ISRCTN10967042 https://doi.org/10.1186/ISRCTN10967042

SMArT Work: Stand More AT Work

Submission date	Recruitment status	[X] Prospectively registered
23/01/2015	No longer recruiting	[X] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
02/02/2015	Completed	[X] Results
Last Edited	**Condition category**	[_] Individual participant data
21/09/2020	Injury, Occupational Diseases, Poisoning	

Plain English summary of protocol

Background and study aims
Excessive sitting is bad for health. Modern society provides many opportunities to sit and we have engineered much physical activity out of our lives. Previous generations sat less because they engaged in less TV viewing, no computer use, less car travel, and less work-related sitting. Changing sitting time by providing an environment that makes sitting less likely and standing /moving easier could have significant health benefits. A good place to start this cultural shift is in the workplace because many jobs are desk-bound. The aim in this study is to assess the effectiveness of providing sit-stand desks that allow workers to stand or sit while working at a computer.

Who can participate?
NHS workforce, aged 18–70 years old

What does the study involve?
Self-contained buildings or blocks will be randomly assigned to the intervention or control arm. People in the intervention arm will receive height-adjustable sit-stand desks and behaviour-change techniques and strategies to help reduce sedentary behaviour. People in the control arm will not receive any of the behaviour-change intervention strategies nor the sit-stand desk. We will assess, after 3 months, 6 months and 12 months, whether the study reduced sitting time and improved employee health, job satisfaction and engagement, job performance, absenteeism, what worked well or not, and what can be done better in the future to sustain changes in behaviour.

What are the possible benefits and risks of participating?
Benefits not provided at time of registration. Risks not provided at time of registration.

Where is the study run from?
University Hospitals of Leicester NHS Trust (UK)

When is the study starting and how long is it expected to run for?
October 2014 to January 2018

Who is funding the study?
Department of Health (UK)

Who is the main contact?
Dr Ben Jackson
b.r.jackson@lboro.ac.uk

Contact information

Type(s)
Public

Contact name
Dr Fehmidah Munir

Contact details
School of Sport, Exercise and Health Sciences
Loughborough University
Loughborough
United Kingdom
LE11 3TU
+44 (0)1509 228 228
f.munir@lboro.ac.uk

Type(s)
Scientific

Contact name
Dr Fehmidah Munir

Contact details
School of Sport, Exercise and Health Sciences
Loughborough University
Loughborough
United Kingdom
LE11 3TU
+44 (0)1509 228 228
f.munir@lboro.ac.uk

Type(s)
Public

Contact name
Dr Sophie O'Connell

Contact details
Leicester Diabetes Centre
Leicester General Hospital
Leicester
United Kingdom
LE5 4PW
+44 (0)116 258 8571
sophie.oconnell@uhl-tr.nhs.uk

Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
N/A

Study information

Scientific Title
Effectiveness of a behaviour-change intervention with sit-stand desks on NHS desk-based staff's sitting time and associated factors (SMArT Work): a cluster randomised controlled trial

Acronym
SMArT

Study objectives
The provision of sit-to-stand workstations and supporting strategies aimed at promoting reduced sitting will increase standing and movement over the long term (12 months) in office-based National Health Service (NHS) staff, reduce absenteeism, improve job performance, increase job satisfaction and work engagement, reduce occupational fatigue, improve musculoskeletal health, improve mood/affective states and improve quality of life.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Ethics Approvals (Human Participants) Sub-Committee, Loughborough University (UK), 03/09/2014, Ref: SSEHS 1751

Study design
Cluster randomised controlled trial

Primary study design
Interventional

Secondary study design
Cluster randomised trial

Study setting(s)
Hospital

Study type(s)
Prevention

Participant information sheet

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

Health condition(s) or problem(s) studied
Sedentary behaviour and associated conditions (e.g., musculoskeletal health)

Interventions
1. A cluster randomised controlled trial will be undertaken at three University Hospitals of Leicester (UK; Leicester General Hospital, Leicester Royal Infirmary and Glenfield General Hospital), with the unit of randomisation being at the level of each self-contained building or block.
2. The intervention arm will receive height-adjustable sit-stand desks and an array of behaviour-change techniques and strategies to help reduce sedentary behaviour (e.g., prompts, self-monitoring and education) identified using the Behaviour Change Wheel (Michie et al, 2011).
3. Control arm will not receive any of the behaviour-change intervention strategies nor the sit-stand desk; control sites will have limited opportunity to substantially increase their standing activity during working hours

Intervention Type
Behavioural

Primary outcome measure
Long-term (12 months) changes: objectively measured sedentary behaviour at baseline, 3 months, 6 months, and 12 months using self-monitoring devices (including LumoBack, GeneActive and ActivPAL) worn by participants

Secondary outcome measures
1. Change in sedentary behaviour over the short term (3 months and 6 months) measured objectively
2. Absenteeism (using employment records)
3. Job performance
4. Job satisfaction
5. Work engagement
6. Occupational fatigue
7. Musculoskeletal health
8. Mood/affective states
9. Quality of life (self assessment)
10. Cognitive ability (using experimental measures such as the Hopkins Verbal Learning Test, the Digit-Symbol Subsitition Test, and Stroop Test)

Secondary outcomes will be measured at baseline, 3 months, 6 months, and 12 months after the intervention
using a range of validated psychometric measures (occupational fatigue, musculoskeletal health, mood/affective states and quality of life), self-report (job performance, job satisfaction and work engagement), employer records (absenteeism) and experimental cognitive tasks (cognitive ability).

Overall study start date
01/04/2015

Completion date

31/12/2017

Eligibility

Key inclusion criteria
1. Health professionals
2. Healthy volunteers
3. Age 18–70 years old
4. Able to speak and read English
5. Willing and able to give full informed consent for themselves
6. NHS-office based, predominantly sedentary staff employed by the University Hospitals of Leicester NHS Trust

Participant type(s)
Mixed

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
18 clusters in each arm, with 136 participants in total.

Total final enrolment
146

Key exclusion criteria
1. Younger than 18 years old or older than 70 years old
2. Unable to give informed consent
3. NHS staff not predominantly in office-based jobs

Date of first enrolment
31/10/2015

Date of final enrolment
30/06/2016

Locations

Countries of recruitment
England

United Kingdom

Study participating centre
University Hospitals of Leicester NHS Trust
Leicester
United Kingdom
LE3 9QP

Sponsor information

Organisation
Loughborough University

Sponsor details
Epinal Way
Loughborough
England
United Kingdom
LE11 3TU
+44 (0)1509 222 222
ssehs-enquiries@lboro.ac.uk

Sponsor type
University/education

Website
www.lboro.ac.uk

ROR
https://ror.org/04vg4w365

Funder(s)

Funder type
Government

Funder Name
Department of Health (UK)

Results and Publications

Publication and dissemination plan
1. We will likely publish our findings from the development phase of our study (focus groups to aid in the development of the intervention) at around month 12 of the study, whereas primary

and secondary outcomes will be published at the end of the intervention phase.
2. We will also present our findings at academic conferences.

Intention to publish date
31/10/2015

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article	protocol	09/12/2015		Yes	No
Results article	results	06/03/2018		Yes	No
Results article	results	10/10/2018		Yes	No
Other publications	process evaluation	13/05/2020	15/05/2020	Yes	No
Other publications	cost-benefit analysis	13/02/2020	21/09/2020	Yes	No