

The influence of subtly encouraging individuals to choose less calorie-dense foods

Submission date 01/10/2020	Recruitment status No longer recruiting	☐ Prospectively registered ☐ Protocol
Registration date 02/10/2020	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 13/08/2021	Condition category Other	☐ Individual participant data

Plain English summary of protocol

Background and study aims:

Many people exercise because they know it is good for their health. Although this is true, it can make us feel deserving of a reward and lead us to eat more indulgent, less healthy food than if we had not done any exercise. Generally, lower energy-dense (LED) foods are recognised as healthier choices than higher energy-dense (HED) options. Despite our intention to make healthy choices, seeing tempting higher-calorie foods on offer often side-tracks us. Priming is a psychological tool that makes specific changes to our environment that remind us of our motivation to be healthy. This makes it easier to choose a healthier option, by nudging us towards it without us even realising. Our study explores whether priming people to expect they will receive LED food leads them to make this healthier choice after exercise, even when also offered tempting less healthy HED foods at the moment of selection.

Who can participate?

Potential participants must be members of the University of St Andrews 1st or 2nd XI, male or female, football or hockey teams.

What does the study involve?

All participants complete three questionnaires: baseline, pre-match and post-match. In the pre-match questionnaire, only experimental group participants are supraliminally primed to select a low energy-dense food for post-exercise consumption. After the sports match (and post-match questionnaire completion), all participants are select one food item from three low energy-dense and three high energy-dense foods on offer. The frequency of low versus high-energy dense food selection between control and experimental groups is compared.

What are the possible benefits and risks of participating?

When participants are made aware of the study focus upon receiving the Participant Debrief Form, this knowledge may increase their awareness of the healthfulness of food choices after exercise and subsequently nudge them towards making healthier future choices.

The only potential risk is that of food allergies, hence we advise all participants to carefully consider this risk before participating. Foods provided avoided containing common allergens and all ingredient labels were clearly visible.

Where is the study run from?

University of St Andrews School of Medicine (Population and Behavioural Sciences division)

When is the study starting and how long is it expected to run for?

March 2019 to February 2020

Who is funding the study?

This study was funded by the University of St Andrews (UK)

Who is the main contact?

Isabelle Schlegel

ims5@st-andrews.ac.uk

Contact information

Type(s)

Scientific

Contact name

Miss Isabelle Schlegel

ORCID ID

<https://orcid.org/0000-0003-1061-4527>

Contact details

University of St Andrews

School of Medicine

North Haugh

St Andrews

United Kingdom

G4 9HT

+44 (0)1334 463599

ims5@st-andrews.ac.uk

Additional identifiers

Study information

Scientific Title

To what extent does priming individuals to select low energy-dense (LED) foods reduce their selection of high energy-dense (HED) items when faced with the temptation of more calorically dense visual cues?

Study objectives

Supraliminal priming increases individuals' tendency to select less energy-dense foods, rather than high energy-dense foods following exercise (compared to a control group not receiving a priming intervention).

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 17/01/2020, University of St Andrews School of Medicine Research Ethics Committee (University of St Andrews School of Medicine, North Haugh, St Andrews, KY16 9TF, UK; +44 (0) 1334 461733; no email provided), ref: MND14700

Primary study design

Interventional

Study design

Single-center interventional single-blinded randomized controlled trial

Study type(s)

Other

Health condition(s) or problem(s) studied

Promotion of less energy-dense food selection following exercise in university-level student athletes, as part of promotion of an overall healthier lifestyle.

Interventions

Computer-generated randomisation into control and experimental groups.

All participants complete three questionnaires: baseline (one week before participants' sports match), pre-match (within one hour before the match) and post-match (immediately following the match).

Control group: no priming intervention applied.

Experimental group: The priming intervention is one question in the pre-match questionnaire, which asks participants to select a low energy-dense food for post-match consumption.

Post-match, following questionnaire completion, all participants are asked to select one food item from a selection of three low energy-dense and three high energy-dense foods visually displayed on offer (much to the surprise of the experimental group who have been primed to expect a choice of exclusively low energy-dense options).

Intervention Type

Behavioural

Primary outcome(s)

Energy density of food item selected is measured by the researcher observing whether participants select a low energy-dense or high energy-dense food following post-match questionnaire completion (immediately following participants' sports match)

Key secondary outcome(s)

Self reported appetite is measured using a visual analogue scale (0-10) before exercise (pre-match questionnaire) and after exercise (post-match questionnaire)

Completion date

12/02/2020

Eligibility

Key inclusion criteria

Members of the University of St Andrews 1st or 2nd XI, male or female, football or hockey teams.

Participant type(s)

Healthy volunteer

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Total final enrolment

128

Key exclusion criteria

Does not meet inclusion criteria

Date of first enrolment

27/01/2020

Date of final enrolment

06/02/2020

Locations

Countries of recruitment

United Kingdom

Scotland

Study participating centre

University of St Andrews Sports Centre

St Leonard's Rd

St Andrews

United Kingdom

KY16 9DY

Sponsor information

Organisation

University of St Andrews

ROR

<https://ror.org/02wn5qz54>

Funder(s)

Funder type

University/education

Funder Name

University of St Andrews

Alternative Name(s)

The University of St Andrews

Funding Body Type

Government organisation

Funding Body Subtype

Universities (academic only)

Location

United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

All data generated or analysed during this study will be included in the subsequent results publication.

IPD sharing plan summary

Other

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		23/03/2021	13/08/2021	Yes	No
Participant information sheet	version v1.1	14/11/2019	08/10/2020	No	Yes