

Low consumption of seafood in early pregnancy as a risk factor for pre-term delivery: prospective cohort study

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Abstract

Objective To determine the relation between intake of seafood in pregnancy and risk of preterm delivery and low birth weight.

Design Prospective cohort study.

Setting Aarhus, Denmark.

Participants 8729 pregnant women.

Main outcome measures Pre-term delivery and low birth weight.

Results The occurrence of pre-term delivery differed significantly across four groups of seafood intake, falling progressively from 7.1% in the group never consuming fish to 1.9% in the group consuming fish as a hot meal and an open sandwich with fish at least once a week. Adjusted odds for pre-term delivery were increased by a factor of 3.6 (95% confidence interval 1.2 to 11.2) in the zero consumption group compared with the highest consumption group. Analyses based on quantified intakes indicated that the working range of the dose-response relation is mainly from zero intake up to a daily intake of 15 g fish or 0.15 g n.3 fatty acids. Estimates of risk for low birth weight were similar to those for pre-term delivery.

Conclusions Low consumption of fish was a strong risk factor for pre-term delivery and low birth weight. In women with zero or low intake of fish, small amounts of n.3 fatty acids—provided as fish or fish oil—may confer protection against pre-term delivery and low birth weight.

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