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.

Funding source(s): N/A.

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 $3 \times$ 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

backward elimination approach was used to obtain a parsimonious model, following which FFG was included as an additional explanatory variable.

Results: The participant's characteristics were age: 45 (1.67) yrs, FM: 31 (1.42) kg, RMR: 5763 (151) kJ/d, RQ: 0.83 (0.005) and FFG: +0.65 (0.30)^{0}C. The final parsimonious model significantly predicted RMR from age, FM, FFM, ethnicity, McA ISI and FFG. The β coefficient of FFG on RMR was 50.3 kJ/d (95%CI: 2.5, 98.2, $p < 0.05$). There was no relationship of FFG to RQ.

Conclusions: FFG maybe an unrecognized factor that contributes to inter-individual variations in RMR even within TNZ.

Funding source(s): N/A.

SUGAR INTAKE IN A COHORT OF AUSTRALIAN CHILDREN

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Background/Aims: The 2003 Dietary Guidelines for Children and Adolescents in Australia stated that in a healthy diet, total sugar consumption should not exceed 20% of daily energy intake. This study examined total sugar consumption in a cohort of school children and compared the results to these guidelines.

Method: Currently 81 children aged 9-12 y (10.5 ± 1.1 y; 51% Male) have been recruited through South Australian schools and community. Questionnaire data assessing demographics and energy and nutrient intake (Food Frequency Questionnaire) was obtained via child and parent report.

Results: Daily energy consumption ranged between 3,012kJ − 19,402 kJ. Males (8596 ± 2915 kJ) and females (8768 ± 3769 kJ; $p = 0.818$) did not differ in energy consumption. There was a strong correlation between total energy consumption and sugar intake $r = 0.904$, $p < 0.001$. Sugar consumption ranged between 23.6 g − 368.8 g (140.2 ± 78.0g) and sugar as a percentage of energy ranged between 8.2% − 44.6% (26.4 ± 7.3%). Age was not related to sugar consumption as a percentage of energy, $p = 0.25$. In this sample 21% were within the healthy sugar consumption guidelines while 79% exceeded. Amongst those who exceeded the sugar consumption guidelines there were no mean differences between genders in terms of sugar as a percentage of energy ($p = 0.36$).

Conclusions: The results indicate a large amount of sugar consumption among children aged 8-12 y, with majority of the children consuming more than recommended. The food sources contributing to the high sugar intake should be further explored.

Funding source(s): N/A.

PSYCHOLOGICAL WELLBEING IN ADULTS WITH TYPE 2 DIABETES FOLLOWING WEIGHT LOSS AND WEIGHT MAINTENANCE

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Background/Aims: The aim of this study was to compare a higher-protein diet (HP) and a higher-carbohydrate diet (HC) on psychological wellbeing outcomes in a T2DM population during weight loss and weight maintenance.

Methods: Adults ($n = 61$, aged 55 ± 8 years, BMI 33.5 ± 4.8 kg/m^2) with T2DM (HbA1c 8.1 ± 1.4%) were randomised to a HP diet (30% protein, 38% carbohydrate, 29% fat) or a HC diet (21%:53%:23%) for a 12 week weight loss phase (WL) followed by a 12 week weight maintenance phase (WM). BMI, HbA1c and self-administered psychological wellbeing questionnaires (Problems Areas in Diabetes, PAID; Perceived Stress Scale, PSS-10) were assessed at baseline and at the end of each phase. Data was analysis using a linear mixed effects model.

Results: Forty four participants completed the study (HP $n = 23$, HC $n = 21$). Both diets resulted in a significant reduction ($p < 0.001$) in BMI (HP: -2.8 ± 0.3 kg/m^2, HC: -2.6 ± 0.3 kg/m^2) and HbA1c (HP: -1.5% ± 0.2%, HC: -1.3% ± 0.2%) following WL with no difference between diets ($p > 0.05$). These remained stable following WM ($p > 0.05$). There were significant reductions ($p < 0.05$) in the PAID Total Score following WL (HP: -5.7 ± 2.5, HC: -10.8 ± 2.6) and WM (HP: -5.1 ± 1.6, HC: -0.30 ± 1.7) with no difference between diets ($p > 0.05$). There were no changes in the PSS score for either phase.

Conclusions: Diabetes-specific emotional distress reduced with improvements in HbA1c and weight management following both a HP and HC diet.

Funding source(s): Pork CRC.

THE EFFECTS OF RESVERATROL SUPPLEMENTATION ON OBESITY IN HUMANS: A SYSTEMATIC REVIEW

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Background/Aims: Obesity is a chronic condition that is associated with significant morbidity and mortality rates and it is increasingly becoming a global problem. It is a complex and multifactorial condition influenced by lifestyle, behaviour and genetics. Relatively recently, there has been an increased interest in the use of plant polyphenols in the treatment of various conditions including obesity. Resveratrol, a polyphenol commonly found in red wine was identified as one of the compounds with potential weight reduction properties. The aim of this study was to determine the effects of resveratrol supplementation on factors associated with obesity in humans.

Methods: Following the PRISMA guidelines, literature searches were performed from four electronic databases (Medline/PubMed, Cochrane Library, CINAHL and EBSCO) to identify all human double blind, randomised placebo controlled trials investigating the effects of resveratrol supplementation on obesity related factors such as BMI, central obesity, adiposity, blood lipid profile and energy expenditure.

Results: Five studies met the inclusion criteria. Dietary supplementation of resveratrol ranged between 0.15-3 g/day and the number of participants varied between 8-18. There were no significant differences observed for body fat measurements ($p > 0.05$) in any of the included studies. Furthermore, only plasma triglyceride concentrations were significantly lower in the treatment group after resveratrol supplementation ($p = 0.03$) compared to placebo and only in one study.

Conclusions: Resveratrol supplementation only had a very limited positive impact on blood biomarkers related to obesity, while there were no reported significant losses in weight.

Funding source(s): N/A.

IMPACT OF FOOD SUPPLEMENTATION ON WEIGHT LOSS IN RANDOMISED CONTROLLED DIETARY INTERVENTION TRIALS: A SYSTEMATIC REVIEW

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Background/Aims: For overweight individuals, lifestyle modifications are needed to facilitate weight loss. Nutrition counselling supports behaviour change for weight loss; however, resources are needed to facilitate compliance towards the counselling process. Meal plans or food supplementation may be appropriate resources which favourably influence dietary compliance and enhance weight loss outcomes. The aim of this review was to examine the impact of food supplementation on weight loss in dietary intervention trials.

Methods: The databases Scopus, PubMed and the Cochrane Library