

Nutritional guidance improves nutrient intake, quality of life and may prevent falls of aged persons with AD living at home: a randomized, controlled trial (NuAD -trial)

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Conclusions

Tailored nutritional guidance improves nutrition, HRQoL and may prevent falls among home-dwelling AD people. Assessment-based, tailored nutritional advice should be a significant part of the care of old and frail individuals.

Background and aim

Malnutrition is common in Alzheimer disease (AD). Aim was to examine effectiveness of tailored nutritional guidance on nutrition, health-related quality-of-life (HRQoL) and falls of persons with AD.

Design / Participants

A total of 99 persons with confirmed AD (aged ≥ 65 years) living at home with their spousal caregivers were randomised for a controlled clinical trial.

Intervention

During a one-year intervention, a nutritionist visited intervention couples four to eight times at their homes and people with AD received tailored nutrition guidance. Protein and nutrient-enriched drinks were provided when needed. Participants in the control group received a written guide on the nutrition for older people.

Outcome measures Weight change, nutrient intake with three-day food records and HRQoL (15D). Table 1.

Results

Of participants (n=78) with AD (mean age 77.4, 69% males), 40% were at risk of malnutrition, 77% received protein < 1.2 g/body kg at baseline. No difference in weight change between groups. At 12 months mean change in protein intake was 0.05 g/bodyweight (kg) (95% CI -0.06 to 0.15) in intervention group (IG), and -0.06 g/kg (95% CI -0.12 to 0.02) in control group (CG), ($p = 0.031$, adjusted for baseline value, age, sex, MMSE and BMI). Participants' HRQoL improved 0.006 (95% CI -0.016 to 0.028) in IG, declined -0.036 (95% CI -0.059 to 0.013) in CG, ($p = 0.007$, adjusted for baseline value, age, sex, MMSE and BMI). Dimensions showing differences were mental functioning, breathing, usual activities and depression. The fall rate was 0.55 falls/person/year (95% CI 0.34 to 0.83) in IG and 1.39 falls/person/year (95% CI 1.04 to 1.82) in the CG (IRR 0.55 (95% CI 2.16 to 6.46); ($p < 0.001$ adjusted for age, sex and MMSE).

Publications

Puranen TM, Pitkala KH, Suominen MH. Tailored nutritional guidance for home-dwelling AD families: the feasibility and elements promoting positive changes in diet. JNHA (in press)

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Puranen TM, Jyvakorpi SK, Pitkala KH, Eloniemi-Sulkava U, Raivio M, Suominen MH. Nutritional intervention of home-dwelling patients with Alzheimer's disease living at home with their spouse: A randomized, controlled trial. Baseline findings and feasibility. J Aging: Research and Practise. 2013;2:236-241.

Jyvakorpi S, Puranen T, Pitkala KH, Suominen MH. Nutritional treatment of aged individuals with Alzheimer disease living at home with their spouses: study protocol for a randomized controlled trial. Trials. 2012;13:66.

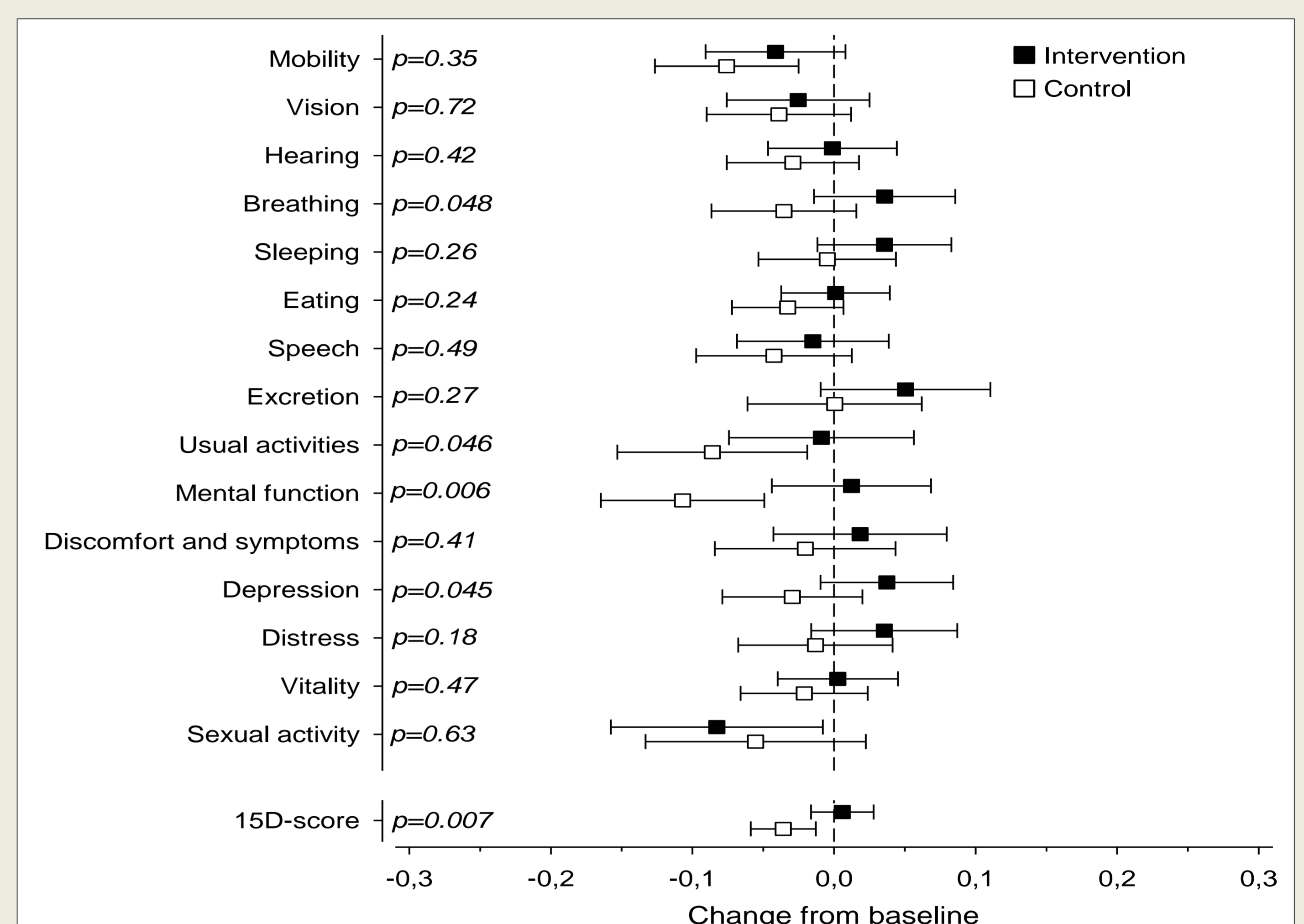


Figure 1. Changes in quality of life in intervention and control groups. Adjusted baseline sex, age, MMSE and BMI

Table 1. Description of tailored nutrition guidance in intervention and control groups.

	Nutritional intervention in the intervention group	Description of the intervention	In the control group
Home visits	At least once every 3 months, more often if needed; max. 8 times. Discussions and guidance of nutrition.	Baseline measurements and first home visit was the basis for the individualised intervention. Communication and ability to cope with issues related to nutrition were seen	-
Nutritional care plan	Individually to every participant. Sent by mail after assessment and the first home visit	Included feedback from baseline assessments (weight, nutrient intake, cognition etc), practical suggestion to increase nutrient intake if necessary, all advice was suitable for AD patient's daily living	After completion of the trial
Telephone contacts	Food records were checked, guidance and discussions provided when needed.	There was variation how the food records were filled. It was important to ensure the amount and type of fat, bread, milk and possible flaws in records.	Food records were checked
Group meetings	1-2 times for each couple. Program, coffee, examples of healthy snacks, discussions.		After completion of the trial
Oral nutritional supplements (ONS)	Protein- or energy-enriched drinks according to participants' needs		-
Booklet of good nutrition for older individuals	General information on good nutrition for older individuals		When allocated to the control group
Booklet of good sources of protein	Description and images of protein sources		After completion of the trial