

A systematic literature review:

The effect of elimination diet for the management of food allergies on
dietary adequacy and growth in paediatric populations

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The current systematic literature review investigated the effect of elimination diets resulting from food allergies on the energy, macro and micronutrient dietary adequacy and subsequent growth of children. Five databases were used to search for studies that adhered to pre-determined inclusion criteria. Key search terms were mapped to relevant medical subject headings, and individual subject headings and truncations were used to capture relevant topic areas. Risk of bias of individual studies and overall quality assessment was conducted. A total of 10624 studies were identified after duplicates were removed, of which 16 fulfilled the inclusion criteria. Although it was not feasible to compare energy intake against Australian reference ranges, participants did not have statistically different energy intake compared to controls. All participants met protein requirements. Calcium, vitamin D, phosphorous, vitamin B2, iron, magnesium and zinc intake varied between studies, but risks of inadequate intake were reduced with presence of formula use, vitamin and mineral supplementation and/or dietetic intervention. In particular, participants with vitamin and mineral supplement were better able to meet requirements for calcium and vitamin D. Although relative length or height was often lower than healthy controls, children were still within healthy reference ranges. Studies included had moderate and serious risk of bias, and the resultant overall quality was downgraded to very low confidence in effect estimate. Those with intervention were more likely to reach micronutrient requirements. Hence, personalised dietetic involvement is paramount to ensure optimal dietary adequacy and for monitoring of growth.

Keywords: Dietary adequacy; food hypersensitivity; growth; paediatric.