

Do nutrition education programmes improve health outcomes in patients with chronic diseases? A systematic review.

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Background/Objective

Nutrition education plays a key role in the management of chronic diseases. This review aimed to assess whether nutritional educational programmes (NEPs) utilising whole-diet approaches improved health outcomes in patients with chronic diseases.

Methods

Searches were conducted on 5 databases (Medline, Pubmed, EMBASE, CINAHL and Web of Science) independently by three reviewers. Search terms and MESH headings included: Nutrition OR diet OR eating habits AND education OR teaching OR training OR counselling AND health OR morbidity OR mortality OR well-being OR quality of life. Studies of NEPs involving educational interventions on whole diet modification (i.e. improving total nutritional intake) vs. usual diet or no intervention were included. Studies lacking a comparison group, case-control studies and those involving single dietary or nutrient modifications were excluded. Papers were independently assessed for eligibility; quality (Agency for Healthcare Research and Quality assessment tool); risk of bias (Cochrane Risk of bias 2 tool) and data extracted. Outcomes of interest were nutritional status, biochemical markers and quality of life. Data heterogeneity meant meta-analyses could not be performed so a descriptive approach was used.

Results

From a total of 8453 papers, 18 studies were identified as relevant and grouped by disease: cancer (n=8); Type 2 diabetes (n=6) and CKD (n=4). NEPs in 12 studies were dietician-led, with the remainder delivered via telehealth (n=2), group therapy (n=2), nutritionist (n=1) or nurse specialist (n=1). Results showed that NEPs had statistically significant improvements in quality of life and prevention of malnutrition in cancer patients, but did not prevent deterioration in weight. Diabetic patients showed improvements in weight loss, reduced waist circumference and HbA1c; however changes in BMI, blood pressure and cholesterol were not significant. NEPs did not improve clinical markers in CKD (e.g. cholesterol, phosphate and eGFR), but following the intervention patients reported better knowledge of their illness.

Conclusions

This review suggests that nutrition education programmes are an important tool in improving health outcomes of patients with cancer, Type 2 diabetes and CKD.