

Avoiding type 2 diabetes – there is more than one diet to choose from

19 April 2018, by Nicola Guess



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If you have high blood glucose, but not high enough to be diagnosed with diabetes (so-called [prediabetes](#)) you may have been advised by your doctor to [lose weight and to eat less fat and more fibre](#). If this sounds a bit one-size-fits-all, you may be encouraged by the fact that other diets may work just as well, if not better, at warding off full-blown [type 2 diabetes](#).

The advice to eat less fat, more fibre and lose a moderate amount of weight comes from a series of [large-scale, randomised controlled trials](#) showing that weight loss following this approach helps prevent type 2 [diabetes](#) in up to two thirds of people. However, the most important predictor of prevention in these trials was not the diet itself, but [the weight loss](#). The more weight a person loses, the lower their risk of type 2 diabetes. Even more exciting, weight loss prevents type 2 diabetes [even if the person regains the weight](#).

So what diets could be equally or more effective than a low-fat, high-fibre diet? Low-carbohydrate diets have been shown to produce [more weight loss in the short-term](#). If weight loss is the primary

driver of type 2 diabetes prevention, then a well-formulated low-carbohydrate diet (high in non-starch vegetables, fruits, nuts and seeds) would probably be as effective as the current standard advice.

There is also growing evidence that adding protein to the diet may help [control blood glucose levels](#), [lower liver fat](#) (strongly linked to [insulin](#) resistance) and even help the [pancreas produce insulin](#). The latter point is important because when a person has prediabetes, they lose the first-phase insulin response. This is the [rapid spike of insulin](#) that is produced as soon as blood glucose level rises.

The first-phase insulin response is a critical function that rapidly suppresses glucose release from the liver. It also encourages glucose to be taken up by the muscles after you eat. Without it, hyperglycaemia results and [glucose](#) stays [elevated for several hours after the meal](#). Emerging evidence seems to indicate the protein somehow seems to help the pancreas increase this initial insulin spike. Small but promising trials suggest that increasing protein may be [better than a low-protein diet](#) at controlling [blood glucose](#) levels.



High protein seems to help control blood glucose levels. Credit: Syda Productions/Shutterstock.com

A recent [large clinical trial](#) (DiRECT), as well as a series of smaller [physiological trials](#), have shown that people with type 2 diabetes who rapidly lose a lot of weight are able to restore the first-phase insulin response. The effect seems to be greatest in people who haven't had [type 2 diabetes for long](#). This suggests that the effect would be greater still in people with prediabetes.

The reduction in calories consumed seems to be an [independent driver](#) of improved pancreatic function. In studies where people consume only 400kcal a day for seven days, the [weight loss](#) is minimal, but pancreatic function [seems to improve just the same](#).

More choice

A recent large [study](#) from Spain (PREDIMED) showed that a Mediterranean diet with extra virgin olive oil and added nuts helped prevent type 2 diabetes even though people did not lose [weight](#). We don't know for sure how extra [virgin olive oil](#) or nuts could help prevent type 2 diabetes, but there is a growing body of research suggesting that a group of compounds called [polyphenols](#) found in these foods (and also coffee, tea, berries and red wine) have a variety of beneficial health effects. [Potentially](#) these polyphenols may help reduce the inflammation that can damage the pancreatic cells and cause [insulin resistance](#).

The "best" diet is, of course, one that a person enjoys and fits with their lifestyle. So the dietary approaches above may not only be more effective than a low-fat, high-fibre [diet](#) (and this should be tested in large-scale trials), but would provide more choice for people looking to stop their prediabetes morphing into type 2 diabetes.

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