

The Dreaded Di

Diet is all where diabetes is concerned and with careful eating you can remain healthy

What is diabetes?

Blood sugar is called glucose and diabetes occurs when there is too much of it. Insulin is a hormone that helps to regulate glucose but if the body fails to produce enough insulin – or if the insulin it does produce can't be used for some reason – then glucose levels can rise, resulting in damaged nerves and blood vessels and long-term problems such as high blood pressure, blindness, heart, liver and kidney disease, ulcers, gangrene, psychiatric disorders and in some cases, coma and death. Diabetes is a major cause of illness and premature death.

A huge problem

Over two million people in the UK have diabetes and perhaps a further 750,000 have it but don't yet know¹. Globally, around 30 million people had diabetes in 1985 but a decade later it was 135 million and the World Health Organisation (WHO) predicts that by 2030 it will hit over 366 million². An epidemic is underway thanks to a growing population, ageing, unhealthy diets, obesity and lack of exercise.

Types of diabetes

Type 1 diabetes is also known as insulin-dependent and juvenile onset diabetes and occurs when the body produces little or no insulin. The peak age for diagnosis is 10-14 years but is becoming ever younger, with a steep rise in the under fives³. Treatment for life is needed, usually insulin injections.

Type 2 diabetes, or non-insulin-dependent diabetes, occurs when the body produces insufficient insulin or can't use the insulin it does produce. It's called late (maturity) onset diabetes because it traditionally tended to affect people over 40 but now, much younger people are affected, including very overweight children. Some people need insulin injections, some can be treated orally while others can control their blood sugar levels through exercise, diet and weight loss.

Gestational diabetes is a third form of the disease which affects some pregnant women but usually disappears after giving birth.

Symptoms

Weight loss, fatigue, excessive thirst and urination and blurred vision, recurrent skin infections and pins and needles (vasculitis) are some of the symptoms although they may not all occur with type 2 diabetes or may be very subtle, going unnoticed for years. Despite this, complications in type 2 diabetes are frequent and can be life-threatening.

Causes

During the Second World War diabetes cases fell markedly in England as people ate less fat and sugar and more plant foods. As rationing came to an end and more processed foods appeared, the rates went up again⁴.

There is now plenty of evidence to show that a typical Western diet of meat, dairy and processed foods, together with a sedentary lifestyle, increases the risk of diabetes. Persistent organic pollutants (POPs) are a more recent risk factor (see *Sourcing Science*, page 8). These man-made environmental poisons are stored in fatty tissues and have infected most of the food chain, particularly fat-containing foods such as milk, meat and oily fish.



diabetes

10 steps to eating well for diabetes

Obesity and diabetes

Being overweight makes it difficult for your body to control blood sugar levels, particularly in 'apple-shaped' people – those with 'central obesity'. Type 2 diabetes accounts for 85-95 per cent of all cases with more than 80 per cent of people being overweight with high blood pressure and high cholesterol levels. A growing obesity epidemic explains the rise in type 2 diabetes but not the staggering five-fold increase in type 1 over the last 20 years⁵.

Autoimmunity

Type 1 diabetes is an autoimmune disease where the immune system's soldiers (T-cells) destroy the body's insulin-producing beta cells in the pancreas. There is probably a genetic element in this as diabetes often runs in families but there is also an environmental trigger, perhaps a virus or something in food.

Animal proteins are a suspect and a study of children from 40 countries showed that meat and dairy foods increased the risk of type 1 diabetes while plant foods reduced it⁶. Canadian research pointed to cow's milk proteins as a trigger⁷ – the theory being that they look very similar to the body's own insulin-producing cells. The body sees the milk proteins as 'invaders' and attacks them but also the body's own similar-looking pancreas cells⁸. Other cow's milk proteins may also play a part – bovine serum albumin⁹ and cow's insulin¹⁰.

Early exposure to cow's milk – and therefore milk proteins – increases the risk of type 1 diabetes in some infants¹¹, children¹² and adolescents¹³. In fact, children with type 1 diabetes are more likely to have been breast fed for less than three months and to have been given cow's milk formula before they were four months old¹⁴. It follows that breast-feeding and avoiding cow's milk in infancy may reduce the risk of diabetes¹⁵.

Treatment

Diet can be used to treat and even prevent diabetes. In the 1970s, both types of diabetic patient were treated with a high-fibre, high-carbohydrate, low-fat diet¹⁶ and the results were astounding. After three weeks, they needed 40 per cent less insulin and cholesterol levels dropped by 30 per cent. Of

- 1 Eat three regular meals a day and avoid skipping meals.
- 2 Eat lots of complex carbs – wholemeal bread, wholemeal pasta, brown rice, noodles, wholegrain cereals, sweet potatoes.
- 3 Cut down on fat – avoid saturated animal fat (butter, lard etc) and go for unsaturated plant-fats (olive oil, soya oil, flax oil, rapeseed oil, hemp oil).
- 4 Increase fruit and veg intake – 5-9 servings a day to boost vitamin and fibre intake.
- 5 Keep your finger on the pulse – lentils, kidney beans and chick peas can help control blood sugar levels.
- 6 Cut down on sugar – sweets, cakes and biscuits and avoid sugary fizzy drinks – water is best. Avoid sugar in tea and coffee – taste buds soon adapt.
- 7 Moderate alcohol – alcohol can disrupt blood sugar levels but moderate amounts (14 units for women, 21 for men) should be fine (unless you've been told otherwise) with at least two alcohol-free days a week. Don't drink on an empty stomach.
- 8 Reduce salt – less than six grams a day to avoid increased blood pressure and a higher risk of heart disease and stroke.
- 9 Take omega-3 – keep a bottle of flaxseed oil in the fridge and stir into dressings, sauces and cooked food – heating disrupts its valuable properties.
- 10 Get active – physical activity helps reduce the risk of high blood pressure, heart disease and controls blood sugar levels and weight. Aim for 30 minutes a day.

the 25 patients with type 2 diabetes, 24 came off medication completely!¹⁷

Full list of references available on request

Professor Anderson, the researcher, promoted this type of diet as an effective, positive and safe treatment for diabetes which also lowers the risk of coronary artery disease¹⁸. Of course, most people would benefit from increasing their fibre intake and cutting fat.

Regular exercise is also crucial as it helps to control weight and helps the body to use insulin more efficiently. Aim for a Body Mass Index (BMI) of less than 25 and take at least half an hour of moderate physical activity most days of the week.

Prevention

One obvious step is to cut down on saturated fat and increase fibre, which means reducing or eliminating meat and dairy and increasing fruit, vegetables, whole grains, pulses, nuts and seeds. The WHO reckons that a moderate reduction in weight and half an hour's walking every day will cut overweight people's diabetes risk in half.²