Posters

Influence of high protein snack foods on satiety, food intake and glucose and insulin response: a single blind cross over study
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Background - There is evidence that replacement in the diet of refined carbohydrate and fat with fibre and protein results in greater satiety and improvement in glucose and insulin profile. It is less clear whether the macronutrient composition of individual foods as snacks have any meaningful impact on these metabolic parameters and satiety.

Objective - To determine whether the consumption of high protein snack bars (800KJ) (HP) can make a meaningful impact on reducing food intake and diurnal glucose and insulin patterns compared to a conventional isocaloric high fat high refined carbohydrate snack bar (HFC) in overweight women.

Study Design - Twenty three women aged 42 ± 8y (mean±SD) and BMI 30 ± 4kg/m² were randomized in a single blind cross over study with 2 treatments: high protein snack bar consumed mid morning and mid afternoon compared with an isocaloric high fat snack bar mid morning and mid afternoon after consuming a standard high carbohydrate breakfast. Blood samples were taken hourly from 8am to 5pm and ad libitum food intake was assessed by the amount of food consumed at a buffet lunch and weighed food records after 5pm.

Outcomes - The overall diurnal glucose response was significantly lower (P=0.014) on the day of the HP bar intervention (a morning and afternoon HP bar). The overall diurnal insulin response was also significantly lower (P=0.012) during the HP bar intervention. These results were due to the lower post prandial response and lower food intake at the buffet lunch which was a tray of food items consumed ad libitum. Peak glucose levels were also 16% lower after the morning HP bar (P<0.001). The morning HP bar also reduced the energy intake at the buffet lunch meal by 5% (4657 ± 1025KJ vs 4901 ± 1186KJ, P<0.05). Total daily intake of energy was lower but not significantly so after the HP snack bar intervention. Consuming the HP bars was associated with a lower total fat and higher protein and dietary fibre intake.

Conclusions - Snacks with a higher protein and lower carbohydrate composition can reduce food intake at the next meal by 5% and significantly lower peak glucose level by 14% and peak insulin levels by 12 % when replaced isocalorically for conventional snack bars.

How do women change osteoporosis preventive behaviours in their children?
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Background - There is increasing evidence that chronic diseases such as osteoporosis have their beginnings in childhood, but there is limited information about how best to address lifestyle changes in children. In an randomised controlled trial of bone density feedback to improve osteoporosis preventive behaviours in premenopausal women, we found that feedback to mothers resulted in them reporting changing calcium intake and physical activity levels in their children. However, the approaches the mothers took to changing these behaviours in their children were not known.

Objective - To describe strategies and approaches used by mothers to change their children’s calcium intake and physical activity levels, in order to inform the development of practical and efficacious health promotion strategies.

Design - We sampled 39 mothers who participated in the feedback study and undertook semi-structured interviews with them in which they were asked about measures they took to change osteoporosis preventive behaviours in their children. The data were coded thematically and analysed using NVIVO software.

Outcomes - Mothers described a variety of specific dietary changes they made to increase their children’s calcium intake. They also described general approaches to improving both calcium intake and physical activity behaviours such as: raising awareness of the importance of calcium intake; making sure calcium rich foods were accessible; assessing their children’s likes and dislikes and working within these; role modelling; information provision; and taking a balanced approach to attempting behaviour change. Physical activity change was also addressed by encouraging activities that they could do with their children. The majority of mothers described the importance of a having a balanced diet and lifestyle in general, rather than specifically for osteoporosis.

Conclusion - Mothers described a variety of approaches to changing lifestyle behaviours in their children. This information from mothers’ experiences will inform the development of interventions for lifestyle change in children.