

## **Low consumption of seafood in early pregnancy as a risk factor for preterm delivery: prospective cohort study.**

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**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:** Preterm delivery and low birth weight.

**RESULTS:** The occurrence of preterm 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 preterm 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 preterm delivery.

**CONCLUSIONS:** Low consumption of fish was a strong risk factor for preterm 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 preterm delivery and low birth weight.

