

The online supermarket study

Submission date 26/02/2018	Recruitment status No longer recruiting	☒ Prospectively registered ☒ Protocol
Registration date 23/03/2018	Overall study status Completed	☒ Statistical analysis plan ☒ Results
Last Edited 10/08/2022	Condition category Nutritional, Metabolic, Endocrine	☐ 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?
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Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
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

Primary study design

Interventional

Study design

Randomised controlled trial with a 2x2 factorial design

Study type(s)

Prevention

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(s)

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

Key secondary outcome(s)

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

Completion date

07/02/2019

Eligibility

Key inclusion criteria

1. UK adults, aged ≥ 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

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 Years

Sex

All

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**

United Kingdom

England

Study participating centre

University of Oxford

Radcliffe Observatory Quarter

Woodstock Road

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Sponsor information**Organisation**

University of Oxford

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

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?
Results article	results	07/06/2019	14/06/2019	Yes	No
Protocol file	version 3.0	13/07/2018	10/08/2022	No	No
Statistical Analysis Plan	version v1.0	13/07/2018	20/07/2018	No	No