PATIENT FACTSHEET: Type 2 Diabetes & Diet
How to prevent and treat type 2 diabetes with nutrition

The world is in a diabetes epidemic

Diabetes currently affects approximately 537 million people worldwide, which is estimated to rise to 700 million people by 2045— that is 12% of the world’s population.

Over 4 million people die each year due to diabetes and its complications.

Type 2 diabetes, which represents 90% of all diabetes, increases the risk of heart attack and stroke, kidney disease, and blindness. Diabetes is the major cause of limb amputations due to nerve damage (1). Yet diabetes and its complications are reversible.

The biggest risk factors for developing diabetes are an unhealthy diet and excess weight – especially around the torso. Losing weight can reverse diabetes (2), with plant-based dietary patterns being the most effective (3).

How is my diabetes influenced by my diet?

Excess body fat is associated with insulin resistance, and lowering body weight improves glucose control and lowers HbA1c (3)

Overnutrition from a diet high in fats, simple sugars, and processed foods promotes adipose tissue (fat cell) dysfunction, resulting in inflammation and impaired insulin signalling (4)

Long-term high protein intake - particularly animal protein - can lead to elevated blood glucose and insulin resistance (5)

Dietary saturated fat contributes to an abundance of circulating free fatty acids (FFA). FFAs cause oxidative stress and insulin resistance, a precursor to type 2 diabetes (6).

Saturated fat is found in meat, dairy products (such as cheese) and palm oils.

Swapping out saturated fat for monounsaturated and omega-3 polyunsaturated fats from nuts and seeds or high-quality carbohydrates such as whole grains can improve insulin sensitivity (7).

"Over 4 million people die each year due to diabetic complications."

International Diabetes Atlas
How is my diabetes influenced by my diet?

| Weight Loss of 5-10% can improve glycaemic control and reduce the need for medications (5). |
| Greater weight loss can place diabetes in remission and lower HbA1c below 6.5% (2). |
| Lowering the calorie density of meals by adding more fruits and vegetables can help avoid overnutrition and weight gain. |
| The foods with the least calorie densities are leafy green vegetables and non-starchy vegetables. |
| The highest calorie-density food is oil. |

Key Take Aways

- The World Health Organization and other international institutions recommend dietary changes as the best way to prevent or delay the onset of type 2 diabetes.
- Obesity, particularly around the midsection, and poor diet are the two greatest risk factors for developing type 2 diabetes.
- The optimal diet is low in saturated fat, added sugars and processed foods. It is high in whole plant foods such as whole grains, legumes, fruits, and vegetables.
- High protein intake, particularly animal protein, is a risk factor for developing type 2 diabetes.

The Science

People who eat meat are at 74% more risk of developing type 2 diabetes than those who never eat meat.

A subsection of the Adventist Health study followed 8401 people over 17 years.

Adventists are typically healthier than the general public because of their lifestyles. As a group, they have a 55% reduced prevalence of diabetes than the general public.

Researchers found the more meat participants consumed, the more they were at risk of developing diabetes.

Those whose diet included weekly meat intake had a 74% increase in the odds of developing diabetes, relative to those who didn’t eat meat at all (14).

Excess protein intake increases the risk of diabetes.

The EPIC-NL study followed 38,000 people for 10 years.

They found that for every 5% of calories from protein, the risk of diabetes increased by 30%.

This risk was found for animal protein, but not for plant protein (15).
What to Eat

Maximise the intake of high-quality whole plant foods such as vegetables, whole grains, legumes, fruits, nuts, seeds, herbs, and spices; your health will benefit from every step towards more whole plant foods.

Low glycaemic index foods such as nuts, whole grains, and legumes help control blood sugar.

Make it a habit to eat beans, chickpeas, lentils, and split peas, as pulses help keep blood sugar levels stable (8).

Regularly include inulin-rich foods such as chicory root and Jerusalem artichoke. Inulin is an indigestible kind of fibre, which may help maintain steady blood sugar levels (9).

Regularly season your food with the spice turmeric, as one of its active compounds curcumin has been shown to improve glycaemic control (10). About ½ tsp per day.

Consult a physician if you are pregnant or lactating (11).

What to Avoid

Avoid refined carbohydrates such as bakery items and snack foods that can be high in saturated fat and added sugars. They also have high calorie densities.

Eliminate or limit all processed foods, and sugar-sweetened foods and beverages.

Eliminate red and processed meat products such as burgers, sausages, bacon, ham, salami, dried meat, canned meat, and pastrami (12).

Eliminate or limit other animal products such as poultry, fish, eggs, cheese, and dairy.

Limit saturated fats, from both animal and plant sources as much as possible (7,13).

Make sure to cover potentially critical nutrients with a wide variety of plant foods or enriched foods and drinks. Supplements, especially vitamin B12, omega-3 and vitamin D, may be helpful. Please consult with your primary care physician before taking any supplements.
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References

2. Lean et al., 2018. Available from: https://doi.org/10.1016/S0140-6736(17)33102-1