Abstract

Titel: Can omega-3 prevent the emergence of allergy? – A systematic review

Author: Karin Andersson and Cecilia Björertz

Supervisor: Henriette Philipson
Examiner: Anna Winkvist
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Background Today allergy is a major public health issue and one of our most common chronic diseases. It would be most profitable if there was a way to prevent the emergence of allergies, both regarding the community and the individual. The antiinflammatory property of omega-3 influences the immune system and is thought to have a preventive effect on allergic symptoms. To investigate whether the mothers intake of omega-3 during pregnancy and lactation affects the child’s future development of allergy is therefore of high interest.

Objective To examine if omega-3 supplement given to mothers during pregnancy, or pregnancy and lactation, is shown to be beneficial in children with heredity to develop allergy.

Search strategy Articles were collected from the data bases PubMed, Cochrane and Scopus. Search terms used was omega-3, supplement, allergy, pregnancy, infant, atopic and LCPUFA.

Selection criteria Studies included were RCT studies on humans, written in Swedish or English, with eczema and allergy detected by skin prick test as the crucial measurements.

Data collection and analysis The search generated in three studies divided in four articles, two based on the same study. The quality of the studies and the evidence for each crucial measurement was evaluated according to SBU.

Main results
The quality of the studies and the evidence of crucial measurements were considered moderate. All studies showed a reduced prevalence of egg allergy or reduced sensitization towards egg in the omega-3 group, but were not significant in one study. Two of the studies had a reduced prevalence of eczema in the omega-3 group. The third showed that eczema was less severe in this group.

Conclusions The evidence concerning omega-3 to the mother during pregnancy/ pregnancy and lactation, to prevent the emergence of egg allergy and eczema, is moderate. It is therefore relevant to recommend an increased intake to women whose child is predisposed, in order to prevent the emergence of these types of allergies. Additional research within the area is desired to estimate the quantity of omega 3 required and for how long the effect remains.