ISRCTN52923504 https://doi.org/10.1186/ISRCTN52923504

Improving employees' diets by changing the size, availability and labelling of foods in workplace cafeterias

Submission date
20/09/2016

Recruitment status
No longer recruiting

Registration date
22/09/2016

Overall study status
Completed

Last Edited
20/05/2020

Condition category
Nutritional, Metabolic, Endocrine

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
On average, people consume about a third of our weekday energy (calorie) intake at work and what is eaten and drunk affects both health and productivity. For this reason, many companies are keen to encourage healthy eating in the workplace, for instance through the range of products they offer, the way they present items and other related information they provide. The environment has a marked effect on food and drink choices, much more than most people realise. There is a lot of interest in how so-called 'nudge' techniques can be used to change environments and prompt individuals to make healthier choices. However, so far there has been very little research to study the impact of this kind of intervention (program) to improve employees' diets in the workplace. The aim of this study is to explore the feasibility and effectiveness of three different interventions within a workplace environment.

Who can participate?
Eighteen English worksites from companies that are members of the Institute for Grocery Distribution with more than 350 employees.

What does the study involve?
Eighteen workplace sites participate in these studies and six sites take part in each intervention. Sites introduce the intervention that they have been assigned at two-week intervals, over a 12 week period, in a carefully planned, but random order, known as a 'stepped wedge design'. The first intervention involves introducing smaller portion sizes. This involves pre-packaged items being provided in the next available smaller size (e.g. a 25g packet of crisps instead of a 33g packet of crisps) and served food portions being made smaller (e.g. a cake being divided into 10 slices rather than 8). The second intervention involves changing the availability of different foods to increase the amount of healthy foods being available compared to unhealthy options (e. g. providing baked crisps instead of fried ones). The third intervention involves adding labels to foods which include the energy (calorie) content on the packet or at the edge of the shelf or other prominent position. For the four weeks before the interventions are introduced and then

over the course of the interventions, information about the food sold in each of the workplace sites is collected in order to find out if the interventions have changed the way that people buy food.

What are the possible benefits and risks of participating?
There are no direct benefits or risks involved for those participating.

Where is the study run from?
The study is run from the Behaviour and Health Research Unit at the University of Cambridge and takes place at 18 English worksites from companies that are members of the Institute for Grocery Distribution (UK)

When is the study starting and how long is it expected to run for?
April 2016 to September 2017

Who is funding the study?
1. Institute of Grocery Distribution (UK)
2. Department of Health Policy Research Program (UK)

Who is the main contact?
Prof. Theresa Marteau

Contact information

Type(s)
Scientific

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Study information

Scientific Title
Physical micro-environment interventions for healthier eating in the workplace: a pilot study

Study objectives

The aim of this study is to evaluate the impact on energy purchased of:
1. Reducing the sizing of packages and/or portions of higher energy foods or drinks and/or tableware size
2. Reducing higher energy foods and drinks available in cafeterias and replacing these with the equivalent number of lower energy food and drinks
3. Adding labels showing energy (calorie) content on items purchased from cafeterias

Ethics approval required
Old ethics approval format

Ethics approval(s)
Cambridge Psychology Research Ethics Committee, 29/04/2016, ref: PRE.2016.035

Primary study design
Interventional

Study design
Randomised stepped wedge study

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Excess energy intake

Interventions
The 18 worksites (with a minimum of 350 employees) will be allocated to one of these three sets depending on their readiness to start, determined by data collection systems in place. The first six sites to be ready will be allocated to the first intervention ready for implementation: labelling. The remaining 12 sites will be randomly allocated to implement either the sizing or the availability interventions. Within each of the three sets of six sites, the time at which the intervention is introduced will be determined by randomisation to control for time trends while maximising sample size. Sites will be randomised to a phase of the stepped wedge design by means of random permutations using random variates of the uniform distribution. There will be a four week pre-intervention period when normal service will continue while information is collected on the energy content of food available and on the sales each day. The sites will then undergo an intervention period lasting from two - twelve weeks (depending on randomisation sequence within the stepped-wedge design).

The precise nature of the interventions will vary between sites, depending upon the food, drink and tableware currently on sale. For example, if sugar sweetened beverages are already those at the smallest available size (e.g., a 150ml can or carton of drink) these will not be a focus for reduction in size. The target products for each intervention will be documented and included as covariates in the analyses.

For all three sets of interventions foods where the energy content can be reduced will be targeted, whether by reductions in portion size, reformulation (primarily reductions in fat or sugar) or by offering a substitute product (e.g., non-nutritively sweetened beverages to replace sugar sweetened beverages, or baked products to replace deep-fried savoury snacks). Products containing little or no energy (<5 kcal/100g) will be specifically excluded from the interventions,

such as non-nutritively sweetened beverages or chewing gum, and all fresh fruit and vegetables with no added fat or sugar.

Intervention 1 - Size:
The intervention will comprise three components:
1. Packaged products: Replace currently available higher energy packaged food and drinks in cafeterias with the next, smaller available package size.
2. Portion sizes of served foods: Reduce the size of portions of higher energy food and drink items served in cafeterias by approximately 10% to 15%, including main meal (e.g., lasagne); sides (e.g., chips or fries); and desserts, cakes, cookies and biscuits, relative to the current standard size.
This might involve cutting 10 portions of lasagne from a tray that was previously cut into 8 portions, or 10 slices of cake from a cake that was previously cut into 8 slices.
3. Tableware: The size of available glasses, plates, bowls and/or serving cutlery used to serve higher energy food and drink items will be reduced to the next smaller available size.
For all sites, the standard retail price of the packages and portions will be used. In the case of reducing portion size of items which are not pre-packaged (such as cakes or main meals), prices will be reduced proportionally.

Intervention 2 - Availability:
This intervention will involve keeping constant the number of options offered but shifting the ratio of healthier to less healthy options by reducing the higher energy foods and drinks (products or units of the same product) available and increasing the lower energy foods and drinks available.
The size of the change will depend upon the baseline ratio of healthier to less healthy products. For example, in cafeterias where 75% of available options are classified as higher energy the intervention would likely involve having 50% of options as higher.

Intervention 3 - Labelling:
This intervention comprises labels that state the name of a food or drink item together with the calorie content written as 'XXX Calories'. The latter is to be written in the same font type and size as the product name, legible and prominent to the customer, rounded to the nearest 5 or 10 calories, and clearly denoting the portion size to which it refers. In-keeping with EU regulations kilocalorie (kcal) and kilojoule (kj) content will be displayed beneath the 'XXX Calories'.

Continued measures of the energy content of food available and the sales data throughout the intervention period will be used to model any changes from baseline levels. The number of transactions that involve products that have been altered as a result of our interventions will also be measured. Follow-up after the intervention period ends is not planned.

Intervention Type
Behavioural

Primary outcome(s)
Primary outcome as of 31/05/2017:
Total energy (calories) purchased per time frame of analysis (daily or weekly) from intervention items controlling for the total sales/transactions as measured from daily sales records.

Original primary outcome:
Total energy (calories) purchased per time frame of analysis (daily or weekly) controlling for the total sales/transactions as measured from daily sales records.

Key secondary outcome(s)
Secondary outcomes as of 31/05/2017:
1. Total energy (calories) purchased per time frame of analysis (daily or weekly) controlling for the total sales/transactions as measured from daily sales records
2. Total energy (calories) purchased per time frame of analysis (daily or weekly) from non-intervention items controlling for the total sales/transactions as measured from daily sales records

Original secondary outcome:
Total energy (calories) purchased per time frame of analysis (daily or weekly) from intervention items and non-intervention items controlling for the total sales/transactions as measured from daily sales records.

Completion date
30/09/2017

Eligibility

Key inclusion criteria
1. English worksites from companies that are members of the Institute for Grocery Distribution (IGD)
2. More than 350 employees
3. Mix of office-based and other site types (to recruit sites that are likely to represent different ranges of socio-economic status)
4. Ability to provide weekly data on sales of individual items and their energy content

Participant type(s)
Other

Healthy volunteers allowed
No

Age group
Other

Sex
All

Total final enrolment
18

Key exclusion criteria
Sites not meeting the inclusion criteria.

Date of first enrolment
08/08/2016

Date of final enrolment
01/05/2017

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Behaviour and Health Research Unit
University of Cambridge
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Sponsor information

Organisation
University of Cambridge

ROR
https://ror.org/013meh722

Funder(s)

Funder type
Charity

Funder Name
Institute of Grocery Distribution (IGD)

Funder Name
Department of Health Policy Research Program

Results and Publications

Individual participant data (IPD) sharing plan

The data are commercially sensitive, provided by the worksites on condition that they are not shared beyond the research team.

IPD sharing plan summary

Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	calorie-labelling results	14/05/2018	20/05/2020	Yes	No
Results article	healthy food proportion results	01/02/2019	20/05/2020	Yes	No
Results article	portion size results	01/12/2018	20/05/2020	Yes	No
Protocol article	protocol	09/06/2017		Yes	No