



News Release

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Transplant therapy helping Type 1 diabetes patients, study shows

People with Type 1 diabetes are being helped by a new transplant therapy that uses cells from the organ that makes insulin, a study has shown.

Patients who have received pancreas cells from donor organs have shown an improved quality of life, researchers say.

The technique aims to combat hypoglycaemia – a drop in blood sugar triggered in patients with Type 1 diabetes on insulin treatment, which can prove fatal.

Type 1 diabetes is caused by the loss of cells in the pancreas that produce a hormone – called insulin – which decreases blood sugar levels.

People with the condition are prescribed insulin to maintain a healthy blood sugar level. However, severe hypoglycaemia affects one in four patients on insulin treatment for Type 1 diabetes, researchers say.

Patients who have repeated episodes of hypoglycaemia may have less severe symptoms – such as dizziness, sweating and blurred vision – and not realise their blood sugar is dangerously low. This can lead to multiple health problems, the suspension of driving licences for safety reasons, and even loss of employment.

Replacing cells from the region of the pancreas that produces insulin – known as the Islets of Langerhans – is an effective way of preventing hypoglycaemia, the team says.

Clinicians found islet transplants decreased hypoglycaemia among people with Type 1 diabetes and restored the warning symptoms of the condition, making it easier for patients to prevent an episode.

Type 1 diabetes affects people from all sections of society equally. However, people from the lowest socioeconomic groups are at the greatest risk of becoming hypoglycaemic, researchers say.

The team found three quarters of patients referred for transplants were from economically disadvantaged groups. The team says the programme is reaching those people that require treatment most urgently, and these patients go on to live healthier lives and have improved employment opportunities.

The Scottish Islet Transplant Programme is funded by the National Health Service and is free to patients at the point of care.

The work was carried out by researchers at the University of Edinburgh, The Islet Transplant Team at the Edinburgh Royal Infirmary, and the Scottish National Blood Transfusion Service's Islet Isolation Laboratory.

The study, published in the journal *Diabetologia*, was based on the outcomes of a clinical programme funded by charities including Diabetes UK, Diabetes Research and Wellness Foundation, and the Juvenile Diabetes Research Foundation.

Dr Shareen Forbes, of the University of Edinburgh's School of Clinical Sciences, who led the study, said: "In the UK we have the first nationally funded islet transplant programme. Our programme in Scotland reaches the people that need these transplants the most and has excellent results which transforms the quality of life for these people."

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