

Effects of calcium on gut functions and blood glucose in healthy humans

ACTRN12625000138482

Status	RECRUITING
Sponsor	Prof Christine Feinle-Bisset, Adelaide Medical School & CRE in Translating Nutritional Science to Good Health, University of Adelaide
Enrollment	15 participants

Plain Language Summary

Calcium is well known for its role in building strong bones, but emerging research suggests it may also have an important effect on how quickly food leaves the stomach and how gut hormones respond to a meal. These gut hormones help regulate blood sugar — which is particularly relevant for preventing and managing conditions like diabetes and obesity.

This study is examining how different doses of calcium (infused directly into the small intestine) affect stomach emptying speed, blood sugar levels, and gut hormone responses after a liquid meal. Understanding these mechanisms could open new ways of using calcium to manage appetite and blood glucose naturally.

Eligible participants are healthy, normal-weight men aged 18 to 55 with no gut diseases, no food allergies, and not taking any medications. The study involves placing a thin tube through the nose into the small intestine (nasoduodenal tube) to infuse calcium — so participants must be comfortable with this procedure. Vegetarians, current smokers, heavy drinkers, and athletes are not eligible.

Key Eligibility Criteria

Inclusion (2)

- Healthy
- Normal weight (BMI 19-25 kg/m²)

Exclusion (17)

- Each participant will be questioned prior to the study to exclude:
- significant GI symptoms, disease or surgery
- use of prescribed or non-prescribed medications (including vitamins and herbal supplements) which may affect energy metabolism, GI function, body weight or appetite (e.g. domperidone, cisapride, anticholinergic drugs (e.g. atropine), metoclopramide, erythromycin, hyoscine, orlistat, green tea extracts, Astragalus, St Johns Wort etc.)
- lactose intolerance/other food allergy(ies)
- current gallbladder or pancreatic disease
- ... and 12 more (see full listing online)

Locations (1 total)

SA, Australia

<https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?ACTRN=ACTRN12625000138482>

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