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Fish intake during pregnancy and foetal neurodevelopment - a systematic review of the evidence

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Abstract

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FISH INTAKE DURING PREGNANCY AND FOETAL NEURODEVELOPMENT – A SYSTEMATIC REVIEW OF THE EVIDENCE

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Background/Aims: Australian women are not meeting recommended intakes for fish. Fish are a source of several nutrients important for healthy foetal development. Fish are also a potential source of contaminants including methyl-mercury; therefore, risks and benefits from fish consumption need to be considered when shaping public health messages for pregnant women. A systematic literature review critically evaluated whether fish intake during pregnancy was associated with offspring neurodevelopmental outcomes.

Methods: Peer-reviewed journal articles published between January 2000 and April 2014 were sourced from Medline, Scopus, Web of Science, Science Direct and the Cochrane Library. Eligible studies included those of healthy pregnant women with full term births, measured fish or seafood intake and assessed neurodevelopmental outcomes in offspring.

Results: Of 474 papers sourced, eight observational cohort studies were included in the final review. Due to heterogeneity in methodology and measured outcomes, a qualitative comparison was conducted. A relationship was found between consumption of 1-4 serves of fish/week and improved neurodevelopmental outcomes in offspring aged between 6 months and 9 years.

Conclusions: Moderate consumption of fish during pregnancy has benefits on neurocognitive outcomes in infants and young children. This evidence supports promotion of dietary messages to encourage fish consumption during pregnancy. These messages, however, need to be provided within the context of food safety guidelines and avoidance of methyl-mercury contamination.

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