Methods: Adults ($n = 161$) with depression completed a semi-quantitative food frequency questionnaire and shopping and budgeting questionnaire. Associations between consideration of nutritional value and nutrition label use with vegetable, wholegrain, legume, snack food and soft drink intake were evaluated using linear regression, adjusting for age, gender and education.
Results: In adjusted models, more consideration of the nutrition value of foods was positively associated with vegetable intake ($\beta = 0.188$; $p = 0.025$), wholegrain intake ($\beta = 0.213$; $p = 0.015$) and negatively associated with snack food intake ($\beta = -0.236$, $p = 0.006$). More frequent reading of nutrition labels was positively associated with legume intake ($\beta = 0.185$; $p = 0.036$). Better understanding of nutrition labels was positively associated with vegetable intake ($\beta = 0.780$; $p = 0.035$), wholegrain intake ($\beta = 0.233$; $p = 0.008$), and legume intake ($\beta = 0.254$; $p = 0.004$). There were no associations between soft drink intake and nutrition value consideration or nutrition label use.
Conclusions: These findings suggest that increasing consideration of the nutrition value of foods and nutrition label use may support healthy eating in adults with depression.
Funding source(s): NHMRC.

CONCURRENT SESSION 5: FOOD COMPONENTS.
CD63 UPREGULATION ON BASOPHILS IS NOT A PREDICTOR OF SALICYLATE SENSITIVITY

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Background/Aims: About 2.5% of the general population show pseudoallergic reactions to salicylates (including aspirin). Patients with aspirin-exacerbated respiratory disease (AERD) show symptomatic improvement on low salicylate diet. Aspirin sensitivity is detected through oral provocation test - contraindicated in anaphylactoid reaction. Food salicylate sensitivity is detected through highly restrictive and lengthy 'elimination and rechallenge diet' raising compliance issues. More recently, an *in vitro* assay, the basophil activation test (BAT), is reported to detect pseudoallergic reactions with high sensitivity and specificity. However, the results remain controversial. The aim of this study was to examine the ability of BAT to differentiate known salicylate sensitivity from healthy controls (HC).
Methods: Peripheral blood of 10 AERD patients (2 males, 8 females), 10 HC (3 males, 7 females) was stimulated *in vitro* with aspirin (5, 2.5, 1.25, 0.6, 0.3, 0.15, 0.07 mg/ml). Flow cytometry was used to detect activated basophils (IgE+/CD63+). Stimulation index (SI) and percentage activation (% act) were used to determine basophil activation. Receiver-operator characteristics (ROC) were determined.
Results: Mean SI in AERD was similar to HC for all concentrations [p-values ranged from 0.178 (0.6 mg/mL) to 0.800 (0.07 mg/mL), independent sample t-tests)]. Likewise, % act did not differ between the groups [p-values ranged from 0.869 (2.5 mg/mL) to 0.498 (5 mg/mL)]. No cut-off values were able to discriminate the two subject groups (area-under-the-curve for ROC analyses < 0.5 for all).
Conclusions: BAT using CD63 is unable to predict salicylate sensitivity. It may not be a useful diagnostic test for non-IgE mediated pseudoallergic reactions.
Funding source(s): Gastroenterology Department.

BITTER TASTE PHENOTYPE AND *TAS2R38* A49P GENOTYPE INFLUENCE ALCOHOL CONSUMPTION IN MALES BUT NOT FEMALES

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Background/Aims: *TAS2R38* polymorphisms influence bitter taste phenotype. Both have been linked to alcohol consumption; however this has not been demonstrated in all cohorts tested. To date, this interaction has been studied in small cohorts (< 100 participants) with males and females combined, with not consideration of a potential gender dimorphism. Therefore we used a larger cohort to assess the gender specificity of this relationship.
Methods: Blood was collected from patients undergoing routine colonoscopy ($n = 262$). *TAS2R38* genotype (A49P) was assessed using RFLP-PCR. Bitter taste phenotype (non-tasters vs. tasters) was determined using 6-n-propylthiouracil. Alcohol consumption was assessed using food frequency questionnaires. Frequencies of genotypes and phenotypes were compared by chi-squared tests. Pairwise comparisons were made using least squares means (adjusted for age and smoking status) and t-tests.
Results: Distribution of genotype and phenotype did not vary between genders ($\chi^2 = 6.52$, $p = 0.16$ and $\chi^2 = 4.67$, $p = 0.13$, respectively). Males were significantly older (60.4 ± 1.0 *vs.* 64.4 ± 1.2, $p = 0.009$) and drank significantly more alcohol (5.0 ± 0.8 *vs.* 21.1 ± 2.6, $p = 0.0001$). In males genotype and phenotype predicted alcohol intake, with carriers of the "P" variant and "tasters" drinking less (18.1 ± 3.1 g/day *vs.* 31.7 ± 4.6 g/day, $p = 0.01$ and 19.1 ± 2.9 *vs.* 34.2 ± 5.6, $p = 0.02$, respectively). No relationships were found in females. A significant interaction was found between gender and genotype ($p = 0.004$) and phenotype ($p = 0.005$).
Conclusions: A gender dimorphism exists in the relationships between *TAS2R38* genotype, bitter phenotype and alcohol consumption. A significant interaction exists between gender and both genotype and phenotype when predicting alcohol intake.
Funding source(s): CSIRO.

DOES DAILY CONSUMPTION OF PECTIN LOWER CHOLESTEROL CONCENTRATION? A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background/Aims: Soluble fibres are thought to lower blood cholesterol concentrations. A systematic review of the effect of pectin, a soluble fibre, on cholesterol concentrations was undertaken.
Methods: EMBASE, PubMed and Cochrane CENTRAL were searched in December 2013. Randomised controlled trials lasting at least two weeks investigating increased consumption of pectin added to foods or as a supplement compared to a suitable control group and reporting at least total cholesterol concentrations in non-acutely ill subjects were included. Studies testing mixtures of fibres or whole foods were excluded because their effects could not be attributed to pectin. Study quality was assessed using the Risk of Bias criteria; high quality studies were double-blind and placebo-controlled. Meta-analysis was conducted using the generic inverse variance method.
Results: Of the 115 articles retrieved, only seven met all inclusion criteria. These tested intakes of pectin between 9 and 36 g/day. The number of participants ranged from six to 66 and most studies were conducted in hypercholesterolaemic people. There was a mean reduction in blood total cholesterol concentration of 0.36 mmol/L (95% CI: -0.52 to -0.19 mmol/L, $p < 0.001$) and moderate heterogeneity ($I^2 = 45\%$) across all studies. Similar magnitudes of effect were seen in the four high quality studies and in the one, low quality, study conducted with normocholesterolaemic subjects.
Conclusions: Daily consumption of at least 9 g pectin/day (a large amount compared to current average total fibre intakes) may reduce blood total cholesterol concentrations. Further studies are needed to confirm this effect, especially in normocholesterolaemic populations.
Funding source(s): None.

RELATIONSHIP BETWEEN CAFFEINE CONSUMPTION AND SLEEP IN AUSTRALIAN CHILDREN

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Background/Aims: Currently Australia does not have caffeine intake