.56, 0.99). Use of other vitamin D supplements during the first year of life and maternal use of cod liver oil or other vitamin D supplements during pregnancy were not associated with type 1 diabetes.

Conclusion: Cod liver oil may reduce the risk of type 1 diabetes, perhaps through the antiinflammatory effects of long-chain n-3 fatty acids.

Comment in

[Vitamin D and Type 1 Diabetes](#)

[SS Harris. Am J Clin Nutr 79 \(5\), 889-90; author reply 890. May 2004. PMID 15113733.](#)

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