

# Engaging adolescents in changing behaviour: a programme of research to improve the diets and physical activity levels of adolescents

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|----------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Submission date</b><br>11/07/2019   | <b>Recruitment status</b><br>No longer recruiting | <input checked="" type="checkbox"/> Prospectively registered<br><input checked="" type="checkbox"/> Protocol |
| <b>Registration date</b><br>30/08/2019 | <b>Overall study status</b><br>Completed          | <input type="checkbox"/> Statistical analysis plan<br><input checked="" type="checkbox"/> Results            |
| <b>Last Edited</b><br>10/09/2025       | <b>Condition category</b><br>Other                | <input type="checkbox"/> Individual participant data                                                         |

## Plain English summary of protocol

### Background and study aims

Poor diet and lack of exercise cost the NHS £7 billion a year and cause many to die early. The researchers aim to build and test an intervention to help teenagers eat better and exercise more. Habits formed as teenagers tend to last, and physical and psychological changes during adolescence make it an important time to help them form healthier habits. Making small sustained changes, e.g. eating more fruit and vegetables and being more active, can reduce risks of heart disease or diabetes in later life. Existing interventions for helping teenagers eat better or exercise more, only work for those ready to change, or who see diet and exercise as important. It is known that school-based interventions may be most effective, face-to-face support is helpful, the role of friends/family is important, websites and smartphones are widely used, and teenagers spend time playing games on phones and computers. Using existing knowledge, the researchers have developed an intervention that motivates and supports teenagers to eat better and exercise more, and want to test this with teenagers from state secondary schools.

### Who can participate?

School children aged 12-13 (Year 8) at state schools in Hampshire and surrounding areas

### What does the study involve?

Participating schools are randomly allocated to either the intervention group or the control group. The intervention contains three elements:

1. Participation in LifeLab at the University of Southampton: a three-week science module linked to the National Curriculum, which helps teenagers think about science and their health
  2. Encouragement from teachers trained to support students to improve their diets and exercise
  3. A specially-designed, interactive smartphone app that involves friends and has game features
- The control group receive no intervention. Intervention duration is 3 weeks for the teaching of the LifeLab module and up to 3 months for the other components including the digital app. There is one follow-up data collection at 12 months.

What are the possible benefits and risks of participating?

The possible benefits of taking part are: improved awareness about the links between healthy lifestyles and long term health; a better understanding of the role of health research; improvements in dietary quality and physical activity levels. There are no risks involved in participating in this trial and a risk assessment has been done as part of the ethics application.

Where is the study run from?

Medical Research Council Lifecourse Epidemiology Unit (MRC LEU), University of Southampton (UK)

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

January 2016 to December 2023

Who is funding the study?

NIHR Programme Grants for Applied Research (UK)

Who is the main contact?

Professor Mary Barker, meb@mrc.soton.ac.uk

## Contact information

### Type(s)

Scientific

### Contact name

Prof Mary Barker

### ORCID ID

<https://orcid.org/0000-0003-2976-0217>

### Contact details

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University of Southampton  
MRC Lifecourse Epidemiology Unit  
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Southampton  
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SO16 6YD  
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## Additional identifiers

### Protocol serial number

RP-PG-0216-20004

## Study information

### Scientific Title

Engaging adolescents in changing behaviour (EACH-B): a programme of research to improve the diets and physical activity levels of adolescents

## **Acronym**

EACH-B

## **Study objectives**

The hypothesis is that LifeLabPlus, comprising engagement with the LifeLab educational programme followed by support from trained teachers and a digital intervention, will improve diet and physical activity levels in 12- to 13-year-old school students.

## **Ethics approval required**

Old ethics approval format

## **Ethics approval(s)**

Pilot trial approved 21/11/2017, full trial approved 21/06/2019, Ethics and Research Governance Online (Faculty of Medicine, University of Southampton, Building 85, Life Sciences Building, Highfield Campus, Southampton, SO17 1BJ; 023 8059 5000; rgoinfo@soton.ac.uk), ref: 30054.

## **Primary study design**

Interventional

## **Study design**

Multicentre cluster randomised controlled trial

## **Study type(s)**

Prevention

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

Dietary quality and physical activity levels of teenagers aged 12-13 years old.

## **Interventions**

Randomisation will be carried out by the University of Southampton's Clinical Trial Unit and will be at the school level. There will be 25 intervention and 25 control schools.

The intervention contains three elements:

1. Participation in LifeLab at the University of Southampton: a three-week science module linked to the National Curriculum, which helps teenagers think about science and their health
2. Encouragement from teachers trained to support students to improve their diets and exercise
3. A specially-designed, interactive smartphone app that involves friends and has game features

The pilot trial finished in May 2019 with six schools involved. These are: Upper Shirley High School, Oasis Lordshill, Oasis Mayfield, Woodlands, Wildern, and Swanmore secondary schools, all are based in Hampshire, UK.

The control group will receive no intervention.

Intervention duration is 3 weeks for the teaching of the LifeLab module and up to 3 months for the other components including the digital app. There is one follow-up data collection at 12 months.

## **Intervention Type**

Behavioural

### **Primary outcome(s)**

1. Dietary quality measured by purpose-made, validated Food Frequency Questionnaire (FFQ) at baseline and 12 months post intervention
2. Physical activity measured by accelerometry at baseline and 12 months post baseline

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

Current secondary outcome measures as of 01/09/2025:

Measured at baseline and 12 months post-intervention:

1. Well-being measured using Child Health Utility (CHU 9D) and Cantril ladder
2. Self-regulation and motivation for having a healthy lifestyle in adolescence measured using purpose-made Confidence and Behavioural Autonomy questionnaires (undergoing validation)
3. Body composition: height and weight used to calculate BMI Z-scores, taking account of both sitting and standing height as an indicator of pubertal status change
4. Compliance/adherence to intervention protocol measured through process evaluation
5. Self-efficacy for healthy eating and physical activity measured through CBA questionnaires
6. Registration and use of the digital intervention measured through app usage data as part of the process evaluation
7. Teachers' competence in HCS use measured as part of process evaluation
8. Educational outcomes, including science GCSE choices at three years post-intervention
9. Others specified by intervention planning (WP2.2)
10. Cost of intervention measured via health economics analysis
11. Categories of physical activity measured by accelerometry and validated YPAQ questionnaire
12. Qualitative feedback on implementation, mechanisms of impact and context. Measured by in-person and online interviews conducted as part of the process evaluation. Interviews conducted with students, teachers, heads of science and parents from intervention and control arm schools which took part in the EACH-B main RCT.

Previous secondary outcome measures as of 06/05/2020:

Measured at baseline and 12 months post-intervention:

1. Well-being measured using Child Health Utility (CHU 9D) and Cantril ladder
2. Self-regulation and motivation for having a healthy lifestyle in adolescence measured using purpose-made Confidence and Behavioural Autonomy questionnaires (undergoing validation)
3. Body composition: height and weight used to calculate BMI Z-scores, taking account of both sitting and standing height as an indicator of pubertal status change
4. Compliance/adherence to intervention protocol measured through process evaluation
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9. Others specified by intervention planning (WP2.2)
10. Cost of intervention measured via health economics analysis
11. Categories of physical activity measured by accelerometry and validated YPAQ questionnaire

Previous secondary outcome measures:

Measured at baseline and 12 months post-intervention:

1. Well-being measured using EQ-5D-Y and Cantril ladder
2. Self-regulation and motivation for having a healthy lifestyle in adolescence measured using

- purpose-made Confidence and Behavioural Autonomy questionnaires (undergoing validation)
3. Body composition: height and weight used to calculate BMI Z-scores, taking account of foot size and height changes as an indicator of pubertal status change
  4. Compliance/adherence to intervention protocol measured through process evaluation
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**Completion date**

31/12/2023

## Eligibility

**Key inclusion criteria**

School children aged 12-13 years (Year 8) at state schools in Hampshire and surrounding areas

**Participant type(s)**

Other

**Healthy volunteers allowed**

No

**Age group**

Child

**Lower age limit**

12 Years

**Upper age limit**

13 Years

**Sex**

All

**Key exclusion criteria**

Single-sex schools

**Date of first enrolment**

11/09/2019

**Date of final enrolment**

31/12/2022

## Locations

**Countries of recruitment**

United Kingdom

England

**Study participating centre****Swanmore College**

New Road

Swanmore

United Kingdom

SO32 2RB

**Study participating centre****Wildern School**

Wildern Lane

Hedge End

Southampton

United Kingdom

SO30 4EJ

**Study participating centre****Woodlands Community College**

Minstead Avenue

Harefield

Southampton

United Kingdom

SO18 5FW.

**Study participating centre****Upper Shirley High School**

Bellemoor Road

Shirley

Southampton

United Kingdom

SO15 7QU

**Study participating centre****Oasis Academy Mayfield**

Ashley Crescent

Southampton  
United Kingdom  
SO19 9NA

**Study participating centre**  
**Oasis Academy Lordshill**  
Nursling  
Southampton  
United Kingdom  
SO16 0XN

## Sponsor information

**Organisation**  
University Hospital of Southampton Foundation Trust (UHSFT)

**ROR**  
<https://ror.org/0485axj58>

## Funder(s)

**Funder type**  
Government

**Funder Name**  
Programme Grants for Applied Research

**Alternative Name(s)**  
NIHR Programme Grants for Applied Research, PGfAR

**Funding Body Type**  
Government organisation

**Funding Body Subtype**  
National government

**Location**  
United Kingdom

## Results and Publications

## Individual participant data (IPD) sharing plan

Quantitative data (from primary and secondary outcome measures) collected from schools which took part in the National Institute for Health Research (NIHR)-funded EACH-B trial will be anonymised and uploaded to Pure, the University of Southampton's institutional research repository (<https://eprints.soton.ac.uk/>). Data will be uploaded in sections, as and when they are used in published journal articles. This is in line with the university's policy that all research outputs and activities are recorded in the institutional repository. Data uploaded to Pure will be retained permanently; however, the research team can request that any data within Pure be deleted at any time. Data uploaded to Pure will be designated under the 'public' category to comply with the university's Research Data Management Policy, meaning it will be accessible to anyone. This data sharing plan aligns with the NIHR data sharing policies, which promote openness and transparency in research. Demographic data will only be made available upon reasonable request to Professor Mary Barker, by bona fide researchers and will be fully anonymised and redacted as necessary.

Qualitative data (written transcripts from interviews conducted with students, teachers and parents) collected as part of the process evaluation will be shared with bona fide researchers upon request to Professor Mary Barker, in line with institutional data sharing regulations. All qualitative data collected will be anonymised in accordance with the UK Data Service's guidance on anonymisation of qualitative data (<https://ukdataservice.ac.uk/learning-hub/research-data-management/anonymisation/anonymising-qualitative-data>), which includes de-identifying names of people and places, including geographical locations and companies. Geographical locations will be anonymised and aggregated at a regional level (for example, 'Portsmouth' would be replaced by 'city in Southern England'). Names of people will be replaced with identifiers (for example, 'person A'). Names of schools will be replaced with identifiers (for example, 'school A').

All data anonymisation will be conducted by members of the EACH-B research team, and no other researchers will have access to data prior to anonymisation.

## IPD sharing plan summary

Stored in publicly available repository, Available on request

## Study outputs

| Output type                      | Details            | Date created | Date added | Peer reviewed? | Patient-facing? |
|----------------------------------|--------------------|--------------|------------|----------------|-----------------|
| <a href="#">Results article</a>  | Cost-effectiveness | 17/07/2022   | 10/09/2025 | Yes            | No              |
| <a href="#">Protocol article</a> | protocol           | 15/10/2020   | 22/10/2020 | Yes            | No              |