

# Increasing the availability of vegetarian meals in worksite cafeterias to increase their sales

<b>Submission date</b>	<b>Recruitment status</b>	<input type="checkbox"/> Prospectively registered
19/09/2023	No longer recruiting	<input type="checkbox"/> Protocol
<b>Registration date</b>	<b>Overall study status</b>	<input type="checkbox"/> Statistical analysis plan
21/09/2023	Completed	<input type="checkbox"/> Results
<b>Last Edited</b>	<b>Condition category</b>	<input type="checkbox"/> Individual participant data
19/12/2024	Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

The study aims to address the health and environmental concerns associated with meat consumption in affluent countries. It intends to assess the effectiveness, feasibility, and acceptability of an intervention that promotes vegetarian meal options in worksite cafeterias' lunch offers. The intervention involves replacing one meat meal option with a vegetarian alternative. The study will determine whether this leads to an increase in the proportion of vegetarian meal sales and explore potential unintended consequences like changes in total site revenue and food waste.

### Who can participate?

Worksite cafeterias that meet specific criteria are eligible to participate. They must offer at least three main meal options at lunch, including at least one vegetarian option and two meat-based options (so that a meat option can be swapped for a vegetarian option during the intervention period while still maintaining customer choice). Additionally, the sites should be willing to change their menus for the study period.

### What does the study involve?

The study is implemented over a minimum period of 10 weeks with potentially 2 additional weeks of data collection (these fall into early December and will only be included in analyses if seasonal Christmas meals have not been introduced into menus or these have not disrupted the proportion of vegetarian meals available). Cafeterias will be randomly assigned to implement the intervention at different time points staggered over 6 weeks. During the intervention, cafeterias will increase the availability of vegetarian meals by replacing one meat meal option with a vegetarian one while maintaining the same total number of meal options.

### What are the possible benefits and risks of participating?

Benefits may include contributing to research that addresses the health and environmental impact of meat consumption. Cafeterias may also benefit from increased sales of vegetarian meals. Risks could include potential disruptions in meal sales and increased food waste.

### Where is the study run from?

University of Oxford (UK)

When is the study starting and how long is it expected to run for?  
October 2022 to December 2023

Who is funding the study?  
Economic and Social Research Council (UK)

Who is the main contact?  
Dr Rachel Pechey, rachel.pechey@phc.ox.ac.uk

## Contact information

### Type(s)

Scientific

### Contact name

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## Additional identifiers

### Clinical Trials Information System (CTIS)

Nil known

### ClinicalTrials.gov (NCT)

Nil known

### Protocol serial number

1

## Study information

### Scientific Title

The effect on sales of increased availability of vegetarian meals in worksite cafeterias

### Study objectives

Offering a higher proportion of vegetarian meals increases their sales

**Ethics approval required**

Ethics approval required

**Ethics approval(s)**

approved 14/04/2023, Medical Sciences Interdivisional Research Ethics Committee (Research Services, Boundary Brook House, Churchill Drive, Headington, Oxford, OX3 7GB, United Kingdom; +44 (0)1865 616575; [ethics@medsci.ox.ac.uk](mailto:ethics@medsci.ox.ac.uk)), ref: R72710/RE006

**Study design**

Interventional randomized controlled stepped-wedge field trial

**Primary study design**

Interventional

**Study type(s)**

Prevention

**Health condition(s) or problem(s) studied**

Diet sustainability

**Interventions**

This study evaluates the effectiveness, feasibility, and acceptance of increasing the relative availability of vegetarian (defined here as ovo-lacto vegetarian, i.e. containing no meat or fish, but possibly animal products such as dairy or eggs) main meal options on worksite cafeteria lunch counters. Cafeterias will increase their offer of vegetarian meal options at lunchtime by swapping out one meat meal option for a vegetarian alternative.

The study is implemented over a minimum period of 10 weeks with potentially 2 additional weeks of data collection (these fall into early December and will only be included in analyses if seasonal Christmas meals have not been introduced into menus or these have not disrupted the proportion of vegetarian meals available). Cafeterias will be randomly assigned to implement the intervention at different time points staggered over 6 weeks. During the intervention, cafeterias will increase the availability of vegetarian meals by replacing one meat meal option with a vegetarian one while maintaining the same total number of meal options.

**Intervention Type**

Behavioural

**Primary outcome(s)**

Percentage of vegetarian (out of total) meals (in units) sold in each cafeteria measured using centrally provided sales data, averaged for each week from 12 weeks prior to intervention until at least week 10 of the intervention. A further 2 weeks' data will be included if the availability of Christmas meals does not disrupt the intervention implementation.

**Key secondary outcome(s)**

1. Total environmental impact of meals sold, measured using an estimate of greenhouse gas emissions, eutrophication potential, water use, and land use (using an equivalent method to that described in <https://www.pnas.org/doi/10.1073/pnas.2120584119>), each week during the baseline and intervention period
2. Total energy purchased (kcal) from meals sold, measurement provided by the catering company, taken each week during the baseline and intervention period

3. Total site sales revenue (£GBP), measurement provided by the catering company, taken each week during the baseline and intervention periods
4. Total food waste, measured in both kg and £GBP provided by the catering company, taken each week during the baseline and intervention period

**Completion date**

15/12/2023

## Eligibility

**Key inclusion criteria**

N.B.: This study tests an intervention on the level of individual worksite cafeterias, so the researchers will specify eligibility for cafeterias here.

Eligible worksite cafeterias will:

1. Offer at least three main meal options at lunchtime (if the number varies systematically across the week, then a site will be eligible if at least three main meal options are offered on at least 4 out of 5 weekdays)
2. Currently offer at least two meat-based meals and at least one vegetarian meal (to ensure that a choice between meat/fish-based and vegetarian meals is possible at baseline and during the intervention)
3. Be willing to take part in the study and change their menus for the full study period

**Participant type(s)**

Employee

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Upper age limit**

99 years

**Sex**

All

**Key exclusion criteria**

Not sending at least 4 out of 6 weekly menu pictures during the pre-trial monitoring period, unless a further missing menu can be explained, e.g. by site closures

**Date of first enrolment**

19/04/2023

**Date of final enrolment**

16/10/2023

# Locations

## Countries of recruitment

United Kingdom

England

## Study participating centre

### University of Oxford

Nuffield Department of Primary Care Health Sciences

Radcliffe Observatory Quarter

Woodstock Road

Oxford

United Kingdom

OX2 6GG

# Sponsor information

## Organisation

University of Oxford

## ROR

<https://ror.org/052gg0110>

# Funder(s)

## Funder type

Research council

## Funder Name

Economic and Social Research Council

## Alternative Name(s)

Economic and Social Research Council (ESRC), ESRC

## Funding Body Type

Government organisation

## Funding Body Subtype

National government

## Location

## Results and Publications

### Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are not expected to be made available due to confidentiality.

### IPD sharing plan summary

Not expected to be made available

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes