

# The online supermarket study

<b>Submission date</b> 26/02/2018	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 23/03/2018	<b>Overall study status</b> Completed	<input checked="" type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 10/08/2022	<b>Condition category</b> Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Poor diet is a risk factor for heart disease. Saturated fat (SFA) in food increases the type of cholesterol (LDL-cholesterol) that increases the chances of heart disease. Cutting down on food containing SFA, e.g. swapping butter for plant-based spreads, could help lower the risk of heart disease. Researchers are currently investigating new ways of reducing SFA in the population's diet. This study is an online shopping experiment to find out which are the best food swaps which achieve the greatest impact on SFA, and also the swaps which are most acceptable to people. The researchers are also interested in whether they can change purchases by changing the way foods choices are presented online.

### Who can participate?

Healthy volunteers aged 18 and over

### What does the study involve?

Participants do a 'pretend' shop in an online supermarket specially designed to conduct this kind of experiment. They are randomly allocated to one of four groups. One group is offered lower SFA swaps to the products they first select. In a second group the position of foods in the list which appears on screen is changed so that lower SFA options are positioned higher up. In the third group both of these interventions are applied together. The fourth group see the default version of the website with no swaps offered and a random order of the foods displayed in response to each search. The amount of SFA in the final basket is calculated for the four groups.

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

If successful, these strategies can be delivered at scale supporting current efforts to help people make lifestyle changes to lower their risk of chronic diseases. There are no direct benefits or risks involved in participating in this study, but the participants are reimbursed for their effort.

### Where is the study run from?

University of Oxford (UK)

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

February 2018 to February 2019

Who is funding the study?  
National Institute for Health Research (NIHR) (UK)

Who is the main contact?  
Dr Dimitrios Koutoukidis  
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## Contact information

**Type(s)**  
Scientific

**Contact name**  
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## Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

**Secondary identifying numbers**  
v1.0

## Study information

**Scientific Title**  
The effectiveness of individual-level and environmental-level interventions on food choices: an experimental online supermarket study

**Acronym**  
OLS

**Study objectives**

To investigate the magnitude of saturated fat change achieved in the shopping basket in response to an individual-level intervention and an environmental-level intervention, separately and in combination, compared to control (no intervention).

**Ethics approval required**

Old ethics approval format

**Ethics approval(s)**

University of Oxford, Medical Sciences Interdivisional Research Ethics Committee, 08/02/2018, ref: R55722/RE001

**Study design**

Randomised controlled trial with a 2x2 factorial design

**Primary study design**

Interventional

**Secondary study design**

Randomised controlled trial

**Study setting(s)**

Internet/virtual

**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**

Food choices

**Interventions**

This study uses a bespoke virtual online supermarket shopping (OLS) platform, hosted by The University of Oxford, which emulates a real online supermarket for research purposes relating to food purchasing interventions. Participants will be randomly allocated to one of the following groups when shopping online:

1. Individual-level intervention: offering a swap to a product with less saturated fat (SFA)  
Swaps will be offered at point of selection i.e. when a participant selects an item to put in their shopping basket, if an alternative product exists that is lower in SFA within the same food category, the participant will be offered the chance to swap the item. Products offered as swaps will be within the same general price and weight range as the original item.
2. Environmental-level intervention: prominent positioning of lower SFA options  
This will apply to each list of foods offered to participants when searching for products.
3. A combination of individual- and environmental-level interventions  
This group will receive both interventions as described above.

#### 4. Control

Participants in this group will see the default version of the website with no swaps offered and a random order of the foods displayed in response to each search.

### **Intervention Type**

Behavioural

### **Primary outcome measure**

Current primary outcome measure as of 20/07/2018:

The difference in the saturated fat content of the final basket (measured in % of total energy) between each of the four trial arms

Previous primary outcome measure:

Difference in the saturated fat change of the final basket (measured in % of total energy) between each single intervention group and control; between combined intervention groups and each single intervention group; and between combined intervention groups and control

### **Secondary outcome measures**

Current secondary outcome measures as of 20/07/2018:

The following outcomes will be compared between each of the four trial arms:

1. Difference in the proportion of products with lower saturated fat in the final basket (%)
2. Difference in the overall cost of the final shopping basket (£) weighted for the size of the basket (g)
3. Difference in the total energy, energy density, sugars (% energy), and salt (g/100g) content of the shopping basket

The following outcomes will be compared between the single individual-level intervention (swaps only) and the combined intervention arms:

4. Difference in % saturated fat content per swap accepted (% energy intake)
5. Difference in the proportion of swaps accepted out of those offered (%)
6. Difference in the proportion of swaps accepted out of those offered (%) by median observed change in saturated fat
7. Difference in the proportion of swaps accepted out of those offered (%) for (a) butter, margarine, and spreads, (b) cheese, (c) milk, (d) meat, and (e) sweets and desserts
8. Difference in the proportion of accepted swaps out of total shopping basket items (%)

Previous secondary outcome measures:

Difference between intervention vs control:

1. The proportion of products with lower saturated fat in the final basket (%)
2. % saturated fat content per swap accepted (% energy intake)
3. The proportion of swaps accepted out of those offered (%)
4. The proportion of accepted swaps out of total shopping basket items (%)
5. The overall cost of the final shopping basket (£) weighted for the size of the basket
6. The total energy, energy density, sugars (% energy) and salt (g/100g) content of the shopping basket

### **Overall study start date**

08/02/2018

### **Completion date**

07/02/2019

# Eligibility

## Key inclusion criteria

1. UK adults, aged  $\geq 18$  years
2. Able to speak and read English
3. Willing and able to give informed consent for participation in the study
4. Being the main (or shared) grocery shopper for their household
5. Having access to a computer and Internet

## Participant type(s)

Healthy volunteer

## Age group

Adult

## Lower age limit

18 Years

## Sex

Both

## Target number of participants

1240

## Total final enrolment

1240

## Key exclusion criteria

Having any dietary restriction

## Date of first enrolment

26/03/2018

## Date of final enrolment

29/06/2018

# Locations

## Countries of recruitment

England

United Kingdom

## Study participating centre

University of Oxford

Radcliffe Observatory Quarter

Woodstock Road

Oxford

United Kingdom  
OX2 6GG

## Sponsor information

### Organisation

University of Oxford

### Sponsor details

Research Services  
Joint Research Office  
Block 60, Churchill Hospital  
Old Road, Headington  
Oxford  
England  
United Kingdom  
OX3 7LE

### Sponsor type

University/education

### ROR

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

## Funder(s)

### Funder type

Government

### 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

# Results and Publications

## Publication and dissemination plan

The study protocol will become available. The statistical analysis plan created prior to running the statistical analysis is available. Planned publication of the study results in a high-impact peer reviewed journal.

## Intention to publish date

07/02/2020

## Individual participant data (IPD) sharing plan

The current data sharing plans for the study are unknown and will be made available at a later date.

## IPD sharing plan summary

Data sharing statement to be made available at a later date

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Statistical Analysis Plan</a>	version v1.0	13/07/2018	20/07/2018	No	No
<a href="#">Results article</a>	results	07/06/2019	14/06/2019	Yes	No
<a href="#">Protocol file</a>	version 3.0	13/07/2018	10/08/2022	No	No