

# Could apps be the answer to self-managing diabetes?

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Credit: Cardiff University

Smart phone apps could offer patients with type 2 diabetes a highly effective method of self-managing their condition, concludes a study by Cardiff University.

A systematic review of 14 previous studies found that all had reported a reduction in average blood glucose levels in patients that used an app, compared to those who did not, with an approximate reduction in HbA1c (glycated haemoglobin) of about 0.5%. The analysis also found that younger patients were more likely to report a benefit. No evidence

was found to support the use of apps in type 1 diabetes, but further research is needed to substantiate this.

Dr Ben Carter from Cardiff University's School of Medicine said: "With the number of patients globally with diabetes expected to rise to over 500m by 2030, there is an urgent need for better self-management tools.

"As we enter an era where portable technology is increasingly used to improve our lifestyles, as can already be seen with physical activity technology, apps can offer a large percentage of the world's population a low cost and dynamic solution to type 2 diabetes management."

Diabetes management includes monitoring and managing blood glucose levels. This is done by controlling diet and knowing how foods affect blood sugar. For many people with diabetes, it also involves taking medications that help manage blood sugar levels. Current diabetes apps allow patients to enter data and provide feedback on improved management. They can provide low cost, interactive and dynamic health promotion by allowing patients to track medications, set reminders, plan meals, find recipes and plan for doctor's appointments and blood tests.

Dr Carter added, "By the end of the decade it is predicted that global usage of mobile phones will exceed 5 billion, so apps, used in combination with other self-management strategies, could form the basis of diabetes education and self-management."

The study comprised of a [systematic review](#) of 14 diabetes type 2 randomised controlled trials, involving 1,360 [patients](#). This type of research provides the strongest evidence for drawing causal conclusions because it draws together all of the best evidence.

Do Mobile Phone Applications Improve Glycemic Control (HbA1c) in the Self-management of Diabetes: A Systematic Review, Meta-analysis,

and GRADE of 14 Randomized Trials, is published in *Diabetes Care*.

Provided by Cardiff University

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