

Scientists discover a new way to treat type 2 diabetes

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Scientists discover a new way to treat type 2 diabetes . Credit: University of Aberdeen

Medication currently being used to treat obesity is also proving to have significant health benefits for patients with type 2 diabetes. A new study published today in *Molecular Metabolism* explains how this therapeutic benefit for type 2 diabetes is achieved by acting in our brain.

Scientists from the University of Aberdeen Rowett Institute, in collaboration with teams from the Universities of Cambridge and Michigan, have discovered that the medication Lorcaserin acts in the

brain to improve type 2 diabetes by modifying the activity of neurones that help to regulate [blood glucose levels](#).

Lorcaserin is prescribed to help patients lose weight and works by regulating how hungry we feel. However, researchers have discovered that as well as doing this, the drug can also reduce [glucose levels](#) in the body and increase the body's cells sensitivity to insulin. When the body fails to produce enough insulin or the body's cells fail to react to insulin this leads to Type 2 diabetes meaning that glucose remains in the blood rather than being used as fuel for energy.

Professor Lora Heisler, who is leading the Aberdeen team, explains: "Current medications for type 2 diabetes improve symptoms of this disease by acting in the body. We have discovered that this obesity drug, [lorcaserin](#), acts in the brain to improve type 2 diabetes.

"Lorcaserin targets important brain hormones called pro-opiomelanocortin (POMC) peptides, which are responsible for regulating appetite. So as well as sending messages telling us we are full and no longer need to eat, leading to weight loss, the POMC hormones also activate a different [brain](#) circuit that helps keep our blood [glucose](#) in check.

"This discovery is important because type 2 diabetes is an incredibly prevalent disease in the modern world and new treatment choices are needed."

The leader of the Cambridge research team Dr Mark Evans added: "Of course, more research is needed, but these promising findings provide a completely new direction for type 2 [diabetes](#) drug treatment, which may offer hope to individuals struggling with this disease."

More information: Luke K. Burke et al. Lorcaserin improves

glycemic control via a melanocortin neurocircuit, *Molecular Metabolism* (2017). [DOI: 10.1016/j.molmet.2017.07.004](https://doi.org/10.1016/j.molmet.2017.07.004)

Provided by University of Aberdeen

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