

# Snacktivity™ intervention to promote physical activity during pregnancy

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<b>Registration date</b> 31/05/2023	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 21/07/2023	<b>Condition category</b> Pregnancy and Childbirth	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Many studies show that pregnant women do not achieve 150 minutes of moderate-intensity physical activity per week, which is the recommended guideline. To date, there is a large amount of research describing the benefits and barriers of physical activity during pregnancy, but very few studies have looked at how to best support pregnant women and their ability to reach and maintain their physical activity levels. Through participation in physical activity during pregnancy, women have decreased risk of complications such as high blood pressure, excessive protein in their urine, too much weight gain and gestational diabetes, as well as reduced anxiety and feelings of depression. To try and help women reduce their chances of pregnancy-related complications, we plan to conduct the SUNNY study which aims to test the feasibility and acceptability of an approach we have called Snacktivity™ during pregnancy. Snacktivity™ is based on the idea that small, frequent doses of physical activity throughout the day, called 'physical activity snacks', can help people accumulate at least 150 minutes of moderate-intensity physical activity per week.

### Who can participate?

90 eligible pregnant women in the UK

### What does the study involve?

Participants will be randomly allocated to receive either the Snacktivity™ intervention programme or a standard antenatal care programme. Participation in this study will take place from when women are around 10-16 weeks pregnant until they are 36 weeks pregnant. In addition to receiving standard antenatal care, participants in the Snacktivity™ intervention group will receive access to a mobile phone application called the SnackApp and a physical activity tracker (Fitbit watch), which will measure their physical activity snacks throughout the week.

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

It is hoped that the Snacktivity™ intervention will encourage pregnant women to be more physically active, which may help reduce pregnancy-related complications. The researchers do not expect any risks from taking part in this study.

Where is the study run from?  
Loughborough University (UK)

When is the study starting and how long is it expected to run for?  
June 2022 to June 2024

Who is funding the study?  
National Institute for Health and Care Research (NIHR) via a Research Professorship to Professor Amanda Daley and Loughborough University (UK)

Who is the main contact?  
Kayleigh Sharp, k.j.sharp@lboro.ac.uk (UK)

## Contact information

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## Additional identifiers

**Integrated Research Application System (IRAS)**  
319236

**Central Portfolio Management System (CPMS)**  
55513

## Study information

### Scientific Title

A randomised controlled trial to investigate the feasibility and acceptability of Snacktivity™ in pregnant women

### Acronym

SUNNY

### Study objectives

The aim of the SUNNY study is to undertake a randomised feasibility trial, with nested qualitative interviews, to assess the feasibility and acceptability of the Snacktivity™ intervention during pregnancy.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Approved 19/07/2023, South Central - Hampshire B REC (2 Redman Place, Stratford, London, E20 1JQ, United Kingdom; 020 7104 8289 hampshireb.rec@hra.nhs.uk), ref: 23/SC/0159

### Study design

Randomized interventional study

### Primary study design

Interventional

### Study type(s)

Treatment

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

Reproductive health and childbirth

### Interventions

Participants will be randomised to receive either standard physical activity advice during pregnancy or encouragement to achieve the recommended physical activity levels for pregnancy via Snacktivity™. For the intervention group, Snacktivity™ will be promoted with a physical activity tracker (Fitbit watch) and access to the SnackApp. Both resources will help participants

monitor their physical activity, activity snacks, and steps each day. The researchers will measure physical activity at the start of the study and at 36 weeks gestation for both the intervention and control group; however, steps, light-to-vigorous physical activity, moderate-to-vigorous physical activity, and activity snacks will be monitored for the intervention group throughout the 24-week intervention period.

Snacktivity™ is based on the idea that small, frequent doses of physical activity throughout the day, called 'physical activity snacks', can help people accumulate at least 150 minutes of moderate-intensity physical activity per week. These physical activity snacks should last between 2-5 minutes and can include activities such as rushing for a bus, getting off the bus a stop earlier and walking to the destination, walking over to a colleague instead of sending an email when at work, taking the stairs instead of the lift, and calf raises whilst brushing their teeth. The Snacktivity™ approach also aims to reduce the time people spend sitting as a result of moving more frequently throughout the day, which can also have important benefits for health, particularly during pregnancy.

## **Intervention Type**

Behavioural

## **Primary outcome(s)**

The feasibility of a subsequent phase III randomised controlled trial (RCT) according to pre-specified progression criteria will be assessed at the final follow-up. The researchers are primarily interested in whether:

1. The trial is appealing measured using the number/percentage of people randomised against the recruitment target of 90 participants
2. The Snacktivity™ intervention is acceptable through assessing Snacktivity™ adherence measured using a physical activity tracker (Fitbit watch) and SnackApp data
3. Participant attrition measured using loss to follow-up in [the study notes]

The feasibility and acceptability will also be assessed with participant interviews (intervention group only) and healthcare practitioner interviews on the indicators after the final follow-up:

1. Intervention delivery
2. Participant satisfaction, enjoyment, and intervention acceptability
3. Intervention sustainability

## **Key secondary outcome(s)**

1. Total physical activity (light-to-vigorous activity and steps per day) measured using a research-grade wrist-worn accelerometer at baseline and 36 weeks gestation
2. Moderate-to-vigorous physical activity measured using a research-grade wrist-worn accelerometer at baseline and 36 weeks gestation
3. Sedentary time measured using a research-grade wrist-worn accelerometer at baseline and 36 weeks gestation
4. Gestational weight gain measured at baseline and 36 weeks gestation
5. Depression measured using the Edinburgh Postnatal Depression Scale at baseline, 26- and 36 weeks gestation
6. Fatigue measured using the Multidimensional Assessment of Fatigue at baseline, 26- and 36 weeks gestation

## **Completion date**

25/06/2024

# Eligibility

## Key inclusion criteria

1. Pregnant women  $\geq 18$  years between 10 and 16+0 weeks gestation
2. Singleton pregnancy confirmed at early foetal scan
3. Able to speak and read standard English
4. Able to provide informed written consent
5. Access to an email address
6. Access to a smartphone with Bluetooth capable of hosting mobile applications (Apple iOS 10.0+ and Android OS 4.0+)
7. Complete  $\leq 150$  minutes of physical activity per week pre-pregnancy (as measured by the Exercise vital signs (EVS))

## Participant type(s)

Patient

## Healthy volunteers allowed

No

## Age group

Adult

## Lower age limit

18 years

## Sex

Female

## Key exclusion criteria

1. Post-natal or non-pregnant women
2. Pregnant women past 16 weeks gestation
3. Severe sickness (hyperemesis gravidarum)
4. Currently taking part in a different research study that involves physical activity or other lifestyle behaviours
5. BMI  $> 50$  kg/m<sup>2</sup>
6. Inability or unwillingness to provide consent
7. Women whose GPs feel it is inappropriate for them to take part
8. Cannot speak and read standard English
9. No access to an email address
10. No access to a smartphone with Bluetooth capability for hosting mobile applications (Apple iOS 10.0+ and Android OS 4.0+)
11. Complete  $> 150$  minutes of physical activity per week pre-pregnancy (as measured by the EVS)

## Date of first enrolment

21/07/2023

## Date of final enrolment

21/01/2024

## Locations

### Countries of recruitment

United Kingdom

### Study participating centre

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United Kingdom

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## Sponsor information

### Organisation

Loughborough University

### ROR

<https://ror.org/04vg4w365>

## Funder(s)

### Funder type

Government

### Funder Name

National Institute for Health and Care 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 datasets generated during and/or analysed during the current study will be stored in a non-publicly available repository at the Loughborough University repository (<https://repository.lboro.ac.uk/>).

### **IPD sharing plan summary**

Stored in non-publicly available repository