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## Effect of a nutrient-enriched drink on energy intake and postprandial metabolism in overweight subjects

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Viscous fibres, including guar gum, as well as calcium have been linked to weight management<sup>(1,2)</sup>. It has been suggested that appetite and food intake may be affected by calcium or /and dietary fibre intakes in the diet<sup>(2–4)</sup>. However, the impact of these as isolated food ingredients is unknown. The aim of the present study is to investigate the short-term effects of viscous fibre from fenugreek (Fen), and calcium (Ca), on appetite, satiety and postprandial metabolism in overweight/obese females.

In this randomised single-blind balanced crossover study, ten healthy female overweight /obese subjects (aged 18–45 years, BMI 25–37 kg/m<sup>2</sup>) participated. Subjects were required to consume a test breakfast, containing an enriched drink of viscous fibre from fenugreek (Fen) and calcium (Ca) or a fibre and calcium-free placebo (PL). Appetite sensations were assessed using visual analogue scales (VAS) every 30 min for 3 hours, postprandial metabolism concentrations, energy intakes from an *ad libitum* lunch and over 24 hours were assessed.

The Fen-ca enriched drink significantly reduced hunger ( $p = 0.006$ ). This finding was combined with a reduction in energy intake at the *ad libitum* lunch (976 (SEM 27.64) kcal versus 1122 (SEM 66.98) kcal, respectively, ( $p = 0.030$ ). However, no significant differences over 24h were observed between treatment groups. The enriched drink had no significant effects on plasma insulin or GLP-1 concentrations. Acute consumption of viscous fibre and Ca reduced food intake, indicating an effect on short-term satiety, however the effects were limited to the acute period only and this reduced energy intake was compensated for later in the day at subsequent meals.

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