

# Research informs best outcomes on type 2 diabetes treatment

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New research updates guidance to clinicians on how best to treat patients with type 2 diabetes who do not respond to glucose-lowering medication.

Until now, it has been unclear what clinicians should do if patients have little or no [response](#) to recently-introduced medication. Some guidelines currently suggest stopping [treatment](#) that appears to be ineffective.

Now, a team from the University of Exeter has analysed data from 55,530 patients in the UK Clinical Practice Research Datalink (CPRD) with type 2 diabetes. All of them were starting their second or third [glucose](#) lowering medication. The team looked at average blood sugar levels over a two to three month period, a measure known as HbA1c. For those with no HbA1c improvement or a limited response after six months treatment, the team compared the outcome 12 months later for those who continued their treatment unchanged, switched to new treatment, or added new treatment.

The authors found that there was almost no difference in effectiveness of switching to a different glucose lowering medication or continuing the same medication unchanged. The only way to effectively improve blood glucose in this situation was to add another therapy. This was linked to a substantially better reduction in blood sugar levels either than switching treatment or continuing unchanged.

The study, published in *BMC Medicine*, was funded by the UK Medical Research Council and supported by NIHR.

Lead author Andy McGovern, of the University of Exeter Medical School, said: "Our study is the first to examine the impact of treatment changes in people with an initially limited response to a new glucose lowering therapy. It's common to have a limited response six months after starting a new glucose-lowering [medication](#), but this is likely to represent blood glucose variation that is unrelated to the treatment, rather than lack of biological response to a therapy."

Senior author Angus Jones said "Where a glucose lowering therapy does

not appear to be effective on initial HbA1c testing, changing agents does not improve [blood](#) glucose control. Our research concludes that the initial agent should therefore be continued, as long as it is well tolerated, and an additional [therapy](#) should be added. This is an important change to practice as many guidelines have previously suggested switching to a different treatment where measures of [blood glucose](#) control do not initially improve"

The full paper is titled "What to do with diabetes therapies when HbA1c lowering is inadequate: add, switch, or continue? A MASTERMIND study."

**More information:** What to do with diabetes therapies when HbA1c lowering is inadequate: add, switch, or continue? A MASTERMIND study, *BMC Medicine* (2019). [DOI: 10.1186/s12916-019-1307-8](https://doi.org/10.1186/s12916-019-1307-8)

Provided by University of Exeter

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