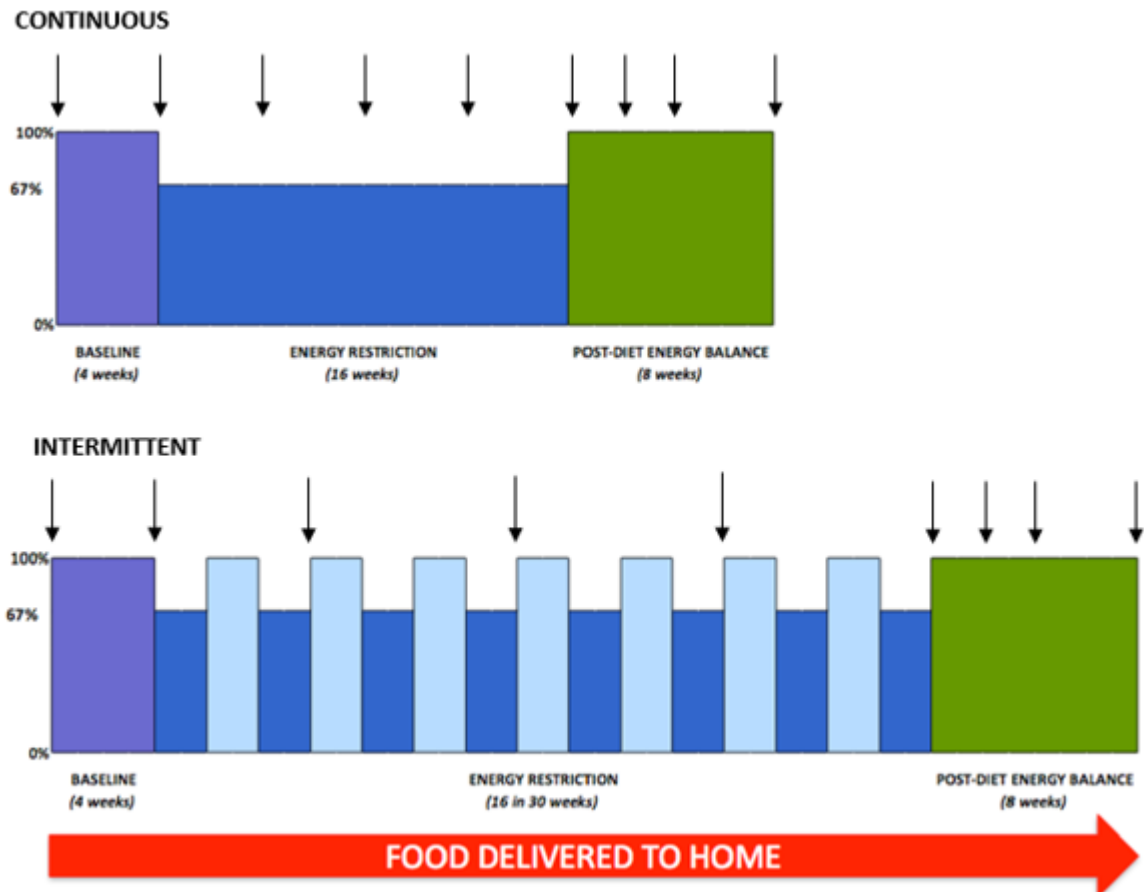


Supplementary Item 1. Study design

Arrows indicate time points for measurement of body weight, body composition, and resting energy expenditure (REE) in the continuous (CON) and intermittent (INT) groups. Measurements were taken at the start and end of baseline, weeks 4, 8, 12, and 16 or ER, and at weeks 1, 2, 4, and 8 of post-ER energy balance.



Supplementary Item 2. Exclusion criteria

Exclusion criteria – medical

- Individuals with a thyroid condition and/or those taking medication for thyroid condition
- Individuals presenting with a medical condition or those taking medications known (or suspected) to affect body weight and/or composition, appetite, heart rate, metabolic rate, and/or neuroendocrine function
- Individuals with a fasting blood glucose concentration >6 mmol/L
- Individuals with a significant metabolic, cardiovascular, haematological, neurological, pulmonary, gastrointestinal, renal, etc. condition
- Individuals who have a history of gastrointestinal disorders, or who have had major gastrointestinal surgery
- Individuals with medical conditions or disorders that impede mobility, or those for whom it is not comfortable to sit still for several hours (requirement of some testing)

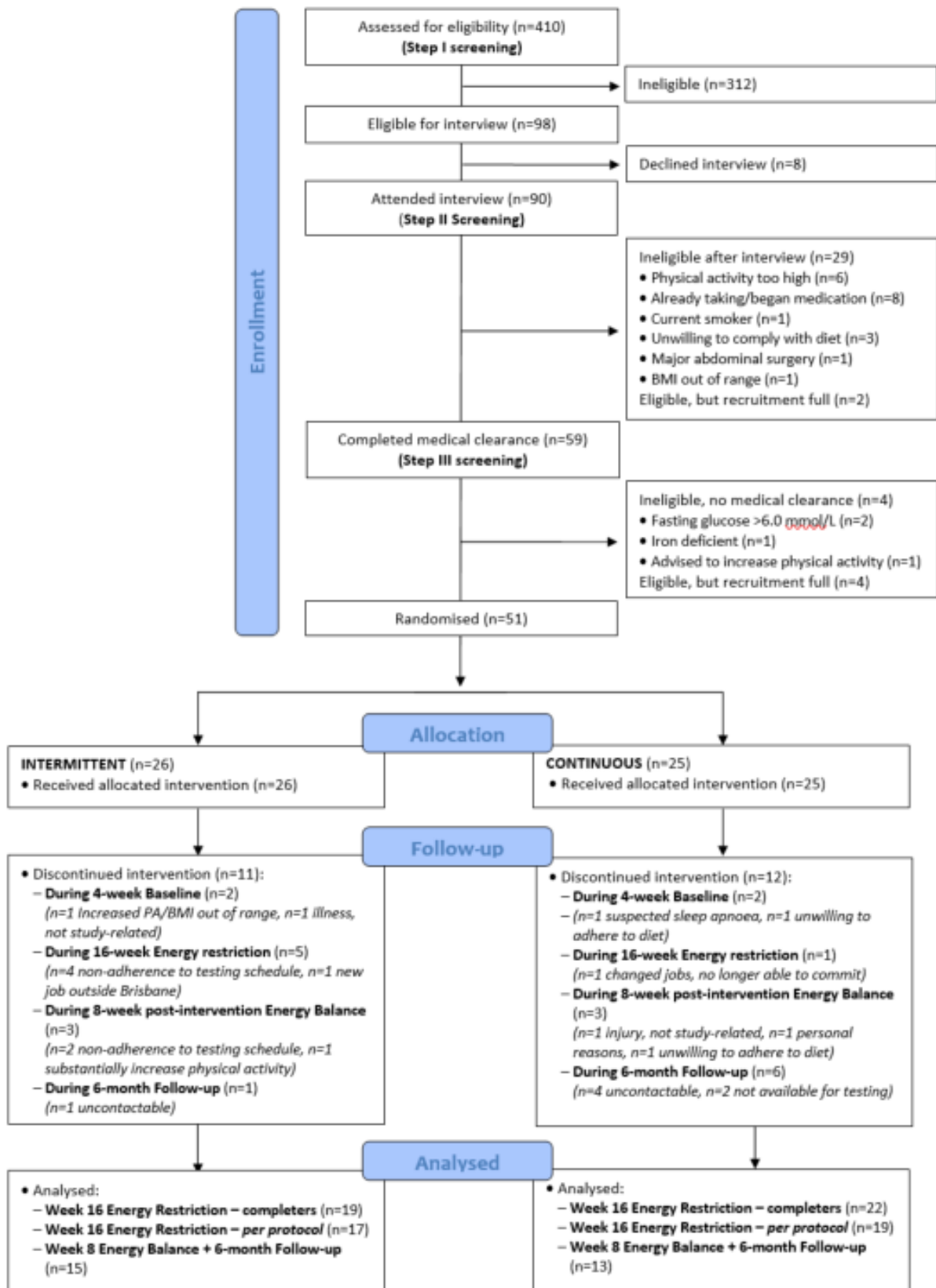
Exclusion criteria – behavioural

- Individuals who were physically active (>60 minutes planned physical activity each week)
- Individuals who were planning to begin an exercise program, or who express interest in beginning an exercise program over the duration of the study
- Individuals with food allergies or intolerances, those who were vegetarian/vegan, and those with cultural dietary requirements that could not be accommodated by the prescribed menu
- Individuals with a self-reported history of excessive alcohol intake, and express an unwillingness to reduce intake for the study duration
- Individuals who, in the opinion of the investigators, are unwilling or unable to adhere to the requirements of the dietary intervention
- Individuals who have lost or gained ≥ 2 kg in the 6 months prior to the study
- Individuals who smoke, or who gave up smoking within the 12 months prior to the study
- Individuals who are unable or unwilling to be assigned at random to either of the interventions

Exclusion criteria - logistics

- Individuals residing outside the Brisbane metropolitan area (food delivery is limited to certain areas only, and access to the laboratory for testing sessions would be challenging)
- Individuals planning to take holidays and/or work-related travel during the study period (challenges adherence to the diet, and interferes with testing session scheduling)
- Individuals who were unwilling or unable to attend testing sessions, some lasting up to 5 hours, between 6 am and 12 pm

Supplementary Item 3. CONSORT diagram.



Supplementary Item 4. Overview of the three-step screening process.

Screening Step I (electronic questionnaire)

- Demographic information
- Self-reported height and weight for calculation of body mass index (BMI)
- Relevant medical history
- Current physical activity status
- Food allergies/intolerances/preferences
- Work (logistics e.g. shift work)
- Work-related travel and/or planned holidays

Screening Step II (face-to-face interview)

- Verify information obtained in Phase I questionnaire
- Verify BMI with laboratory measures
- Discuss time commitment and implications on work/family/other commitments
- Discuss dietary prescription (go through detailed menu and identify any issues)
- Clarify any ambiguous information from Step I questionnaire

Screening Step III

- Medical clearance to participate
- Blood test for thyroid function, fasting blood glucose

Supplementary Item 5.

Changes in body weight (kg; mean \pm SEM) for each 4 weeks of energy restriction (ER) in the continuous (CON; N=19) and intermittent (INT; N=17) groups. Change is calculated from the end of baseline. *Significant difference between groups; $P < 0.01$. Different letters (CON: α, β ; INT: a,b,c) denote significant differences within a group; $P < 0.01$.

