Statistics, Uni. of Wollongong, NSW, Australia
E-mail address: karenc@uow.edu.au (K.E. Charlton)

Background/Aims: Hypertension is a major risk factor for developing cardiovascular disease, stroke and kidney disease. Reducing sodium and increasing potassium intake has been shown to reduce blood pressure (BP). The aim of this study was to determine the association between urinary sodium excretion and sodium-to-potassium ratio and BP in a sample of overweight adults.
Methods: Secondary analysis of baseline data from the 12-month HealthTrack randomised controlled trial ($n = 327$, mean age: 43.6 ± 8.0 years; mean BMI: 32.4 ± 4.2 kg/m^2) was conducted. Resting BP and 24-h urine sodium and potassium excretion were measured.
Results: Mean systolic blood pressure (SBP) was 124.9 ± 14.5 mmHg and diastolic blood pressure (DBP) was 73.3 ± 9.9 mmHg. Median urinary sodium excretion was 3197.0 mg/d (7.99 g salt) (interquartile range: 2300-4140 mg/d) and median sodium-to-potassium ratio was 1.9 (interquartile range: 1.5-2.4). Urinary sodium was positively correlated with both SBP ($r = 0.173$, $p = 0.002$) and DBP ($r = 0.134$, $p = 0.015$). In multiple linear regression, after adjusting for age, sex, BMI and hypertension medication, urinary sodium [$F_{(3,323)} = 33.125$, $p < 0.0005$; adjusted $R^2 = 0.228$] significantly predicted SBP.
Conclusions: These results indicate that the relationship between dietary sodium and SBP can be observed in a clinical sample of overweight adults. These findings are in line with the current dietary recommendations that recommend restriction of salt-containing processed foods. This advice can be translated to clinical practice to include patient groups such as overweight adults.
Funding source(s): Illawarra Health and Medical Research Institute, California Walnut Commission.

SYSTEMATIC REVIEW OF THE SAFETY OF NON-NUTRITIVE SWEETENERS

P. Clifton [1], F. Fayet-Moore [2]. [1] *University of South Australia, SA, Australia;* [2] *Nutrition Research Australia, Sydney, NSW, Australia*
E-mail address: peter.clifton@unisa.edu.au (P. Clifton)

Background/Aims: Sugar sweetened beverages have been associated with obesity, type 2 diabetes and CVD. In Australia nearly 40% of soft drinks contain non-nutritive sweeteners (NNS) but in the USA there have been concerns over the safety of non-nutritive sweeteners. We aimed to review the recent literature on NNS from June 2010 to November 2013.
Methods: The following key words were used in PubMed: Non-nutritive sweeteners, Artificial sweeteners, Aspartame, AcesulphameK, Acesulphame Potassium, Stevia, Stevia rebaudiana, Stevioside, Rebaudioside A plus health and safety terms.
Results: A total of 86 publications on health and safety were found. A 2013 EFSA review found aspartame was safe. The consumption of beverages containing NNS has been associated with weight gain in some prospective cohort studies but reverse causality is a possible explanation. The evidence on whether NNS can affect appetite or preference for sweet foods is very limited and no firm conclusions can be drawn. The replacement of sugar-sweetened beverages with drinks containing NNS is a useful adjunctive strategy for weight management but long term studies are limited. Aspartame, acesulphame K and stevia have no effect on blood glucose or insulin levels. The effects of NNS on cardiometabolic risk are unclear. Although associations between the consumption of non-nutritive sweeteners and the risk for type 2 diabetes and coronary heart disease have been observed in prospective cohort studies, potential mechanisms are lacking and reverse causality is possible.
Conclusions: Limited evidence suggests that the replacement of sugar-sweetened beverages with drinks sweetened with NNS may lower risk for dental caries.
Funding source(s): Coca-Cola Australia.

EFFECT OF ADDING PEANUTS TO THE DIET ON SNACKING BEHAVIOUR AND TOTAL ENERGY INTAKE

J.A. Barbour [1], E. Stojanovski [1], L.J. Moran [2], P.R.C. Howe [1,3], A.M. Coates [1]. [1] *Alliance for Research in Exercise, Nutrition and Activity, Uni. of South Australia, SA, Australia;* [2] *Discipline of Obstetrics & Gynaecology, Robinson Research Institute, Uni. of Adelaide, SA, Australia;* [3] *Clinical Nutrition Research Centre, University of Newcastle, NSW, Australia*
E-mail address: alison.coates@unisa.edu.au (A.M. Coates)

Background/Aims: Peanuts are a snack food with potential satiety benefits. We investigated whether adding peanuts to a nut free diet would affect snacking habits and overall energy intake.
Methods: Sixty-one healthy participants (65 ± 7 y, BMI 31 ± 4 kg/m^2) consumed either peanuts (56 g/d for 32F; 84 g/d for 29M) or no nuts in addition to a habitual diet for 12 weeks each in a randomised crossover design. Food diaries were analysed at baseline and after each 12 week period for dietary patterns and total energy. Frequency and number of snacks were calculated (excluding peanuts).
Results: Peanuts were more likely to be eaten as a snack than with a meal by both genders (62%M *vs.* 66%F). Females consumed a greater proportion of peanuts in the afternoon compared to men (85% *vs.* 70% respectively, $p = 0.038$). Snacking occasions increased significantly for both women (14%) and men (53%) during the peanut phase. The number of serves of other snack foods did not change during the peanut compared with the control phase in the whole group ($p = 0.6$); however males consumed more sweet and less savoury snacks and females decreased total snack consumption in during the peanut phase ($p = 0.01$). Energy intake was higher (1094 kJ, $p < 0.05$) during the peanut phase.
Conclusions: Addition of peanuts to the diet increased snacking frequency and overall energy intake with some gender differences in snacking habits and snacking substitutions. Education on substitution strategies are important when recommending nut consumption.
Funding source(s): Australian Linkage Grant in partnership with the Peanut Company of Australia.

YOUNG MEN'S MOTIVATORS AND BARRIERS TO HEALTHY EATING AND THEIR PREFERENCES FOR A HEALTHY EATING INTERVENTION

L. Ashton, M. Hutchesson, M. Rollo, P. Morgan, C. Collins. *University of Newcastle, NSW, Australia*
E-mail address: clare.collins@newcastle.edu.au (C. Collins)

Background/Aims: Young men are under-represented in nutrition research, with a lack of understanding of how to reach and engage them in interventions. Therefore the aims were to explore young men's motivators and barriers to healthy eating, and their preferences for a healthy eating intervention.
Methods: A cross-sectional online survey was completed by young Australian men (18-25 yrs) in July 2015.
Results: Preliminary results ($n = 220$) show key motivators for healthy eating were to improve: health (28.1% ranked as top motivator); body image (18.1%) and sports performance (10.4%). Whilst key barriers to healthy eating included: perceived accessibility of unhealthy foods (22.7% ranked as top barrier), lack of time to cook/prepare healthy foods (19.5%), and high cost of healthy foods (16.4%). The preferred delivery methods were via website (36.1%) followed by mobile apps (25.0%), face-to-face in a group setting (21.7%) and face-to-face in a one-on-one setting (12.0%). Young men would prefer a median (IQR) of 4 face-to-face sessions per month (2-4) and an intervention length of 3 months (2-6) was favoured.
Conclusions: Early results have shown unique motivators and barriers for young men which have not been identified in other population groups i.e. to improve sport performance and restricted by perceived accessibility of unhealthy foods. Despite most young men choosing web-site as the preferred delivery mode, it was not unanimous and thus future research may look to explore preferences by different sub-groups of young men.
Funding source(s): 3D Healing Walk grant provided by Hunter Medical Research Institute (HMRI).

THEANINE CONSUMPTION, STRESS AND ANXIETY IN HUMAN CLINICAL TRIALS: A SYSTEMATIC REVIEW