

Testing a traditional food-based intervention for weight loss and type 2 diabetes remission

Submission date 10/09/2023	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
Registration date 13/09/2023	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
Last Edited 10/09/2024	Condition category Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Individual participant data

Plain English summary of protocol

Background and study aims

This study will evaluate a low-cost, easily accessible food-based treatment for type 2 diabetes in overweight patients. The diet treatment uses only traditional local Nepali foods, designed to provide all the essential vitamins and minerals, in amounts to cause a weight loss of 10 kg in 8 weeks, if it is followed carefully.

Who can participate?

People living in Kathmandu, aged 30-70 years, with type 2 diabetes up to 5 years after diagnosis, not on high-dose insulin treatment, who are overweight.

What does the study involve?

The researchers will assess how many people are able to follow the diet plan to achieve remission of their diabetes (their blood tests show they no longer have diabetes, while off anti-diabetes medications for at least 2 months).

What are the possible benefits and risks of participating?

There may be other benefits from weight loss, including better blood pressure control, and improved quality of life. There are no important hazards or risks from participation, but diet control is always hard and requires commitment.

Where is the study run from?

Metro Hospital (Kathmandu)

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

September 2020 to December 2023

Who is funding the study?

All Saints Educational Trust (UK)

Who is the main contact?

Prof. Michael Lean, mike.lean@glasgow.ac.uk

Contact information

Type(s)

Principal Investigator

Contact name

Prof Michael Lean

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Additional identifiers

EudraCT/CTIS number

Nil known

IRAS number

ClinicalTrials.gov number

Nil known

Secondary identifying numbers

Nil known

Study information

Scientific Title

Hospital-based Diabetes Remission Clinical Trial in Nepal (Ho-DiRECT-Nepal): a food-based educational and home-economics intervention for type 2 diabetes remission

Acronym

Ho-DiRECT-NEPAL

Study objectives

A diet intervention, based on the UK Diabetes Remission Clinical Trial (DiRECT), but using only low-cost traditional foods, will generate significant weight losses from baseline, and remissions of recent-onset type 2 diabetes, in people attending hospital-based diabetes clinics in Kathmandu, Nepal

Ethics approval required

Ethics approval not required

Ethics approval(s)

Opinions were sought from the Nepal Health Research Council (NHRC) and Kathmandu University Institutional Review Committee (IRC), who concluded that with no randomisation, and with no new experimental intervention, this study would be considered a service evaluation, which does not require ethical approval.

Study design

Single-centre pragmatic single-arm evaluation

Primary study design

Interventional

Secondary study design

Non randomised study

Study setting(s)

Hospital

Study type(s)

Efficacy

Participant information sheet

Not applicable (low literacy population)

Health condition(s) or problem(s) studied

Remission of type 2 diabetes in overweight patients

Interventions

Patients aged 30-70 years attending hospital diabetes clinics who have had type 2 diabetes up to 5 years, and with Body Mass Index above 23 kg/m² will be invited to participate. Participants will be educated about T2D and its multimorbid complications and offered a dietary intervention program. The health workers and nutritionists will contact the participants to provide support twice weekly up to week 10, and then 4-weekly. Anthropometric measurements and biochemistry will be conducted routinely. Weight-control support will continue irrespective of T2D remission, aiming to limit related multimorbid conditions. Patient recruitment and dietary intervention will be conducted within the care of diabetes specialists and nutritionists/dietitians.

The dietary program:

1. A Total Diet Replacement (TDR) Phase for weight loss induction, which will last for the first 8 weeks, using only low-cost traditional foods, similar to the Scottish 'No Doubts Diet' based on porridge and lentil soups
2. Reintroduction of meals, again using only low-cost traditional foods, for weight loss maintenance

Intervention Type

Behavioural

Primary outcome measure

Remission of type 2 diabetes (HbA1c <48 mmol/mol [<6.5%]) after 6 months

Secondary outcome measures

1. Body weight measured with scales at 3, 6 and 12 months
2. HbA1c measured by standard laboratory method at 6 and 12 months
3. Blood pressure measured by electronic sphygmomanometer at 6 and 12 months
4. Microalbuminuria measured by dipstick and standard laboratory method at 6 and 12 months
5. Liver function tests measured by standard laboratory method at 6 and 12 months
6. Ultrasound liver fat measured at 6 and 12 months (if available)
7. Quality of life measured using WHO-BREF – QoL (Nepali version) at 6 and 12 months
8. Glucose-lowering and antihypertensive medications prescribed at 3, 6 and 12 months
9. Participant experience measured by qualitative interviews in a subset at different study stages

Overall study start date

01/09/2020

Completion date

01/12/2023

Eligibility

Key inclusion criteria

1. Age 30-70 years
2. Men and women
3. Type 2 diabetes of duration up to 4 years since diagnosis
4. Not insulin-dependent/type 1 diabetes
5. Body mass index >23 kg/m²

Participant type(s)

Patient

Age group

Adult

Lower age limit

30 Years

Upper age limit

70 Years

Sex

Both

Target number of participants

80

Total final enrolment

85

Key exclusion criteria

1. Weight loss of >5 kg within the last 6 months
2. Pregnancy/lactation
3. MI or stroke in the past 3 months
4. Chronic pancreatitis, alcohol dependence, psychiatric illness and learning disability
5. Patients using insulin more than 30 units basal, or other complex insulin regimen

Date of first enrolment

29/03/2022

Date of final enrolment

19/09/2022

Locations

Countries of recruitment

Nepal

Study participating centre

Metro Hospital

Kathmandu

Nepal

P8RQ+42C, Kathmandu 44600

Sponsor information

Organisation

Kathmandu Medical College Teaching Hospital

Sponsor details

Dhulikhel

Dhulikhel

Nepal

45200

+977 (0)11 490497

birajmk@kusms.edu.np

Sponsor type

Hospital/treatment centre

Website

<http://www.kmc.edu.np/>

ROR

<https://ror.org/00tcmr651>

Funder(s)

Funder type
Charity

Funder Name
All Saints Educational Trust

Alternative Name(s)

Funding Body Type
Private sector organisation

Funding Body Subtype
Other non-profit organizations

Location
United Kingdom

Results and Publications

Publication and dissemination plan
Planned publication in a high-impact peer-reviewed journal, and presentations at scientific and professional meetings in Nepal and internationally.

Intention to publish date
30/11/2024

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study will be available upon request from Prof. Mike Lean (mike.lea@glasgow.ac.uk). Data will be anonymised and provided to researchers for any reasonable scientific purpose for at least 10 years.

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol file			13/09/2023	No	No
Results article		17/08/2024	10/09/2024	Yes	No