

A new study to show why young people with diabetes develop heart damage

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A new study led by a research team at Leicester's Hospitals hope to reveal, using magnetic resonance imaging (MRI), why young people with Type-2 diabetes develop heart damage.

The research team, led by Dr Gerry McCann, Consultant Cardiologist at Leicester's Hospitals and NIHR Fellow and Professor Melanie Davies, Honorary Consultant at Leicester's Hospitals, Director of the Diabetes Centre and Professor of Diabetes Medicine at the University of Leicester, are going to use MRI scanning to determine what causes early [heart failure](#) in 100 younger adults with diabetes.

The study will randomly allocate patients to different treatment arms. The first group will receive optimal blood sugar lowering treatment and lifestyle advice. The second, a very [low calorie diet](#) and the third, moderate intensity exercise training. The research team hope that conducting MRI scans throughout this period will indicate whether early [heart damage](#) can be completely reversed.

Dr McCann stated: "Patients with diabetes are four times more likely to develop heart failure and other circulation problems. Younger diabetics have the greatest life-time risk of complications and death. It is essential that we develop tools to diagnose heart failure early and effective treatments to prevent this serious life threatening condition progressing. This NIHR award will see Leicester's cardiovascular and diabetes research units working together to combat heart failure developing in patients with diabetes."

It is hoped that by using the evidence produced by the MRI scans to compare the different treatment methods, it will lead to better treatments that prevent hospitalisation with heart failure and premature deaths.

Professor Davies noted: "We have seen a dramatic increase in the numbers of people developing Type-2 [diabetes](#) at a younger age. Our previous work has shown that younger people already have evidence of heart damage. We want to see if we can intervene and reverse these really worrying changes.

"I am delighted that we have been awarded this prestigious award funding to allow us to carry out this important and innovative work in Leicester."

Provided by University of Leicester

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