Effects of a Mediterranean-style diet on mental health and quality of life in people with depression

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to counter the energy deficit of reducing discretionary foods by 25%, resulting in 6 g/person (7%) greater protein intake and 10 g (19.9%) less added sugar compared to the current diet. Reducing added sugar in discretionary foods by 25% reduced total energy intake by 184 kJ (2.1%). Substituting water for all SSBs reduced energy by 319 kJ (3.7%) and added sugar by 17 g (33.5%). Reformulation of grain based discretionary foods to reduce sodium by 25% resulted in 64 mg (2.6%) lower sodium intake.

Conclusions: Key discrete strategies to reformulate or reduce discretionary foods would have small to moderate impact on the diet quality of the Australian adult population. The impact of combined strategies, or for sub-populations with proportionally higher discretionary food intake would be more substantial.

Funding source(s): NHMRC

BEVERAGE INTAKE OF AUSTRALIANS

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Background/Aims: To examine intake of non-alcoholic, non-dairy drinks by Australians.

Methods: A secondary analysis of one day of intake from 12,153 subjects of the 2011-12 National Nutrition and Physical Activity Survey. Prevalence estimates were population weighted.

Results: On the day of the survey, unsweetened water was consumed by 87% of Australians compared to sugar sweetened beverages (34%), fruit juices without added sugar (17%) and low kilojoule sweetened beverages (10%). Children were more likely than adults to consume fruit juice on the day of the survey (23% *vs.* 15%; $p < 0.05$), and sugar sweetened beverages (47% *vs.* 30%; $p < 0.05$), while adults were more likely than children to consume low kilojoule sweetened beverages on the day of the survey (11% *vs.* 6%, $p < 0.05$). Sugar sweetened beverages were consumed by more men than women (36% *vs.* 25% on the day of the survey; $p < 0.05$), while prevalence of sugar sweetened soft drinks peaked at 14-18 years of age (43% for boys, 32% for girls; $p < 0.05$). There was no significant difference between males and females in prevalence of intake of low kilojoule sweetened beverages. In total, beverages accounted for 10% of the energy intake from discretionary choices for children, and non-alcoholic beverages accounted for 8% of the energy intake from discretionary food choices for adults. For both children and adults, the overall energy contribution of soft drinks was 4% of the discretionary food energy intake.

Conclusions: Beverages make an important energy contribution to dietary intake.

Funding source(s): Australian Beverages Council Ltd.

EFFECTS OF A MEDITERRANEAN-STYLE DIET ON MENTAL HEALTH AND QUALITY OF LIFE IN PEOPLE WITH DEPRESSION

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Background/Aims: Poor diets are an independent risk factor for depression while healthy diets are protective. Traditional Mediterranean diets (MedDiet) are associated with reduced cardiovascular disease risk which overlaps with depression. We investigated whether MedDiet can improve mental health.

Methods: A total of 163 adults aged 18-65 with self-reported depression participated in a randomised controlled trial (RCT) providing nutrition education and fortnightly food hampers and cooking workshops for 3 months with 6 months follow-up. The control group attended fortnightly social groups. Participants completed mental health, quality of life (QoL) and dietary questionnaires. Data were analysed using linear mixed modelling and Pearson correlations.

Results: In comparison to the control group at 3 months the treatment group had a higher MedDiet score ($t = 4.27$, $p < 0.001$), consumed more vegetables ($t = 3.95$, $p < 0.001$), fruit ($t = 2.11$, $p = 0.037$), nuts ($t = 2.43$, $p = 0.016$), wholegrains ($t = 2.39$, $p = 0.018$) and legumes ($t = 2.45$, $p = 0.016$),

greater diversity of vegetables ($t = 3.46$, $p = 0.001$) and fruit ($t = 2.08$, $p = 0.040$) and less unhealthy snacks ($t = -2.20$, $p = 0.030$) and red meat/chicken ($t = -2.25$, $p = 0.026$). The treatment group had reduced depression scores ($t = -2.02$, $p = 0.045$), and higher mental health QoL scores ($t = 2.17$, $p = 0.032$). Reduced depression scores were correlated with increased MedDiet ($r = -0.275$, $p = 0.006$), consumption of nuts ($r = -0.251$, $p = 0.011$), legumes ($r = -0.233$, $p = 0.018$), and greater diversity of vegetables ($r = -0.284$, $p = 0.004$). Similar correlations were seen with other mental health and QoL improvements, particularly for legumes and diversity of vegetables and fruit. All changes were sustained at 6 months.

Conclusions: This is one of the first RCTs to show a benefit of diet for mental health.

Funding source(s): NHMRC

IMPROVED NUTRITIONAL STATUS IN FEMALE AGED-CARE RESIDENTS WITH 12 MONTHS OF DAIRY SUPPLEMENTATION: A CLUSTER RANDOMISED TRIAL

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Background/Aims: Malnutrition is common in institutionalised elderly, exacerbated by inadequate provision of protein-rich foods. Dairy foods are a good source of high-quality protein therefore we aimed to determine if increasing dairy intake (~4 serves daily) would improve nutritional markers in female aged-care residents with inadequate protein intakes.

Methods: Data were analysed for 57 females (mean ± SD age 86 ± 8 years) with low protein intakes (77 ± 16% of RDI) from 27 aged-care facilities randomised to 12 months of high-dairy ($n = 8$) or usual ($n = 19$) menu. Food service specialists assisted staff to implement high-dairy menus. Food consumption was measured and nutritional assessment undertaken using the mini nutrition assessment (MNA) tool. Fasting morning bloods were analysed for nutritional biomarkers. Recommended protein intakes were based on Australian standards. Group differences were determined using ANOVA.

Results: When consuming from regular menus, reductions in albumin (37 ± 3 *vs.* 35 ± 3 g/L) and Hb (130 ± 13 *vs.* 123 ± 12 g/L) were observed ($p < 0.001$), while levels were maintained in those consuming from high-dairy menus (albumin; 36 ± 4 *vs.* 35 ± 4, Hb; 128 ± 11 *vs.* 129 ± 14 g/L). Both absolute and percentage differences between groups for albumin and Hb were significant ($p < 0.05$). No differences were observed for IGF-1 or MNA.

Conclusions: Improving protein intake using dairy foods abated age-related declines in albumin and maintained haemoglobin in elderly females in aged-care.

Funding source(s): Consortium of seven dairy organisations

PROTEIN INTAKE IN OLDER COMMUNITY DWELLING AUSTRALIANS AT RISK OF CHRONIC DISEASE

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Background/Aims: Sarcopenia is related to age-related reductions in skeletal muscle protein synthesis, and is accelerated by poor nutrition, inactivity and co-morbid disease. Increasing protein intake in older age may reduce progression of sarcopenia, and Australia has raised recommended daily intake (RDI) of protein for those over 70y to 1.07 g/kg for men and 0.94 g/kg for women. The aim of this research was to examine whether older adults are meeting these protein intakes.

Methods: In a cross-sectional study of 485 adults aged $\geq$ 60 years at increased risk of cardiovascular disease, protein intake was measured by 4d food record (analysed using FoodWorks), and risk factors, including estimated glomerular filtration rate (eGFR), examined. Multivariate regression was used to examine associations between protein intake and eGFR.

Results: In the cohort as a whole, 67% met their RDI for protein, 81% of