

The secret disease

Type 2 diabetes works by stealth, writes JOANNA McMILLAN PRICE, but that doesn't mean it can't be treated — or avoided altogether

It's Australia's fastest growing chronic disease, affecting about a million of us, yet half of those who have it don't know it. That's because it creeps up on you slowly with few or only mild symptoms — not enough to send you to your doctor.

You carry on, ignoring the slight tingling in your hands or feet, the infection on your foot that just won't heal, blurred vision ("I must need new glasses"), excessive thirst ("Must be this hot weather") or, in men, performance failure in the bedroom ("Must be down to stress").

You're completely unaware your blood glucose levels are dangerously high and causing damage, particularly to the small blood vessels in your body: in your eyes, in your kidneys and leading to the extremities causing these symptoms.

The blood vessels to your heart are also affected and you are up to three times more likely to have high blood pressure or cholesterol. Your risk of heart disease or stroke is dramatically increased as a result.

Yet in many cases it can be prevented.

The disease isn't just a problem in Australia. Worldwide, some 150 million people currently have diabetes and that figure is expected to double by 2025.

Why? While obviously genes play a part in your individual susceptibility to the disease, such dramatic increases in incidence during a relatively short space of time, in a stable gene pool, must be due to some other cause.

While what we eat has changed considerably over the past 50 years, our physical activity levels have pretty much halved.

There's little doubt our modern lifestyle is to blame — more specifically, the difficulty we have in balancing our energy intake with our energy expenditure. We're surrounded by abundant energy-dense, relatively cheap food, while our environment makes it hard to "use up" calories in physical work.

Overweight and obesity are the more obvious results, but diabetes is a hidden, insidious disease that creeps up on us, seriously affecting our health and shortening lives.

WHAT IS DIABETES?

For our bodies to function normally, blood glucose levels must be kept within a fairly tight band. If glucose levels fall too low, not enough fuel gets around the body, particularly to the brain. You would feel dizzy, be likely to faint and eventually fall into a coma.

In the converse situation, if blood glucose levels are too high, this damages the blood vessels carrying glucose around the body and is a sign that not enough glucose is being taken out of the blood and up into cells to be used as fuel.

The hormone insulin, produced in the pancreas, is intricately involved in the control of blood glucose. Its job is to stimulate the uptake of glucose from the

blood into cells in the liver, muscles and other tissues around the body. Diabetes affects insulin's ability to do this and thus affects the control of blood glucose levels.

There are two main types of diabetes. Type 1 diabetes is a condition where the pancreas fails to produce insulin, or produces only very small amounts. This type of diabetes is usually diagnosed before age 30 and is not related to lifestyle factors.

There is usually an abrupt onset and you can't ignore it. Symptoms include excessive thirst and urination, unexplained weight loss, irritability, weakness and fatigue.

Without lifelong daily insulin injections, Type 1 diabetes is fatal. However, it's far less common, representing only 10-15 per cent of all cases of diabetes.

The far more prevalent form, type 2 diabetes, occurs when the body fails to respond properly to insulin — the cells become insulin-resistant. Initially the pancreas responds by increasing production of insulin, leading to hyperinsulinaemia (high insulin levels in the blood), but eventually the pancreatic cells can't keep up the demand and fail to produce sufficient insulin to control blood glucose levels.

We're focusing on type 2 here since it's affected by lifestyle factors. Therefore we can do something about reducing the risk of developing it and preventing the complications that can result from it.

The onset is far more insidious than type 1 and can take years to develop. This, together with the fact that it can often be controlled by diet and lifestyle modifications, lulls many into believing it's less serious than type 1 diabetes.

Don't be fooled. Untreated or poorly controlled, type 2 diabetes is a slow killer. It will gradually debilitate you, take away your health and wellbeing, and it will get you in the end. >





Your waist measurement can be an indicator of your risk for type 2 diabetes.

WHO'S AT RISK?

If any of the following categories applies to you, you have a high risk of developing type 2 diabetes and should see your doctor for tests:

- You are aged 45 or over and are overweight and/or have high blood pressure and/or have a family member with diabetes
- You are over 55 years of age
- You have heart disease or have suffered a heart attack
- You have recorded a borderline blood glucose level or have been told by your doctor that you have impaired glucose tolerance or impaired fasting glycaemia
- You had high blood glucose levels during pregnancy (gestational diabetes)
- You have polycystic ovary syndrome (PCOS) and are overweight
- You are over 35 years of age and an Aborigine, Torres Strait Islander, or have Chinese, Indian or Pacific Island forebears. Being overweight or obese is clearly a risk

factor but it matters where you're carrying the extra fat. The good news for "pear-shaped" women who carry their extra kilos around the hips and thighs is that this type of fat distribution doesn't seem to increase their risk of diabetes and heart disease. It's the "apple-shaped" individual who's most at risk.

If you're not sure, take a tape measure and measure your waist circumference. Over 100cm for men and over 90cm for women of Caucasian origin dramatically increases your risk (those with Asian blood need to knock 10cm off these cut-offs, while Pacific or Torres Strait Islanders can add 10cm).

PREVENTING TYPE 2 DIABETES

While you can do nothing about your genetic susceptibility, you can control the lifestyle factors that increase your risk of developing the disease. This means maintaining a healthy weight but, in particular, keeping your waist circumference within healthy limits.

Of course, we know this involves eating well, but can we be more specific? The latest research has tried to identify whether specific patterns of eating or types of food may affect our risk.

Carbohydrate-rich foods are the obvious ones to look at as they directly affect blood glucose levels. You might be thinking sugar must be to blame, but in fact such a conclusion is overly simplistic.

However, carbohydrates that are very rapidly digested and absorbed (with a high glycaemic index or GI), leading to dramatic rises in blood glucose levels, have been linked to an increased risk of diabetes in several large-scale population studies such as the famous Nurses Health Study from Harvard.

Theoretically, this makes sense, as the repeated consumption of such foods would increase the body's overall insulin demand, potentially placing stress on the pancreatic cells that produce insulin.

The vast majority of high-GI foods are modern processed foods such as breakfast cereals, breads and baked goods and many of the manufactured low-fat snack bars (interestingly, our increased consumption of such foods has paralleled the rise in diabetes).

Nevertheless, not all studies have found the same relationship, perhaps partly because the GI of foods in different countries has not been well established. Until we know more, it seems prudent to reduce our consumption of such processed carbs and, where possible, aim for a more natural unrefined diet.

But that's just one half of the energy equation. The other involves how much we move. This may well prove to be the most crucial aspect of lifestyle change.

While what we eat has changed considerably over the past 50 years, the total calories or percentage of energy from carbs, protein or fat hasn't changed that much. On the other hand, our physical activity levels have pretty much halved!

Most of us have jobs that tax the brain more than the body. We drive cars with power steering, travel further for both work and play and so no longer tend to walk. Even where distances are short, we've become so dependent on using our cars for getting there quickly, walking is just not considered. Even in our leisure time we're more likely to watch sport than take part ourselves.

10 THINGS YOU (PROBABLY) DIDN'T KNOW ABOUT DIABETES

- About half a million Australians have been diagnosed with diabetes, but a further half million have the disease and just don't know it yet.
- One in four Australians are estimated to have diabetes or a condition known as pre-diabetes, where blood glucose levels are elevated but are not yet high enough to be diagnosed as diabetes.
- These numbers are rising dramatically, making it our fastest-growing chronic disease.
- Australia's indigenous population suffers the fourth-highest rate of type 2 diabetes in the world.
- Type 2 diabetes used to be called "maturity-onset diabetes" as it almost always presented in middle age. This name no longer applies as since children are increasingly affected, paralleling the rising incidence of childhood obesity.
- Both pre-diabetes and diabetes increase your risk of cardiovascular disease. In fact, 65 to 80 per cent of people with diabetes will die of coronary heart disease.
- If you are overweight and have an elevated blood glucose level you have an extremely high risk of developing diabetes, but you can reverse the process and avoid the disease by eating less and moving more.
- Diabetic retinopathy — eye damage as a result of poorly controlled diabetes — is the leading cause of blindness in Australians aged under 60.
- Diabetes is a leading cause of kidney failure and accounts for 8 to 14 per cent of deaths in people who have the disease.
- Diabetes damages the vascular system, particularly affecting the extremities. This can lead to serious damage to the limbs and, in men, erectile dysfunction. Such complications are a leading cause of limb amputations, yet most can be prevented by good blood glucose control.

The most common excuse not to exercise is “I don’t have time.” Well, the bottom line is, if you value your health, you have to make time. It needn’t be formal exercise such as going to the gym or for a run, but simply making the decision to be more active all of the time.

Move whenever you can: walk, climb the stairs, park a little further away. All these small acts of activity add up over the weeks, months and years to help keep you in energy balance but also to keep your body functioning in the way it should.

TREATING AND CONTROLLING DIABETES

If you’ve already been diagnosed with diabetes the disease cannot be cured, but the complications need not be inevitable and can be prevented with good blood glucose control.

If you’re overweight, you need to aim for a sensible weight loss and, regardless of



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your weight, follow a healthy diet and take up a regular activity program. These are paramount to your success in controlling the disease.

As you have an increased risk of heart disease, you should concentrate on reducing the saturated fat content of your diet and including healthy fats such as oily fish, nuts, seeds and olive oil in their place.

Sugar need not be avoided but Diabetes Australia does recommend a diet based on low-GI carbohydrates to assist in controlling blood glucose levels.

Diabetes Australia is an excellent resource for further information on eating plans and exercise (see below for contact details).

You can also ask your doctor to refer you to a dietician for a personalised dietary evaluation and plan. ■

For more information contact Diabetes Australia. Phone 1300 136 588. www.diabetesaustralia.com.au.

