knowledge consumers have difficulty correctly estimating kJ difference between 'standard' and 'large' serving sizes. This suggests there needs to be continued commitment to public health strategies that raise awareness of appropriate portion sizes.

Funding source(s): N/A.

EHEALTH TECHNOLOGY USE IN HEALTH AND BEHAVIOURAL INTERVENTIONS FOR CHILDREN AND ADOLESCENTS: A SYSTEMATIC REVIEW

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Background/Aims: In parallel with continuing technological advances, eHealth and mHealth technologies are increasingly utilised in the delivery of health intervention programs and management of chronic conditions. The level of use and impact of these technologies in children and adolescent health interventions is yet to be reported. The aim of this study was to identify and evaluate eHealth technologies which have been employed in health interventions for children and adolescents.

Methods: A detailed search strategy was designed and performed in 5 databases; PubMed, CINAHL, PsycINFO, Embase and Web of Science. Abstracts and full text articles were screened and reviewed independently by two authors. Articles were excluded if they did not (a) report the use of eHealth technology to support delivery of an intervention, (b) include children or adolescents ($6 - 18$ years), (c) target a health issue/behaviour (for example overweight), or (d) report on outcomes of technology use on health issue/behaviour. Full text articles which met each of the inclusion criteria for the systematic review were then independently appraised using the Mixed Methods Appraisal Tool (MMAT).

Results: Study design, setting and population will be reported and eHealth technologies will be summarised by technology type and/or combination (where multimodal), as well as the health issue/behaviour which the intervention is intended to manage/treat. Common considerations for the use of eHealth technologies in child and adolescent interventions will be presented.

Conclusions: Findings from this systematic review will inform future eHealth interventions in children and adolescents, including management of child overweight and obesity.

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CONSUMPTION WITH FORK OR SPOON? EFFECTS ON ACUTE FOOD INTAKE, EATING RATE AND PALATABILITY

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Background/Aims: Accumulating evidence show positive relationships between eating rate and body weight. Acute food intake is affected by eating rate, bite size, and palatability. The objective was to investigate whether habitual fork vs. spoon use influence eating rate and food intake in four meals that differ in palatability (salt) and in energy density (fat).

Methods: Forty healthy adults (18-54 y) were recruited. In a randomized 2×2 cross-over design, participants attended four lunch time sessions after a standardized breakfast. Meals were either 1) low-fat/low-salt, 2) low-fat/high-salt, 3) high-fat/low-salt, or 4) high-fat/high-salt.

Results: Nineteen participants (6 males) consistently used a fork and 21 (8 males) used a spoon (BMI fork: 22.5 ± 0.4 kg/m^2; spoon: 25.8 ± 0.4 kg/m^2, $p = 0.006$). Overall, spoon users consumed ~17% more ($p = 0.004$), and faster (fork: 51 ± 3.4 g/min; spoon: 63 ± 3.5 g/min, $p < 0.001$). In both groups, the high-salt meals were more pleasant than the low-salt meals ($p < 0.03$). In fork users, the high-salt meals led to greater food intake (g) ($p = 0.019$), and tended to be consumed at higher eating rate ($p = 0.08$), but these effects were not observed for spoon users ($p > 0.5$). Fat did not affect

food intake (g) in both groups.

Conclusions: Fork users consumed slower and less, and adjust their amount of food intake to pleasantness. Consumption with smaller bites may be a strategy to reduce energy intake and increase the awareness of taste.

Funding source(s): NHMRC, Deakin University.

DIETARY SALT INTAKE AND DISCRETIONARY SALT USE IN AN AUSTRALIAN POPULATION SAMPLE: 2011 AND 2014

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Background/Aims: The impact on population salt intakes of initial Australian efforts to reduce the amount of salt in the food supply have not been evaluated. We sought to compare salt intake and discretionary salt use in Victoria between 2011 and 2014.

Methods: Adults aged $18 - 75$ years provided 24-hour urine collections and reported discretionary salt use in 2011 and 2014. Analysis was adjusted for age, gender, metropolitan area, weekend collection and participation in both surveys.

Results: Estimates of salt intake based upon 24-hour collections in 598 participants in 2011 [53% female, mean (SD) age 57.1 (12.0) years] and 442 participants in 2014 [53% female, 61.2(10.7) years] indicated no change: mean (95%CI) 7.9 (7.6, 8.2) vs. 7.8 (7.5, 8.1) g/d ($p = 0.589$). There was no difference in salt use over the same period with 35% versus 36% adding salt sometimes or often/always at the table ($p = 0.76$), and 44% versus 47% adding salt sometimes or often/always during cooking ($p = 0.29$). 24-hour urinary salt excretion was 0.7 (0.7, 0.8) g/d ($p = 0.002$) higher in those sometimes or often/always adding salt at the table and when cooking compared to those infrequently using salt.

Conclusions: There is no indication over this 3-year period that national salt reduction initiatives have resulted in a reduction in salt intake in Victoria. More concerted efforts to reduce the salt content of manufactured foods, together with a consumer education campaign targeting the use of discretionary salt are required.

Funding Source: NHMRC, Australian Division World Action on Salt and Health, NSW Health, NSW Food Authority, Australian Food and Grocery Council.

IS FOOD ADDICTION A STABLE PHENOMENON?

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Background/Aims: The Yale Food Addiction Scale (YFAS) is a widely used tool to assess addictive-like eating behaviours. To date, no studies have determined whether these addictive-like eating behaviours are stable longitudinally, or are a transient phenomenon, in a non-clinical population. This study aimed to evaluate whether food addiction Diagnosis and Symptom scores, as assessed by the YFAS, are stable over 18-months in a non-clinical population.

Methods: Young adults (18-35 years) were recruited from the community to an online survey. The survey included demographics, anthropometrics, and YFAS. Participants who volunteered to be recontacted for future research were invited to complete the same survey 18-months later. The YFAS scoring outputs Diagnosis and Symptom scores were tested for agreement and reliability between the two time-points.

Results: Sixty-nine participants (94% female, 67% normal weight) completed both surveys. At baseline, thirteen participants met the YFAS predefined criteria for Diagnosis, while eleven participants met this criteria at 18-month follow-up. YFAS Diagnosis was found to have moderate agreement [Kappa = 0.50, 95%CI (0.23, 0.77)] between time-points while Symptom scores had good agreement [Kappa = 0.70, 95%CI (0.54,

0.83)]. Intraclass correlation coefficients were moderate over 18-months for both the *Diagnosis* [ICC = 0.71, 95%CI (0.45, 0.88)] and *Symptom* scores [ICC = 0.72, 95%CI (0.58, 0.82)].

Conclusions: YFAS assessed food addiction *Diagnosis* and *Symptom* scores were found to be relatively stable over 18-months in a non-clinical population of young adults. Future research is required to determine the stability of YFAS scores in the context of intervention programs.

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WHAT IS THE TRADITIONAL MEDITERRANEAN DIET?

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Background/Aims: The Mediterranean diet is important for health and used in research and clinical practice. However, a range of definitions exist for this dietary pattern. The purpose of this study is to describe the 'traditional' Mediterranean diet and identify additional elements not covered by most educational and index tools, including that used in the PREDIMED trial.

Methods: We conducted a literature review of Mediterranean diet definitions, including those used in educational and index tools. Nine databases were searched from inception to July 2015.

Results: Definitions in the literature vary and mostly focus on the proportion of key foods. The traditional Mediterranean diet is described as high in plant foods (fruits, vegetables, cereals, legumes, nuts/seeds and extra virgin olive oil), moderate in fish/shellfish and red wine and low in meat, dairy, eggs and animal fats. In 2010, the United Nations Educational, Scientific and Cultural Organization (UNESCO) recognised the Mediterranean diet as an Intangible Cultural Heritage. Yet the definition accepted by UNESCO encompasses broader lifestyle aspects related to culinary and consumption habits. Additional elements of the traditional Mediterranean diet, not well documented in previous tools, include the intake of home cooked meals, cooking styles, frequency of eating in company, fasting practice, ownership of a kitchen garden and napping after the midday meal.

Conclusions: Scope exists for improved educational and index tools for use by researchers and clinicians. Existing tools should be reviewed to incorporate broader elements of the Mediterranean 'way of life' that may influence dietary adherence and/or provide independent health effects.

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DIET QUALITY IN END STAGE RENAL FAILURE PATIENTS ON DIALYSIS

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Background/Aims: Dialysis patients are at risk of consuming a poor quality diet, long chain (LC) omega-3 fatty acid intake is of particular interest. This study aims to investigate diet quality using numerous tools, and assess omega-3 erythrocyte fatty acid status in an End Stage Renal Failure population on dialysis.

Methods: Dietary intake was measured for participants ($n = 32$) using 3×24 hour recalls and the Polyunsaturated Food Frequency questionnaire (PUFA FFQ) which was compared to the evidence based practice guidelines (EBPG), a Patient Generated Subjective Global Assessment (PG SGA) was used to measure malnourishment and diet quality was assessed using the Total Diet Score (TDS). Erythrocyte fatty acid analysis was conducted to calculate the omega-3 index, the arachidonic acid to eicosapentaenoic acid ratio (AA/EPA) and levels of DHA deficiency.

Results: Adherence to the EBPG were poor, specifically for energy and protein intake and saturated fat and carbohydrates as a % of total energy. The PG SGA found 58% of participants mild to moderately malnourished and 3% severely malnourished. The mean TDS of the population was 10.23, which was significantly ($p < 0.05$) higher than the TDS of a healthy cohort.

The omega-3 index was the same between the dialysis cohort and a healthy cohort, but the AA/EPA ratio was significantly higher in the dialysis cohort.

Conclusions: Dialysis patients have a diet quality similar to a healthy cohort, however improvements are required for better adherence to the EBPG. Increased consumption of LC omega-3 fatty acids may also benefit this population.

Funding source(s): N/A.

GENOME STABILITY OF INFANTS AS MEASURED BY THE CYTOKINESIS BLOCK MICRONUCLEUS CYTOME ASSAY AND INFLUENCE OF TYPE OF FEEDING

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Background/Aims: A longitudinal prospective cohort study was designed to investigate genome instability biomarkers in the offspring of Australian mothers at low risk of pregnancy complications and to test whether they are influenced by the type of infant feeding.

Methods: Genome instability was measured by the Cytokinesis block micronucleus cytome (CBMN-Cyt) assay in peripheral blood lymphocytes collected from cord blood ($n = 92$) and from infants at 3 ($n = 69$) and 6 months ($n = 56$). DNA damage biomarkers expressed ex vivo were measured per 1000 binucleated cells including micronuclei (MN), nucleoplasmic bridges (NPB), nuclear buds (NBUD), apoptotic and necrotic cells. Nuclear division index (NDI) was measured using the frequency of mono-, bi- and multinucleated cells. Each infant was assigned a feeding score (FS): exclusively breast fed: 4; partially breast fed: 3; exclusively formula fed or other milk (soy or cow): 2; partially formula fed or other milk: 1.

Results: None of the DNA damage biomarkers measured was correlated with average FS. The decline in MN, NPB and NBUD at 3 months (28%. 53%, 35% respectively) and at 6 months (23%, 58%, 36% respectively) relative to cord blood could not be attributed to the type of feeding.

Conclusions: To our knowledge, this is the first study to have collected genome instability biomarker data for South Australian infants using the CBMN-Cyt assay. 67% and 38 % of babies were exclusively breast fed in the cohort that may have influenced observed non association between FS and DNA damage biomarkers.

Funding source(s): Cancer Council South Australia.

FOREARM TO FINGER-TIP SKIN TEMPERATURE GRADIENTS CONTRIBUTE TO RESTING METABOLIC RATE IN THE THERMONEUTRAL ZONE

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Background/Aims: RMR is always measured in the thermoneutral zone. Forearm to finger-tip skin temperature gradients are an objective assessment of thermo-neutral conditions. The aim was to explore the relationship between the two variables after controlling for many confounders.

Methods: Data on 82 adult Australians (61 Europeans, 21 sub-Saharan Africans) were collated for this study. All participants had been measured at 25°C under standardized conditions in a temperature controlled chamber. RMR, RQ, in the ear tympanic temperatures (IET), and 30 min forearm to finger-tip skin temperature gradients (FFG) were complemented by fasting blood clinical chemistry. McAuley's index of insulin sensitivity (McA_ISI) and presence of metabolic syndrome (MetS) were determined. FM, FFM and android:gynoid ratio was obtained from DEXA measurements. Physical activity was determined from the short version of IPAQ. Multiple linear regression modelling of RMR and RQ was conducted on several potential predictors. A