P53  Effects of a controlled diet supplemented with chickpeas versus wheat on serum lipids, glycaemic control, satiety and bowel function
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Background – Chickpeas are common in many ethnic diets and are rich in polyunsaturated fatty acids (PUFA), dietary fibre and resistant starch. However, little information is available on the health effects of regular chickpea consumption.

Objective – To compare the effects of a diet supplemented with chickpeas to a wheat-supplemented diet of similar fibre content on serum lipids and glycaemic control, and to compare these diets plus a wheat based diet of low fibre content on satiety and bowel function.

Design – Twenty-seven free-living adults followed two randomized, crossover dietary interventions each of five weeks duration. The chickpea diet included canned chickpeas (140g/day), bread and biscuits containing 30% chickpea flour. The diets were isoenergetic to the participants’ usual diet, matched for macronutrient content and controlled for dietary fibre. Following on from the second randomised intervention, a sub-group of 18 participants underwent a third lower-fibre wheat diet. Measures at the end of the diets were compared by repeated measures ANOVA using GLM.

Outcomes – Serum TC was 0.25 mmol/L (p< 0.01) and LDL-C was 0.20 mmol/L lower (p=0.02) following the chickpea diet compared to the wheat diet. An unintended significant increase in PUFA and corresponding decrease in MUFA consumption occurred during the chickpea diet and statistical adjustment for this reduced the effect on serum lipids by about 50%. There was no significant difference in glucose or insulin concentrations. Perceived general bowel health improved significantly during the chickpea diet although there was considerable individual variation. Greater satiety was reported by some participants and was significantly greater than on the low fibre diet.

Conclusions – The small but significantly lower serum TC and LDL-C during the chickpea diet could provide a valuable health benefit.

P54  Comparison of two sets of criteria to classify ‘extra’ foods in the Australian diet
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Background – The high consumption of non-core or ‘extra’ foods is of concern as they may contribute to excessive energy intakes and replace more nutritious foods in the diet. The definitions used to classify ‘extra’ foods are inconsistent and need to be standardised.

Objective – To develop a classification system to identify ‘extra’ foods which can be used in the analysis of dietary intake data and development of nutrition policy in Australia.

Design – Two sets of criteria to identify ‘extra’ foods were developed based on standards for fat and sugar content; one set was based on principles outlined in the Australian Guide to Healthy Eating (AGHE) and, the other set was more stringent and followed the additional principles outlined in the Dietary Guidelines (AGHE+). The energy and nutrient contribution of ‘extra’ foods based on these two sets of criteria were compared, using dietary data for children aged 2-18 years who participated in the 1995 NNS.

Outcomes – Using the AGHE criteria, ‘extra’ foods contributed 41% of energy, 19% of protein, 48% of fat, 54% of sugar and 20-30% of micronutrient intakes. By comparison, using the AGHE+ criteria, ‘extra’ foods contributed 70% of energy, 58% of protein, 82% of fat, 80% of sugar and 60-70% of micronutrients.

Conclusion – ‘Extra’ foods contribute to a large proportion of energy, fat and sugar intake in the diets of Australian children, using either set of criteria. However, the AGHE+ system is too stringent, in that it includes many foods that would be regarded as high-fat or high sugar forms of core foods. We recommend the AGHE criteria be considered more widely for use in identifying ‘extra’ foods. This set of criteria uses defined cut-points for each food category and yields results similar to the few international studies which have assessed the contribution of energy-dense, nutrient-poor foods to the total diet. It is important that there is agreement on standardised criteria to identify ‘extra’ foods.