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Special infant milk formula offers no protection against allergies or autoimmune disorders

*International guidelines should stop recommending these products, say experts*

Hydrolysed infant milk formula does not appear to protect against allergic or autoimmune disorders, suggest findings published in *The BMJ* today.

The authors say infant feeding guidelines should be revised because there is no consistent evidence to support current recommendations.

Allergic and autoimmune diseases have increased in prevalence in many countries and are leading causes of chronic illness among young people. Evidence suggests that early dietary exposures in infancy, such as intact cows' milk protein in the form of infant formula, can increase the risk of these diseases.

Current infant feeding guidelines, including those in North America, Australasia, and Europe, recommend hydrolysed cows' milk formula, in place of standard infant formula, to prevent such diseases in infants during the first months of life.

However, Robert Boyle at Imperial College London and colleagues have found no consistent evidence that partially or extensively hydrolysed milk formula prevents allergic or autoimmune diseases in infants.

They carried out a systematic review and meta analysis of 37 intervention trials including over 19,000 participants, undertaken between 1946-2015.

Trials were included of hydrolysed cows' milk formula compared with another hydrolysed formula, human breast milk, or a standard cows' milk formula, and reported on allergic disease, autoimmune conditions or allergic sensitisation outcomes.

These included common allergic conditions, such as asthma, eczema, allergic rhinitis and/or conjunctivitis, food allergy and allergic sensitisation, and the autoimmune disease type 1 diabetes.

"We found no consistent evidence to support a protective role for partially or extensively hydrolysed formula", explain the authors. "Our findings conflict with current international guidelines, in which hydrolysed formula is widely recommended for young formula fed infants with a family history of allergic disease."

They also report no evidence to support the claim approved by the US Food and Drug Administration that a partially hydrolysed formula could reduce risk of eczema, nor for the Cochrane review's conclusion that hydrolysed formula could prevent cows' milk allergy.

A strength of the review is its assessment of all studies for quality, along with an overall assessment of the quality of evidence from each meta-analysis.

The authors highlight the low quality of evidence, including possible conflicts of interest and high or unclear risk of bias in most studies of allergic outcomes, and evidence of publication bias for studies of eczema and wheeze.

In an accompanying editorial, Caroline Lodge and colleagues from the University of Melbourne, say "while experts might recognise the lack of evidence for the effectiveness of hydrolysed formulas in prevention of allergies, it seems that these formulas are currently recommended in the hope that they might prevent allergic disease and on the basis that they are unlikely to do any harm."

However, they explain that this can unwittingly undermine efforts to promote breastfeeding and attempts to conduct more definitive research on this issue, and hinders efforts by formula producers to improve products.

They conclude: "It is now time for this evidence to be used for updating and clarifying current recommendations and guidelines. Furthermore, we encourage industry to pursue development of effective allergy reducing infant formulas and call for further transparent and well conducted studies in this area."