

## Got pre-diabetes? Here's five things to eat or avoid to prevent type 2 diabetes

Written by Clare Collins, Professor in Nutrition and Dietetics, University of Newcastle

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Lifestyle changes can prevent full-blown type 2 diabetes. from [www.shutterstock.com.au](http://www.shutterstock.com.au)

[Pre-diabetes](#) is diagnosed when your blood sugar levels are higher than normal, but not high enough to be classified as having [type 2 diabetes](#) . Pre-diabetes is an early alert that your diabetes risk is now very high. It is ten to 20 times greater compared to the risk for those with normal blood sugars. What you choose to eat, or avoid, influences this risk.

### Diabetes Prevention Programs

Studies around the world, including Finland, China and the US have shown diabetes prevention programs prevent or delay progression to type 2 diabetes. When people [eat more healthily](#) , [drop their body weight by 5-10%](#) and walk for 30 minutes a day, five days a week, [they lower the risk](#) of developing type 2 diabetes by about 58% over two years.

We recently gave 101 men with pre-diabetes [a self-directed diabetes prevention program over six months](#) . We found they were able to reduce their portion size of potato and meat and improve their variety of health foods. They were able to reduce the proportion of energy coming from junk food by 7.6% more than the group who didn't change their diet and got a four-point increase in their scores from the [Healthy Eating Quiz](#) . These improved eating patterns were associated with [an average weight loss of 5.5kg and better blood sugar regulation](#) .

This is great news for the [318 million adults around the world](#) , including two million Australians, who have pre-diabetes.

The original diabetes prevention studies started in the 1980s. Back then the advice was to reduce your total kilojoule intake by [eating less fat](#) , especially from take-away, processed and fried foods and to eat more foods rich in carbohydrate, such as vegetables, fruit and wholegrains. That advice worked because the world

[did not have the huge numbers of ultra-processed foods and drinks](#)

, many of which claim to be healthy but are actually high in kilojoules.

## What do people in diabetes prevention programs eat?

Drilling down to exactly what you should or shouldn't eat to beat type 2 diabetes is confusing. Less fat? More protein? Less carbs? More wholegrains? Here is what the research suggests.

### 1. More vegetables and fruit

In a [meta-analysis of observational studies that included over 179,000](#) people there was a lower risk of developing type 2 diabetes in those who had the highest intakes of vegetables and fruit compared to the lowest. Drilling down to specific fruit and vegetables identified that high intakes of green leafy vegetables like spinach, silverbeet, cabbage, kale, Asian greens, lettuce, rocket, broccoli and watercress had the strongest relationship.

### 2. Ditch the softdrinks

A review of 17 population studies from the US and UK looked at the prospective associations between [drinking sugar-sweetened beverages](#) and developing diabetes. Over ten years, more than 38,000 people developed type 2 diabetes. After adjusting for weight status, every extra sugar sweetened drink per day was associated with a 13% increase in the incidence of type 2 diabetes.

### 3. Plant based diets

A study of about [200,000 adults in the Nurses and Health Professionals study in the US](#) looked at plant food intake and diabetes risk over 20 years. People who had a high intake of plant foods and low intake of animal foods had a 20% lower risk of diabetes, while those with the highest intakes of the most healthy plant foods (whole grains, fruits, vegetables, nuts, legumes, vegetable oils, tea/coffee) had a 34% lower risk of developing type 2 diabetes, even after adjusting for body weight. Among those with high intakes of less healthy plant foods (refined

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grains, potatoes, sweets, fruit juice, sugar-sweetened beverages) there was a 16% higher risk of diabetes.

### 4. Glycaemic Index

Food with a high [glycaemic index](#) (GI) are digested more rapidly leading to a greater increase in blood sugars after eating. The GI value is out of 100 and less than 55 is considered low. In a review of 21 studies there was a small but significant 8% increase in the risk of developing type 2 diabetes for every five unit increase in GI. You can find information on the [GI value of foods here](#)

### 5. Drink more coffee

Coffee, whether caffeinated or decaffeinated, contains bioactive molecules that help regulate blood sugar levels. [Chlorogenic acid](#) improves glucose metabolism and insulin sensitivity, while [caffeic acid](#) boosts the rate muscles use up glucose. This helps explain why [across 28 studies and over one million adults](#), coffee drinkers have a lower risk of type 2 diabetes. For those who drank three or more cups of coffee a day, there was a 21% lower risk compared to those who never or rarely drank it. For those drinking decaffeinated coffee, there was a 6% lower risk for each cup.

## What about low carb diets?

In a review of [four studies with over 85,000 people where 8,000 cases of diabetes](#) developed in the following 20 years, there was a small but significantly greater risk of developing type 2 diabetes in those who had the lowest carbohydrate intakes. It's a good idea to ditch highly processed carbohydrates and refined sugars like molasses, white, brown and raw sugar and other types of [sugar listed on food labels](#) including sucrose, high fructose corn syrup and other refined sugars. However, complex carbohydrates provide fibre, B vitamins and are often fortified with folate and iodine to prevent conditions like neural tube birth defects and goitre. So ditching all carbs could be inviting disaster and needs careful evaluation.

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### Check your diabetes risk

Meanwhile, use the [Diabetes Australia Risk Calculator](#) to check whether you are at risk of pre-diabetes and type 2 diabetes, or talk to your GP.

#### Disclosure

*Clare Collins is affiliated with the Priority Research Centre for Physical Activity and Nutrition, the University of Newcastle, NSW. She is an NHMRC Senior Research fellow. She has received a range of research grants including NHMRC, ARC, Hunter Medical Research Institute, Meat and Livestock Australia, Diabetes Australia, the Heart Foundation. She has consulted to SHINE Australia, Novo Nordisk, Quality Bakers and the Sax Institute. She is a spokesperson for the Dietitians Association of Australia on some specific nutrition issues, including Australia's Healthy Weight Week.*

*Megan Rollo has received research funding from a number of bodies including Diabetes Australia, Hunter Medical Research Institute, New South Wales Government (TechVoucher) and Novo Nordisk, and consulted to the Sax Institute and Quality Bakers Australia Pty Limited. She is affiliated with the Priority Research Centre in Physical Activity and Nutrition at the University of Newcastle and a member of professional organisations including the Dietitians Association of Australia.*

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