

# Evaluating a behavioural intervention to reduce meat consumption

<b>Submission date</b> 22/06/2018	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 25/06/2018	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 03/02/2023	<b>Condition category</b> Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Reducing meat consumption could help to improve population health and protect the natural environment. However, little is known about how to help people shift towards more plant-based diets. This study evaluates a behavioural intervention to support people to eat less meat. The intervention involves the provision of meat-alternatives for four weeks along with supporting material, including information about the benefits of eating less meat, success stories of people who reduced their meat consumption, and recipes. This study will test whether people who received the intervention have lower meat intakes than people who did not receive the intervention during the fourth intervention week and one month after the intervention ends. This study also explores the impact of the intervention on other components of participants' diet, some psycho-social variables (e.g. attitudes towards eating less meat), and some biomarkers of health risk (e.g. blood pressure).

### Who can participate?

People aged 18 and over who eat meat regularly

### What does the study involve?

Participants are randomly allocated to the intervention group or the control group. Participants in the control group receive no intervention. Participants in the intervention group are offered meat substitutes for 4 weeks and supporting written material, including information about the health and environmental benefits of eating less meat, success stories of people who reduced their consumption of meat, and recipes. Participants' daily meat consumption is assessed using a self-reported food diary from the start of the study to the follow-ups at 1 and 2 months.

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

This study is considered to have very few potential disadvantages or risks. Three finger-prick blood samples are collected and participants are advised to contact the appropriate medical services in the event of an infection following the finger prick. Participants are provided with commercially available foods that they might not have previously eaten, and will be advised to contact the appropriate medical services in the event of an allergic reaction resulting from eating these foods.

Where is the study run from?  
University of Oxford (UK)

When is the study starting and how long is it expected to run for?  
August 2017 to December 2020

Who is funding the study?  
1. Wellcome Trust (UK)  
2. Medical Research Council (UK)  
3. National Institute for Health Research (UK)  
4. Green Templeton College, University of Oxford (UK)

Who is the main contact?  
Mr Filippo Bianchi

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Mr Filippo Bianchi

**ORCID ID**  
<http://orcid.org/0000-0002-7295-1847>

**Contact details**  
43 Woodstock Road  
Oxford  
United Kingdom  
OX2 6HG

## Additional identifiers

**EudraCT/CTIS number**

**IRAS number**

**ClinicalTrials.gov number**

**Secondary identifying numbers**  
N/A

## Study information

**Scientific Title**  
Replacing meat with alternative plant-based products (RE-MAP study): a randomised controlled trial of a behavioural intervention to reduce meat consumption

**Acronym**

### **Study objectives**

To test the effectiveness of a behavioural intervention in reducing meat consumption among healthy adult volunteers and to assess the intervention's impact on participants' habitual meat consumption, consumption of meat-alternatives and other food groups, psycho-social variables, energy, macro- and micro-nutrient intakes, and biomarkers of health risk, including body weight, body composition, blood lipids, and blood pressure.

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

Medical Sciences Interdivisional Research Ethics Committee of the University of Oxford, 07/11/2017, ref: R54329/RE001

### **Study design**

Single-centre two-arm parallel-group individually randomised controlled trial

### **Primary study design**

Interventional

### **Secondary study design**

Randomised controlled trial

### **Study setting(s)**

Community

### **Study type(s)**

Prevention

### **Participant information sheet**

Not available in web format, please use the contact details to request a patient information sheet

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

Reducing meat consumption among healthy adult volunteers.

### **Interventions**

Participants will be stratified by gender and individually randomised in a 1:1 ratio to the intervention or the control condition. The research team will be blinded to the computer generated randomisation sequence, but due to the nature of the intervention neither participants nor researchers will be blinded to the allocation. Members of the research team responsible to analyse diet diaries, will be blinded to participants' allocation.

Participants randomised to the control condition will receive no intervention. Participants randomised to the intervention condition will be offered a behavioural intervention based on the provision of meat-substitutes for four weeks and supporting written material, including information about the health and environmental benefits of eating less meat, success stories of people who reduced their consumption of meat, and recipes.

T0: baseline  
T1: 1 month follow up  
T2: 2 months follow up

## **Intervention Type**

Behavioural

## **Primary outcome measure**

Mean daily meat consumption in grams assessed using a self-reported food diary from the baseline (T0) to the first follow-up (T1) at 1 month

## **Secondary outcome measures**

1. Habitual meat consumption: Change in participants' mean daily meat consumption in grams assessed using a self-reported food diary from the baseline (T0) to the second follow-up (T2) at 2 months
2. Putative psycho-social determinants of consuming a low meat diet assessed through online questionnaires. In particular the following dimensions will be assessed:
  - 2.1. Change in participants' attitudes, perceived behavioural control, subjective social norm, and intention to eat a low meat diet between the baseline and both follow-ups
  - 2.2. Change in participants' attachment to meat between the baseline and both follow-ups
  - 2.3. Change in participants' eating identity between the baseline and both follow-ups
3. General eating behaviour: Change between the baseline and both follow-ups in participants' mean number of daily servings of other principal food groups, including meat substitutes, assessed using a self-reported food diary and an online questionnaire
4. Nutritional intake: Change in participants' mean daily energy, macro-, and micronutrient intake between the baseline and both follow-ups, assessed using data from the self-reported food diary
5. Biomarkers of health risk: Change between the baseline and both follow-ups in participants' weight to the nearest 0.1 kg and body composition (measured with a Tanita SC240Ma scale); blood lipids (measured with an Alere Cholestech LDX® Analyzer), and blood pressure as the mean of the last two of three seated readings
6. Putative psycho-social determinants of meat-alternative usage assessed through online questionnaires: Change in participants' intentions, attitudes, perceived behavioural control, and subjective social norms of using meat-alternatives between the baseline and both follow-ups
7. Desire for similarity between meat and meat-alternatives assessed through online questionnaire: Change between the baseline and both follow-ups in participants' desire for meat-alternatives to be similar to meat overall and in specific aspects

## **Overall study start date**

31/08/2017

## **Completion date**

20/12/2020

## **Eligibility**

### **Key inclusion criteria**

Interested individuals will be included in the study only if they

1. Are  $\geq 18$  years old
2. Self-report to eat meat regularly
3. Belong to an adult-only household
4. Are willing to try meat-alternatives and own adequate food storing facilities

5. Possess a device compatible with the requirements of the online food diary
6. Provide informed consent

**Participant type(s)**

Healthy volunteer

**Age group**

Adult

**Lower age limit**

18 Years

**Sex**

Both

**Target number of participants**

100 participants completing the primary measurement timepoint

**Key exclusion criteria**

Interested individuals will be excluded from participating to the study if they

1. Self-report to have relevant food allergies;
2. Self-report to suffer from an eating disorder;
3. Are pregnant or plan to become pregnant while involved in the study;
4. Belong to the same household as a previously enrolled participant;
5. Consume meat-alternatives more than once a week on average;
6. Report baseline dietary records of insufficient quality for analysis;

The recruiting researcher deems the interested individual unable to adhere appropriately to the study protocol (e.g. insufficient knowledge of the English language, planned absences from main residence during the course of the study, enrolled in other longitudinal dietary intervention study).

**Date of first enrolment**

26/06/2018

**Date of final enrolment**

25/06/2019

**Locations****Countries of recruitment**

England

United Kingdom

**Study participating centre**

Nuffield Department of Primary Care Health Sciences, University of Oxford

Radcliffe Primary Care Building, Radcliffe Observatory Quarter, Woodstock Rd

Oxford  
United Kingdom  
OX2 6GG

## Sponsor information

### Organisation

University of Oxford

### Sponsor details

University Offices  
Wellington Square  
Oxford  
England  
United Kingdom  
OX1 2JD

### Sponsor type

University/education

### ROR

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

## Funder(s)

### Funder type

Charity

### Funder Name

Wellcome Trust, Our Planet Our Health programme (Livestock, Environment and People - LEAP),  
award number 205212/Z/16/Z

### Alternative Name(s)

### Funding Body Type

Private sector organisation

### Funding Body Subtype

International organizations

### Location

United Kingdom

**Funder Name**

Medical Research Council

**Alternative Name(s)**

Medical Research Council (United Kingdom), UK Medical Research Council, MRC

**Funding Body Type**

Government organisation

**Funding Body Subtype**

National government

**Location**

United Kingdom

**Funder Name**

National Institute for Health Research

**Alternative Name(s)**

National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

**Funding Body Type**

Government organisation

**Funding Body Subtype**

National government

**Location**

United Kingdom

**Funder Name**

Green Templeton College, University of Oxford

**Alternative Name(s)**

GTC

**Funding Body Type**

Private sector organisation

**Funding Body Subtype**

Universities (academic only)

**Location**

United Kingdom

# Results and Publications

## Publication and dissemination plan

A protocol will be submitted for publication in due course. The results of the trial will be written up as a doctoral thesis, submitted for publication in a high-impact peer reviewed journal, presented at conferences and disseminated through established networks.

## Intention to publish date

20/06/2021

## Individual participant data (IPD) sharing plan

Individual participant data will be made available on request to bona fide academic researchers once final data analyses are published and provided participants consented for their fully anonymised data to be given to other researchers to be used in research studies. A secure data sharing system will be used to transfer data outside the research team.

## IPD sharing plan summary

Available on request

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Protocol article</a>	protocol	01/06/2019	19/05/2020	Yes	No
<a href="#">Results article</a>	primary and secondary outcome results	01/05/2022	03/02/2023	Yes	No