**Funding Source: Wellcome Trust grant**

**Proposed start date: 1 October 2022**

**Closing date for applications: 8 April 2022**

**Eligibility:** UK applicants only

**Department/School:** Health Sciences

**Supervisors:** Dr Joseph Henson (jjh18@leicester.ac.uk), Professor Melanie Davies (Melanie.davies@uhl-tr.nhs.uk), Dr Michelle Hadjiconstantinou (mh333@leicester.ac.uk)

**Project Title:** Exercise in younger adults with type 2 diabetes: optimising the response using a personalised approach

**Project Description:**

The prevalence of type 2 diabetes in young adults (<40 years old) is dramatically increasing. Onset of diabetes at a younger age is associated with an extreme risk phenotype, longer disease exposure and increased risk for chronic complications, whilst affecting more individuals from deprived areas, minority ethnic groups and those living with obesity.

Exercise training and increased physical activity are important therapies in the management of type 2 diabetes. However, there is emerging evidence that younger adults with type 2 diabetes may suffer a blunted response to exercise training.

The successful candidate will explore the therapeutic ability of personalised lifestyle advice to improve fitness and overall health in young adults with type 2 diabetes. This will be achieved utilising epidemiology, experimental, behavioural science and digital health methodologies. This novel approach to tailoring lifestyle advice (in particular exercise) represents an unmet clinical need and is an essential strategy to improve health outcomes in this burgeoning patient population.

The successful candidate will be hosted in the Leicester Diabetes Centre, which has a leading applied health research unit, with an international reputation for research in the field.

**References:**

1. Young People with Type 2 Diabetes, 2019-20. National Diabetes Audit. <https://digital.nhs.uk/data-and-information/publications/statistical/national-diabetes-audit/young-people-with-type-2-diabetes-2019--20>
2. Sargeant JA, Brady EM, Zaccardi F, Tippins F, Webb DR, Aroda VR, Gregg EW, Khunti K, Davies MJ. Adults with early-onset type 2 diabetes (aged 18–39 years) are severely underrepresented in diabetes clinical research trials. Diabetologia. 2020 Aug;63:1516-20.
3. Lascar N, Brown J, Pattison H, Barnett AH, Bailey CJ, Bellary S. Type 2 diabetes in adolescents and young adults. The lancet Diabetes & endocrinology. 2018 Jan 1;6(1):69-80.
4. Sargeant JA, Jelleyman C, Coull NA, Edwardson CL, Henson J, King JA, Khunti K, McCarthy M, Rowlands AV, Stensel DJ, Waller HL. Improvements in Glycemic Control After Acute Moderate-Intensity Continuous or High-Intensity Interval Exercise Are Greater in South Asians Than White Europeans With Nondiabetic Hyperglycemia: A Randomized Crossover Study. Diabetes Care. 2021 Jan 1;44(1):201-9.
5. Jelleyman C, Yates T, O'Donovan G, Gray LJ, King JA, Khunti K, Davies MJ. The effects of high‐intensity interval training on glucose regulation and insulin resistance: a meta‐analysis. Obesity reviews. 2015 Nov;16(11):942-61.

**Funding details:**

*Students on this programme will be supported by a generous funding package. This will include:*

* *Postgraduate research fee waiver at standard College of Life Sciences UK rates for three years of the PhD*
* *Wellcome Trust stipend covering your salary for all three years of the PhD*
* *Research grant for training, research and travel costs*

**Entry requirements:**

Applicants are required to hold/or expect to obtain a UK Bachelor Degree 2:1 or better in a relevant subject.

The University of Leicester [English language](https://le.ac.uk/study/research-degrees/entry-reqs/eng-lang-reqs) requirements apply where applicable.

This programme is open to:

* allied health professionals
* nurses
* midwives
* junior doctors
* general practitioners

Fellows recruited to the programme must be practicing healthcare professionals and be registered with a national professional regulatory body (e.g. the General Medical Council, Health and Care Professions Council) in the UK/Republic of Ireland.

Medical graduates must be registered on a UK/Republic of Ireland specialist training programme or must be a registered GP.

All fellows must have completed their undergraduate degree and be registered with the relevant professional body.

**Application advice:**

For full application advice and the link to our online application please go do: <https://le.ac.uk/study/research-degrees/funded-opportunities/leicestershire-healthcare-inequalities-improvement-dtp>

With your application, please include:

* CV
* Personal statement explaining your interest in the project, your experience and why we should consider you
* Degree Certificates and Transcripts of study already completed and if possible transcript to date of study currently being undertaken
* Evidence of English language proficiency if applicable
* In the reference section please enter the contact details of your two academic referees in the boxes provided or upload letters of reference if already available.

In the funding section please specify that you wish to be considered for **Wellcome Trust LHII DTP**

In the proposal section please provide the name of at least one or at most two of the projects you are interested in (please indicate title and name of supervisor).

Upload the Widening Participation form (found on the above link) to the proposal section

**Project / Funding Enquiries to :** **lhiip@leicester.ac.uk**

**Application enquiries to** **pgradmissions@le.ac.uk**

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