

Good control – why bother?

As people develop type 2 at a younger and younger age, they now face the microvascular risks of those with type 1, Dr Maeve Durkan tells **Sheila O’Kelly**

Heart disease is the most life-threatening complication for people with type 1 and type 2 diabetes. The rate of heart disease is 30% higher overall among people who have type 1 and type 2 diabetes than it is in the general population.

The difference between type 1 and type 2 is that heart disease may not become apparent in people with type 1 until they have had diabetes for 20 years; whereas people with type 2 can show signs of heart disease at the time of diagnosis.

So if someone was diagnosed with type 1 diabetes at the age of 10 and is now 30 years old, they are at the same risk of heart disease as someone who has just been diagnosed with type 2 diabetes and is also 30 years old.

Macrovascular complications

Heart disease is a macrovascular complication. Macrovascular complications affect the large blood vessels and can lead to heart attacks or strokes.

Microvascular complications

People with type 1 and type 2 diabetes are also at risk of microvascular complications. Microvascular complications affect the small blood vessels. Microvascular complications can cause many different conditions.

Retinopathy

Diabetic retinopathy is a microvascular condition that affects the blood vessels in the retina of the eye and can lead to blindness

Neuropathy

Diabetic neuropathy is another microvascular condition. It is a family of nerve

SHUTTERSTOCK PIC



Diabetic neuropathy (nerve damage) can lead to foot ulcers that you may not notice and that can become infected. In some cases this may make it necessary to amputate the foot

disorders caused by type 1 or type 2 diabetes. Some people with nerve damage have no symptoms. Others may have symptoms such as hypersensitivity, pain, tingling, or loss of feeling, in the hands, arms, feet, and legs. Nerve problems can occur in every organ system, including the digestive tract, heart, and sex organs.

Some people may have a complete lack of sensation and this can predispose them to getting an ulcer. They may get a cut, the wound becomes infected and they don't feel it.

Diabetic nephropathy – kidney disease

Diabetic nephropathy is another microvascular disease that can affect both

those with type 1 and type 2 diabetes. It causes kidney disease or damage. When you visit your diabetes clinic they may take a urine sample to test for signs of kidney damage.

“You can have micro or macrovascular complications in people with either type 1 or type 2 diabetes,” says Dr Maeve Durkan, Consultant Endocrinologist at Portiuncla Hospital, in Ballinasloe, Co Galway.

“People with type 1 diabetes tend not to develop complications, if their diabetes is fairly well controlled, until they have had it for about 20 years. We still screen them for both micro and macrovascular disease after they have had diabetes for five years.

“The difference with type 2 diabetes is that they are usually older when they are diagnosed. When I started out 20 years ago they would have been in their 60s and 70s, but now some are in their 20s and 30s, although most of them would be over 40. What is of real concern about this new demographic is that it includes so many women of childbearing age.”

By the time someone with type 2 diabetes is diagnosed they have probably had some form of dysglycaemia [unable to metabolise sugar adequately] for quite some time.

Vascular disease

“This means that the stage has already been set for vascular disease [disease of the blood vessels],” said Dr Durkan. “As soon as someone is diagnosed with type 2 diabetes they need to be screened for eye disease and other complications because they may have been walking around with the condition for quite some time.”

Until 10 years or so, those diagnosed with type 2 were in their 60s or 70s and

TYPE 1 AND TYPE 2 COMPLICATIONS

the major risk was that they would suffer a heart attack or stroke. Now, awareness and medical progress means that the younger people being diagnosed with type 2 can change their diet, lifestyle and medication to avert some of these risks. This means that they live longer with diabetes and are therefore at risk of developing the microvascular diseases described above.

If someone is diagnosed with type 2 diabetes in their 20s they are at high risk of having developing microvascular complications by the time they are in their 40s.

The difference for people being diagnosed with type 1 diabetes is that there is no lead-in time – they are usually diagnosed with diabetes very quickly after they develop the condition. Traditionally, people with type 1 have not been routinely screened for macrovascular and microvascular diabetes complications until they have had the condition for five years.

“There is some debate about this because a few people newly diagnosed with type 1 diabetes will already have complications,” said Dr Durkan.

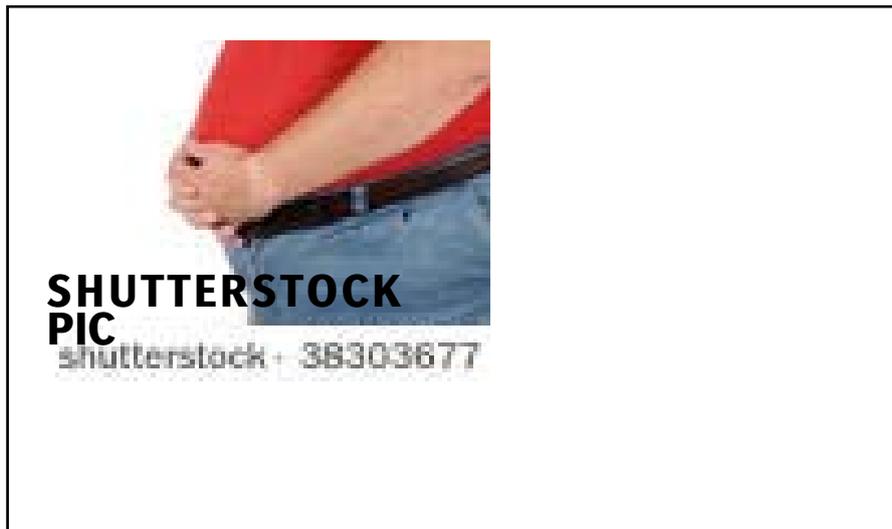
“But these are unusual and people would argue that it is not cost effective therefore to screen everybody as soon as they are diagnosed.

“Certainly if you have poorer control you are setting yourself up to get complications earlier rather than later. If I had a patient who had a very poor A1c for three years, I would be a little bit concerned about waiting five years before they were screened for abnormalities.

“But if they are pretty good and their control has always been 6 to 7% this is a patient I could probably sit tight on. It’s a hard call. I often find diabetes has changed so much in profile in the last five or 10 years in terms of how it presents, and its pathology, I think nothing is certain any more. I would not say there is a preference for a subset of disease in people with type 1 diabetes versus people with type 2.”

Avoiding complications

There is a very strong link between good



Weight gain around the tummy puts people at higher risk of developing type 2 diabetes. Even if you find it hard to lose weight but manage to keep it steady, you are likely to have less complications

sugar control and avoiding microvascular complications like eye disease, kidney disease and nerve damage. Dr Durkan said it was very important that people check their sugars regularly – even if they were usually normal.

“But we also need to be looking beyond sugar control in people with diabetes. We need to look at multifactorial control and that means looking at blood pressure, and cholesterol as well as sugars.

“The Danish Steno 1 and Steno 2 studies showed that if you go beyond sugar control alone and include multifactorial interventions you can reduce cardiac events by up to 50%,” said Dr Durkan.

Maintaining a healthy weight is also critical.

“Exercise is as important as weight loss and if I were to choose between the two I would say exercise. If you lose weight it’s great, but even if your weight stays steady as long as you are exercising you will create a healthier environment for your gut.

“Exercise is one of the things that you can do to help to protect the pancreas.

“You can influence the rate of the progression of your diabetes. If your sugars begin to drift, you can identify the drift and you can ask yourself what am I doing differently?

“Have I changed my habits? Have I been on holiday for three weeks and eating everything in sight? Or I’m not

doing anything and my sugars are beginning to drift.

“That means there may be a move along in your diabetes. So if you’re not on medication, you may need to start it; and if you’re on medication I will look at advancing it.

“It is about protecting the pancreas as far as possible and selecting medications that will help it to work as efficiently as possible.”

Dr Durkan likes to see people as soon as possible after they are first diagnosed. Her targets for people with diabetes are:

- A1c (longer term blood sugar measure) – 6.5
- LDL cholesterol – less than 1.8
- HDL in men – over 1
- HDL in women – over 1.3
- Triglycerides – less than 1.7
- Blood pressure – less than 130/80.

Dr Durkan advises people to have their A1c reviewed every three months – either by their GP or at the diabetes clinic. Though she admits that due to resources this is more likely to happen every six months.

She likes to see people with type 1 diabetes every three months; and those with type 2 once a year – unless they are having problems – in which case she likes to see them sooner.

“If someone with diabetes drifts off these targets I need the GP to send them right back to me,” said Dr Durkan.