primary studies - published RCT

Gastric function in children with cystic fibrosis: effect of diet on gastric lipase levels and fat digestion.

Code: PM14681491 **Year:** 2004 **Date:** 2008 **Author:** Armand M

Study design (if review, criteria of inclusion for studies)

RCT, parallel design.

Participants

74 adults were enrolled and stratified by disease severity into low or high risk disease. Equal numbers of adults were randomly allocated into intervention (n = 37) and control (n = 37) group. 48 adults completed the study through to 12-month follow-up assessment (23 in intervention group, 25 in control group). Gender: intervention group (12 males, 11 females); control group (14 males, 11 females). Mean (range) age: intervention group 26.4 (17.2 - 43.2) years; control group 24.2 (16.9 - 38.1) years. Disease status: intervention group - mean BMI (kg/m2) = 21.3; pancreatic insufficiency (n = 21); Psuedomonas aeruginosa in sputum (n = 18); non-Psuedomonas (n = 5); homozyous DF508 (n = 13); heterozygous DF508 (n = 7); other (n = 3); control group - mean For inclusion, participants had to be older than 16 years, able to understand written English, not partaking in other research. Participants were excluded if they were on heart/lung transplant list or were pregnant or lactating. The study was conducted with adults from the CF clinic of Papworth Hospital, Cambridge, UK. The duration of the study was from January 2003 to August 2005.

Interventions

General and disease-specific nutrition education ('Eat Well with CF'). Content: knowledge on general and disease-specific nutrition topics (energy intake, digestion, pancreatic enzyme replacement, managing appetite, exercise, dietary fibre, reading food labels, body image); self-management skills on goal setting in small inc Mode of delivery: written material focusing on weekly activities, taking approximately 30 minutes each week; supplementary workshops (introductory, weeks 5 and 10) and weekly telephone calls delivered by a dietitian. Duration: 10 weeks. Setting: home (weekly written activities) and hospital (workshops).

Outcome measures

Weight (kg); pulmonary function (FEV1); self-efficacy; knowledge of nutrition (general & disease-specific); dietary fat intake; health-related quality of life. Assessment time points: baseline; 6- and 12-month follow-up.

Main results

There were substantial improvements in the intervention group's specific CF nutrition knowledge score, self-efficacy score, and reported fat intake compared to control, but no substantial change in body mass index or health-related quality of life over time. Home-based nutrition education incorporating behavioral strategies can be an effective way to support adults with CF, enabling improvement in self-management skills in relation to diet and pancreatic enzyme replacement therapy.

Authors' conclusions

This study revealed gaps in basic nutrition knowledge and skills, inadequate knowledge of diet-disease links and pancreatic enzyme replacement therapy. These need to be identified when subjects progress from pediatric to adult care, and programs such as "Eat Well with CF" are a useful adjunct for registered dietitians trying to manage this diverse but growing population.

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See also

Pediatric research YR: 2004 VL: 55 DE: RCT NO: 3

Keywords

Adolescent; Adult; Home; non pharmacological intervention - diet; non pharmacological intervention - psyco-soc-edu-org; Pancreatic Enzyme Replacement Therapy; Supplementation; Pancreas insufficiency; Pancreatic Diseases; Gastrointestinal Diseases;

Malabsorption; Nutrition Disorders; exercise; pharmacological_intervention; Gastrointestinal Agents; Behavioural interventions;