

# Diabetes remission diet also lowers blood pressure and reduces need for medication

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New research has shown that if people achieve and maintain substantial weight loss to manage their type 2 diabetes, many can also effectively control their high blood pressure and stop or cut down on their anti-

hypertensive medication.

A weight management programme, developed by researchers at the Universities of Glasgow and Newcastle for the Diabetes UK-funded Diabetes REmission Clinical Trial (DIRECT), has proved effective at lowering [blood pressure](#) and reducing the need for anti-hypertensive medications, as well as bringing remission of type 2 diabetes.

The programme involves an initial 12 weeks on a nutritionally complete formula diet (low calorie soups and shakes) which will induce [weight loss](#) of over 15 kg (over 2 stones) if followed fully. Diabetes and [blood pressure drugs](#) were stopped at the start, and only re-started if [blood sugar](#) or blood [pressure](#) rose.

The weight loss phase is followed by support to choose foods and eat wisely for weight loss maintenance. Maintaining the 15 kg weight loss allowed 8 out of 10 people to become free from type 2 diabetes, without the need for diabetes medications for at least 2 years.

This study, published in the journal *Diabetologia* (the journal of the European Association for the Study of Diabetes [EASD]), looked at 143 people who started the diet programme, with more than half (78 people) on tablets for [high blood pressure](#) at the start (and 44 on two or more drugs). The researchers found that, overall, average blood pressure fell steadily as people lost weight. And blood pressure remained lower after the formula diet period finished, and then at 12 and at 24 months.

For those not previously treated for high blood pressure, blood pressures fell sharply from week one. For those who had stopped their blood pressure tablets, blood pressure still fell, although more slowly. Just over a quarter (28%) needed to reintroduce a blood pressure [tablet](#) during the formula diet period. However, researchers also found that the same proportion of participants (28%) were able to remain off their

medications for at least two years.

Prof Mike Lean, from the University of Glasgow, said: "We wanted to evaluate the safety and efficacy of withdrawing blood pressure [medication](#) when beginning our specially-designed weight-loss programme for type 2 diabetes, and we are really pleased with the results.

"Our study shows that, in addition to possible remission from type 2 diabetes, there are other very important health benefits, as weight loss is a very effective treatment for hypertension and its associated serious health risks.

"Currently, over half of all the 4.5 million people with type 2 diabetes in UK also require tablets for hypertension, to reduce serious vascular complications. Being overweight is the main cause, and losing weight can bring a remission from hypertension for many, as well as a remission of diabetes. Withdrawing blood pressure medications is safe, provided people lost weight and blood pressure was checked regularly, in case tablets needed to be reintroduced.

"The DiRECT trial was done entirely in primary care. The evidence shows that GPs can safely offer an evidence-based intensive weight management intervention, aiming for substantial weight loss and remission of type 2 diabetes. The study further highlights the links between diet, weight, type 2 diabetes and hypertension, and how long-term support to maintain weight loss is vital."

Professor Roy Taylor, from Newcastle University, said: "Guidelines encourage doctors to start tablets but there have been few demonstrations of how tablets can be stopped.

"My patients, like so many, do not like swallowing multiple tablets, and

this study is important as we can now reassure them that stopping blood pressure tablets is not only safe but also good for their health. We've shown that when substantial weight loss is achieved and maintained, patients can effectively manage both their blood pressure and type 2 diabetes without drugs."

Dr. Wilma Leslie, University of Glasgow, said: "The potential to no longer need medications for blood pressure and diabetes is a big incentive for people. We hope our results will reassure health professionals that this is possible, and encourage the wider provision of diabetes remission services."

Dr. Elizabeth Robertson, Director of Research at Diabetes UK, said: "These important results show that the Diabetes UK-funded DiRECT low-calorie, weight management programme not only helps some people put their type 2 diabetes into remission, but can also lower blood pressure, allowing some people to safely stop taking their blood pressure medication.

"We're delighted to see more evidence of the life-changing impact of the DiRECT programme on people's health. This makes us even more determined to make sure as many people as possible have access to type 2 [diabetes remission](#) services."

The study, "Antihypertensive medication needs and [blood](#) pressure control with [weight](#) loss in the Diabetes Remission Clinical Trial (DiRECT)," is published in *Diabetologia*.

**More information:** Wilma S. Leslie et al, Antihypertensive medication needs and blood pressure control with weight loss in the Diabetes Remission Clinical Trial (DiRECT), *Diabetologia* (2021). [DOI: 10.1007/s00125-021-05471-x](https://doi.org/10.1007/s00125-021-05471-x)

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