

# The healthy eating & active lifestyles for diabetes trial

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		<input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 24/05/2024	<b>Overall study status</b> Ongoing	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
<b>Last Edited</b> 14/11/2025	<b>Condition category</b> Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Individual participant data
		<input checked="" type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Type 2 diabetes (T2D) is more common, and develops at a younger age, in people of black African and black Caribbean heritage in the UK than in people from white ethnic backgrounds. Diabetes can have serious health consequences e.g. blindness and kidney failure, which affect people's quality of life and are costly to the healthcare system. One of the most important ways to avoid diabetes complications is to follow a healthy diet and increase physical activity. This study aims to assess a diet and physical activity education and support programme for people of African and Caribbean heritage who have type 2 diabetes to help them manage their condition and avoid diabetes complications. The programme, called 'Healthy Eating and Active Lifestyles for Diabetes' (or 'HEAL-D'), was created with African and Caribbean people with lived diabetes experience to ensure its content is culturally relevant.

### Who can participate?

Adults with T2D of black African or black Caribbean heritage.

### What does the study involve?

Adults of black African and black Caribbean heritage with type 2 diabetes will be recruited from primary care, through referral to existing diabetes education services, or via community engagement activities. A short information video will be sent to potential participants to explain the study in more detail. A total of 300 people will be recruited over a 10-month period. Those who are eligible and consent to participation will be randomly assigned to one of two groups:

- The intervention group, who will receive the HEAL-D programme.
- The control group, who will receive the usual diabetes education course that is provided by the NHS in their local area.

Participants will decide if they want to attend their course face-to-face or using online video calling facilities. The HEAL-D programme includes eight sessions, each of 2 hrs duration, delivered over a 6-month period. The time commitment of the diabetes education programmes for the control group varies depending on the programme, but is typically 6-12 hours. All participants will undergo measurement of HbA1c, blood lipids, blood pressure, weight, waist circumference and body composition, alongside a range of questionnaire measures (e.g. quality of life, diabetes knowledge) at baseline, before attending their education programme, and 6, 12 and 24 months later. The measurements will be used to assess the effectiveness and the value

for money of the HEAL-D programme against current diabetes education programmes. The study will also investigate which parts of HEAL-D are helpful by interviewing a group of participants and the people who delivered HEAL-D, meaning participants may also be offered to take part in an interview or workshop.

What are the possible benefits and risks of participating?

Participants will need to invest time in the study and attend measurement visits for the collection of research data, for which they will receive modest monetary reimbursement. Participants will receive regular health measurements, as well as diabetes information and support that can help to manage diabetes and improve health and wellbeing. In the longer term, the results of this research study will be shared with black African or black Caribbean communities and may improve healthcare treatment for people of black African or black Caribbean heritage.

There are minimal risks associated with the study. During screening or assessment visits, previously unknown conditions may be revealed for which participants may want support. Blood tests can be uncomfortable, but these will be performed by professional staff, with care taken to minimise any discomfort.

Where is the study run from?

The research study will be coordinated by the University of Leicester's Diabetes Research Centre, with delivery centres in London, Birmingham, Manchester and Leicester.

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

August 2023 to July 2027

Who is funding the study?

The National Institute for Health Research (NIHR), Health Technology Assessment programme; Grant/award number: NIHR151372.

Who is the main contact?

Professor Louise Goff; [louise.goff@leicester.ac.uk](mailto:louise.goff@leicester.ac.uk)

## Contact information

### Type(s)

Public, Scientific, Principal investigator

### Contact name

Prof Louise Goff

### ORCID ID

<https://orcid.org/0000-0001-9633-8759>

### Contact details

Leicester Diabetes Centre, Leicester General Hospital, Gwendolen Road

Leicester

United Kingdom

LE5 4PW

None provided

[Louise.goff@leicester.ac.uk](mailto:Louise.goff@leicester.ac.uk)

## Additional identifiers

**Integrated Research Application System (IRAS)**

326064

**Central Portfolio Management System (CPMS)**

61759

**National Institute for Health and Care Research (NIHR)**

151372

**Protocol serial number**

Grant

## Study information

### Scientific Title

HEAL-D (Healthy Eating & Active Lifestyles for Diabetes): a multicentre, pragmatic randomised controlled trial comparing effectiveness and cost-effectiveness of culturally tailored versus standard diabetes self-management programmes in Black-African and Black-Caribbean adults with type 2 diabetes

### Acronym

HEAL-D

### Study objectives

In adults of black African and black Caribbean heritage living with type 2 diabetes, a culturally tailored diabetes self-management education and support programme ('HEAL-D') will improve glycaemic control to a greater extent than standard diabetes education programmes at 12 months follow-up.

### Ethics approval required

Ethics approval required

### Ethics approval(s)

approved 22/04/2024, East Midlands – Leicester South Research Ethics Committee (2 Redman Place, Stratford, London, E20 1JQ, United Kingdom; +44 (0)207 104 8193; Leicestersouth.rec@hra.nhs.uk), ref: 24/EM/0079

### Study design

Multi-centre randomized controlled trial

### Primary study design

Interventional

### Study type(s)

Treatment

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

Type 2 diabetes

## **Interventions**

**Intervention group:** The HEAL-D programme consists of 16 hours of group-based education and support (eight 2-hr sessions) delivered using face-to-face or online delivery modes. Sessions 1-7 are delivered on a weekly or fortnightly schedule and session 8 is delivered at 6 months. Culturally tailored resources will be used to deliver the curriculum, including diet booklets, portion size guides, interactive games focusing on cultural foods and dishes, and videos including health and motivational messages. HEAL-D will be delivered by a diabetes specialist dietitian (no specified ethnicity), a community trainer of black African or black Caribbean ethnicity and exercise instructors (no specified ethnicity). Sessions are scheduled for daytime, evening, and weekend delivery. Participants are invited to bring a 'significant other' but this is not compulsory. HEAL-D face-to-face is delivered in community settings, such as church halls and community centres, aiming for 8-12 patients in each group. HEAL-D online is delivered via a video-conferencing platform, aiming for 6-8 patients in a group.

**Control group:** Participants allocated to the control arm will receive the standard NHS diabetes education course that is delivered in their local area at the time of the study. They will be offered the choice of attending face-to-face or online virtual delivery where both modalities are offered.

Randomisation will be performed by an appropriate delegated member of staff using a validated web-based system. Randomisation will use randomly permuted blocks of variable block length and be stratified by centre, accounting for the provision of different standard education programmes between centres, and baseline HbA1c (<53, 53-76, 77-100 mmol/mol). Allocation will be assigned in a 1:1 ratio to one of the two study arms. Following randomisation, participants will attend their allocated course within 4 weeks where possible and time from randomisation to attendance will be recorded.

## **Intervention Type**

Behavioural

## **Primary outcome(s)**

Glycaemic control measured as HbA1c (mmol/mol) at 12 months

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

1. Glycaemic control measured as HbA1c (mmol/mol) at 6 and 24 months.
2. Blood lipids measured as total cholesterol and HDL-cholesterol (mmol/L) at 6, 12 and 24 months
3. Blood pressure measured as systolic and diastolic blood pressure (mmHg) at 6, 12 and 24 months
4. Body weight (kg) measured using scales at 6, 12 and 24 months
5. Body mass index (kg/m<sup>2</sup>) calculated from height and weight measurements at 6, 12 and 24 months
6. Waist circumference (cm) measured using a tape measure at 6, 12 and 24 months
7. Body composition measured as fat mass and lean mass (kg) using bioelectrical impedance analysis at 6, 12 and 24 months
8. Quality of life measured using the EQ5D-5L at 6, 12 and 24 months
9. Diabetes-related distress measured using the Problem Areas In Diabetes-5 questionnaire at 6, 12 and 24 months
10. Depressive symptoms measured using the Patient Health Questionnaire at 6, 12 and 24 months

11. Diabetes knowledge measured using the Short Diabetes Knowledge Instrument at 6, 12 and 24 months
12. Diabetes self-efficacy measured using the Diabetes Management Self-Efficacy Scale questionnaire at 6, 12 and 24 months
13. Diabetes dietary competence measured using the Perceived Diabetes & Dietary Competence questionnaire at 6, 12 and 24 months
14. Multimorbidity treatment burden measured using the Multimorbidity Treatment Burden Questionnaire at 6, 12 and 24 months
15. Physical activity measured using the short International Physical Activity Questionnaire at 6, 12 and 24 months
16. Physical activity measured using accelerometry at 12 months
17. Diet quality measured using the Diet Quality Questionnaire at 6, 12 and 24 months
18. Health service resource utilisation measured using the adapted Adult Service Use Schedule at 6, 12 and 24 months

**Completion date**

30/06/2027

## **Eligibility**

**Key inclusion criteria**

1. Adult  $\geq 18$  years of age
2. People of Black African, Black Caribbean, Black British, Black other, and Mixed race with either African or Caribbean ancestry
3. Type 2 diabetes
4. HbA1c  $\leq 100$  mmol/mol (or fructosamine  $< 450$   $\mu$ mol for individuals with sickle cell trait/disease)
5. Suitable for group-based training
6. Suitable for participation in physical activity
7. Willing to undergo randomisation
8. Able to provide informed consent

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Mixed

**Lower age limit**

18 years

**Upper age limit**

99 years

**Sex**

All

**Total final enrolment**

**Key exclusion criteria**

1. Current pregnancy
2. Complex medical or lifestyle needs that require personalised advice or for which group-based training is unsuitable e.g. advanced chronic kidney disease
3. Complex learning needs that require personalised advice or for which group-based training is unsuitable e.g. people with learning disabilities
4. Need for language translation services (spoken or written)
5. Unable or unwilling to provide informed consent
6. Current participation in a competing clinical trial

**Date of first enrolment**

15/08/2024

**Date of final enrolment**

31/12/2025

**Locations**

**Countries of recruitment**

United Kingdom

England

**Study participating centre**

**Guy's and St Thomas' NHS Foundation Trust**

Guy's Hospital

Great Maze Pond

London

England

SE1 9RT

**Study participating centre**

**The University of Manchester**

School of Health Sciences

Oxford Road

Manchester

England

M13 9PL

**Study participating centre**

**The University of Warwick**

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Coventry

England  
CV4 7AL

**Study participating centre**  
**Manchester University NHS Foundation Trust**  
Cobbett House  
Oxford Road  
Manchester  
England  
M13 9WL

**Study participating centre**  
**West Midlands Regional Research Delivery Network (RRDN)**  
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-  
England  
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**Study participating centre**  
**University Hospitals of Leicester NHS Trust**  
Leicester Royal Infirmary  
Infirmary Square  
Leicester  
England  
LE1 5WW

## **Sponsor information**

**Organisation**  
University of Leicester

**ROR**  
<https://ror.org/04h699437>

## **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

Data that support the findings of this trial will be available from the CI (Prof. Louise Goff; louise.goff@leicester.ac.uk) upon reasonable request.

## IPD sharing plan summary

Available on request

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Protocol article</a>		30/09/2025	01/10/2025	Yes	No
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes
<a href="#">Protocol file</a>	version 1.1	09/05/2024	19/07/2024	No	No
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes