



Healthcare  
Improvement  
Scotland

**SHTG**  
Advice on health  
technologies

# Plain Language Summary

Digital prevention programme for people at risk of developing type 2 diabetes | December 2023

## What is type 2 diabetes?

Type 2 diabetes (T2D) is a condition that causes the level of sugar (or glucose) in the blood to be too high. This happens either when the body does not produce enough of a hormone called insulin, or when the body does not react to insulin.

T2D is usually a lifelong condition that affects a person's everyday life. It can increase a person's risk of serious health problems, for example, with their eyes, heart, and nerves.

T2D is linked to being overweight, having an inactive lifestyle or having a family history of diabetes. People with high blood glucose levels but who do not have diabetes have an increased risk of developing T2D.

## What are digital diabetes prevention programmes?

Digital diabetes prevention programmes (DDPPs) provide information, advice, and support to help people make healthier lifestyle choices using technologies such as smartphone apps, websites, videoconferencing and devices like smartwatches. They may be offered to people at risk of developing T2D to reduce this risk.

## Why is this important?

The number of people being diagnosed with T2D is increasing every year. Having T2D increases a person's risk of developing serious illnesses (for example, heart disease). This affects a person's quality of life and places demands on the NHS for treatments.

Poor diet, lack of physical activity and obesity can contribute to the development of T2D. Helping people to make healthier lifestyle choices and change some of their behaviours, can prevent or delay the onset of T2D in people at risk.

## What we did

Diabetes prevention programmes have traditionally been delivered in-person within a group setting. We have assessed whether these programmes work as well when they are delivered using digital technologies like in DDPPs. We looked for studies that tell us how well DDPPs work, and whether they offer good value for money.

## What we found

We found studies from England which suggest that DDPPs are as effective as traditional in-person programmes in reducing blood glucose levels (HbA1c) and helping people lose weight.

DDPPs reduced the rate at which people with high, but non-diabetic, levels of blood glucose go on to develop T2D. Lifestyle interventions which prevent T2D have generally been found to offer good value for money, and this is expected to be the case for digital programmes as well.

We found that health coaches play an essential role in delivering DDPPs. Health coaches are healthcare professionals who support people enrolled in DDPPs. People were more likely to set goals for themselves and engage with the programme if they received support from a health coach in combination with other tools.

Compared with in-person programmes, DDPPs have greater reach and are more accessible to some groups, for example, younger people or people with work or carer commitments.

Some more research on DDPPs would be helpful, so that they can be further improved. For example, we need a better understanding of the main factors which encourage people to start and complete DDPPs.

## What is our conclusion?

DDPPs work as well as in-person programmes in helping people make healthier lifestyle changes and reduce their risk of developing T2D. When offered alongside traditional options, DDPPs may be able to reach more people and provide better access to some population groups.

When developing DDPPs for use, it is important to understand why people take up and engage with the programme.

## What next?

This report will be shared with the Accelerated National Innovation Adoption collaborative to inform their value case on the potential for a DDPP across Scotland.

This plain language summary has been produced based on SHTG Assessment of digital prevention programme for people at risk of developing type 2 diabetes, December 2023.