



Diabetes:
It's not too late
to take control

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Foreword: Ignoring diabetes risks puts Britons in serious danger

One in three adults are at risk of developing diabetes, but many are playing a dangerous game of denial by underestimating the seriousness of the disease, new research has revealed.

A third of the adults polled had a waist measurement which puts them at increased risk of developing Type 2 diabetes — over 80cm (women) or 94cm (men).^{1,2} But with two out of five admitting they know ‘very little’ about the condition there is a real need to increase awareness of this potentially life threatening illness.

Burgeoning obesity and a slump in activity levels are fueling a diabetes epidemic. The number of people diagnosed with type 1 and 2 has more than doubled since 1996 — rising from 1.4 million to 3.2 million³ — and on current trends the charity Diabetes UK estimates that by 2025 five million people will have the condition.⁴

A study just published in the British Medical Journal, which found that one in three adults in England now has prediabetes adds weight to this shocking estimate. Researchers also warned that this number has tripled from 2003 to 2011.⁵

Lead author, Arch Mainous from the Department of Health Services Research Management and Policy at the University of Florida warned: “If there is no coordinated response to the rise in prediabetes, an increase in numbers of people with diabetes will ensue, with consequent increase in health expenditure, morbidity and cardiovascular mortality.”⁵

Yet despite the clear danger, two out of three⁶ (61%) of those questioned for a study commissioned by the Simplyhealth Advisory Research Panel (ShARP) claimed they were not worried about the possibility of developing blood sugar problems such as Type 2 Diabetes.

This refusal to face reality may explain why experts calculate there are 630,000 people in the UK who have Type 2 diabetes but don’t realise it.⁷

Brits in denial

Denial could be deadly, if left untreated diabetes dramatically increases the risk of heart disease, stroke, nerve damage, blindness and other serious health issues.⁸

More than one in four people admitted to hospital with heart failure have diabetes⁹ and the disease is responsible for 18,100 premature deaths a year in England and Wales alone.¹⁰

Poorly controlled diabetes is the most common cause of severe kidney disease¹¹ and a primary trigger for lower limb amputations. Every week, 100 people lose a toe, foot or lower limb to diabetes.¹²

Costs out of control

The economic cost is crippling, too. The NHS spends £13.8billion a year treating people with diabetes¹³ — £25,000 a minute¹⁴ — and ten per cent of the NHS drugs bill now goes on diabetes medicines.¹⁵

Late diagnosis and poor control add to the bill. The London School of Economics estimates that annually it costs between £300 and £370 per patient to monitor and treat diabetes, but that jumps to £1,800 to £2,500 per patient if they are admitted to hospital with complications.^{16,17}

ShARP adviser Dr Gill Jenkins notes: “Prompt diagnosis and effective management of diabetes saves lives and limbs, reducing the risk of heart attack, stroke, kidney failure and blindness, and will reduce the cost of hospital admissions to the NHS.”

“If you want to live life to the full, it really is essential that you know your risk and do something about it. Type 2 Diabetes isn’t a problem which suddenly emerges overnight. There is a long period of months or years, known as ‘prediabetes’ or ‘impaired glucose tolerance’, where blood sugar levels are high, but not bad enough to be diagnosed as diabetes. If you catch it at this point diet and exercise alone may be enough to delay or even prevent you developing diabetes.” Gill says.

Kill or cure?

It was once thought that diabetes was irreversible, but bariatric surgery has been shown to cure 86% of people with Type 2 diabetes and researchers at Newcastle University say it can also be reversed through diet. Professor Roy Taylor explains: “There is now no doubt that this reversal of diabetes depends upon the sudden and profound decrease in food intake.”

But Dr Gill Jenkins says: “Even if you have passed the point of no return and already have well established diabetes, effective blood sugar control and regular health checks are essential to identify any other issues such as kidney failure, high blood pressure or raised cholesterol which increase the risk of serious complications and shortened lifespan.”

“Diabetes can be controlled, and when it is managed and monitored many of the associated risks such as heart disease and stroke can be reduced, but if it is not diagnosed, or it is poorly managed, it can have a devastating impact on the quality and length of your life. It is important to remember that even once you are taking medication, regular exercise and careful diet will continue to protect you and reduce your risk of complications from the disease.”

Dr Gill Jenkins says, “I hope this report is the wake-up call the nation needs to make people aware of how they can help themselves to live a long and healthy life.”

- ✓ TYPE 1 DIABETES occurs when the cells which make insulin are destroyed and the pancreas is unable to make insulin. It is the most common form in childhood and is rarely diagnosed after the age of 40. It is sometimes called insulin-dependent diabetes. People with Type 1 diabetes have to rely on regular insulin injections. Around 10% of people with diabetes have Type 1 diabetes.²¹
- ✓ TYPE 2 DIABETES was once known as late-onset diabetes because it usually occurs after the age of 40. However, because of rising obesity it is becoming increasingly common in children, teens and young adults. People with Type 2 diabetes still make some insulin, but not enough. Treatment varies depending on the severity of the diabetes. In some cases diet and exercise alone will resolve the issue, in others insulin is required. Around 90% of all diabetes is Type 2.²²

Section 1: Brits are taking a high risk gamble

Just over half (53%) the adults questioned for the ShARP survey had convinced themselves they were at no risk of developing type 2 diabetes, with men the most likely to be in denial — 56% compared to 41% of women.

But the evidence tells a very different story, with almost half, 49%, already potentially displaying one or more symptoms of diabetes.

- ✓ Around a quarter of respondents (23%) complained of extreme tiredness
- ✓ One in five (18%) claimed they often got up in the night to go to the toilet
- ✓ One in six (17%) suffered from a dry mouth
- ✓ One in ten (11%) respondents had an excessive thirst

Despite the importance of early diagnosis and treatment, three out of four (76%) people with potential symptoms of diabetes had not mentioned these important warning signs to their doctor. Two out of five (38%) wrongly believed their symptoms were not serious, one in five (18%) said they disliked seeing their GP and one in six (14%) turned to the internet for advice instead.

Missing a trick

Health professionals appear to be missing a trick too. Four out of five (80%) of those questioned claimed their GP or practice nurse had never discussed their risk of developing diabetes, while one in ten (10%) admitted they had been advised to have a check, but failed to follow through.

This echoes a study by the Medical Research Council in which researchers warned: “More than a third of the UK adult population is overweight and at an increased risk of diabetes, but they are not systematically monitored for this risk.”²³

Experts agree that the odds of developing Type 2 diabetes rise after the age of 40,²⁴ yet almost nine out of ten (87%) respondents aged 45 to 54 said their doctor or practice nurse had never raised the issue. Over 55s were the most well informed with almost one in five (19%) confirming they had been tested and given advice on blood sugar control.

Weighty matters

Weight and your waist measurement are important clues when it comes to calculating diabetes risk and one in three of those questioned had a girth great enough to put them in the danger zone — 31.5 inches (80cm) for women and 37 inches (94cm) for men.²⁵



An even higher number had piled on their risk by piling on the pounds, with two out of five (43%)²⁶ admitting they were overweight. A study published in the Journal of Epidemiology and Community Health calculated that over a decade every kilogram of added weight increases the risk of developing diabetes in the subsequent 10 years by 49%.²⁷

However, being slim won't insure you will avoid blood sugar issues, as one in three (32%)²⁸ mistakenly believed it would. Almost half (49%) said one or both their parents had been diagnosed with Type 2 and the study published by the European Association for the Study of Diabetes found that even if you are a healthy weight, having a close family member with type 2 diabetes increases the odds of developing pre-diabetes by 26%.²⁹

"These statistics show that far too many people are heading for problems, but refusing to face the facts. When it comes to diabetes, ignorance is not bliss — it is potentially deadly." ShARP

Almost half the respondents reported one or more symptom³⁰ of diabetes

- ✓ Extreme tiredness 23%
- ✓ Getting up in the night to go to the toilet 18%
- ✓ Dry mouth 17%
- ✓ Excessive thirst 11%
- ✓ Blurred vision 7%
- ✓ Recurrent infections 7%
- ✓ Unexplained weight loss 1%

Know the risk: You are more likely to get Type 2 diabetes if you:

- ✓ Are over 40 years of age (or over 25 if you are South Asian)
- ✓ Have a parent or sibling with diabetes
- ✓ Are overweight
- ✓ Have a waist measures 31.5 inches (80cm) for women or 37 inches (94cm) for men (South Asian men 35 inches or more)
- ✓ Are of South Asian, Black African or African Caribbean descent
- ✓ Are an overweight woman with polycystic ovary syndrome
- ✓ Had gestational diabetes or gave birth to a baby weighing more than 10lbs
- ✓ Have been told you have impaired glucose tolerance³¹

Section 2: Take action to reduce your risk

You can't alter the risk factors you are born with — such as having a family history of diabetes, or being of African Caribbean or South Asian descent,^{32,33} — but you can take steps to avoid the lifestyle choices which can lead to diabetes.

Get active

The NHS advises doing at least 150 minutes of moderate intensity aerobic activity, such as a brisk walk or cycling, every week³⁴ and a recent study which tracked almost 100,000 women for eight years reported that this level of activity cuts the risk of developing Type 2 diabetes by 40%.³⁵

High intensity mini workouts can also help. Researchers at Heriot-Watt University in Edinburgh³⁶ reported “substantial” benefits when volunteers had three sessions a week in which they did four 30 second sprints on an exercise bike.

However, the ShARP survey found that almost one in five (21%) adults rarely or never work up a sweat working out, and the most popular strategies to improve fitness are housework (43%), walking rather than catching the bus (41%) and taking the stairs instead of the lift (41%).

Diet matters

The right diet can reduce your waistline, and with it the risk of developing diabetes. A study published in the British Medical Journal found that sticking to the Mediterranean diet, which they defined as high in fruit and vegetables, monounsaturated fats, grains, legumes and nuts; lean red meat and a moderate intake of milk and dairy foods, reduces the risk of developing diabetes by as much as 83%.³⁷ This echoes NHS advice to eat at least five portions a day of fruit and vegetables and cut back on foods which are high in fat or sugar.³⁸

However, the Simplyhealth survey suggests many Britons are falling short of this target, with only one in four (24%) eating five portions of fruit or vegetables every day and one in ten (10%) managing merely one a day.

There is some evidence that very low calorie diets have a place if you are heavily overweight. A small study at Newcastle University found that seven out of 11 patients were cured of Type 2 diabetes after cutting their food intake to just 600 calories a day for eight weeks.

After just one week on the extreme diet, the volunteers' pre-breakfast blood sugar levels had returned to normal, however Diabetes UK, which helped fund the study, warns: “Such a drastic diet should only be undertaken under medical supervision.”³⁹



Section 3: Hidden harms

Tackling lifestyle issues

Smoking not only adds to the danger of serious complications if you have diabetes, experts now say it increases the odds of developing the disorder in the first place.

A report by the American Surgeon General found smoking increases the risk of developing Type 2 diabetes by 40%⁴⁰ and the more you smoke, the higher the risk. Yet the ShARP survey revealed that only one in six (16%) of adults who thought they were in danger of developing diabetes realised their habit was a risk factor.

ShARP advises: “Smoking is always a danger to your health, but for diabetics it is even more deadly because it feeds into so many other risk factors such as high blood pressure and coronary artery disease.”



If diabetes is not diagnosed and properly controlled, blood sugar levels spike and stay high after every meal or snack, and these everyday assaults can slowly, but steadily, build into a catalogue of potentially life-threatening complications.

Cardiac cost

There is no doubt that diabetes drives heart disease. If you have diabetes you are five times more likely to suffer a heart attack or stroke⁴¹ and one in four hospital admissions for heart failure involve people with diabetes.⁴²

Experts believe there are a number of different mechanisms at work. Over time, poorly controlled blood sugar increases the risk of atherosclerosis — narrowing of the blood vessels and a build-up of waxy substance known as plaque. This reduces blood flow to the heart, making it work harder, and aids the formation of blood clots. Blood vessels also begin

to lose elasticity, which can cause high blood pressure and even more damage to the cardiovascular system.

Diabetes hurts the heart directly, too. Changes at a cellular level cause structural damage, known as diabetic cardiomyopathy,⁴³ which can lead to heart failure without any of the usual contributors such as high blood pressure, coronary artery disease, heart valve malfunctions or congenital heart disease.

It also alters the body's ability to handle cholesterol — another important risk factor in cardiac disease. Research at the University of Helsinki found diabetics produce more cholesterol than those with normal blood sugar regulation and they are also less able to eliminate it from the bloodstream.⁴⁴

ShARP says: “It is the interplay of all these different forms of damage which make it so important to carefully monitor the cardiovascular risk of patients. It’s not good enough to simply have a blood pressure check, or a cholesterol test, and tell yourself, ‘I’m not at risk’.

“It is essential to look at the whole picture, and that means blood pressure, vascular health, cholesterol and all the lifestyle factors such as weight, diet, alcohol consumption and activity levels.”

Yet the ShARP survey found that many Britons are clueless about their risk of cardiac problems.

- ✔ Three out of five (60%) respondents did not know their cholesterol level
- ✔ One in five (21%) had never had a blood pressure check or had forgotten the results

- ✔ Just over a third (36%) of respondents did not realise there was a link between diabetes and heart disease.

Cruel cuts

High blood sugar damages tiny blood vessels in nerves which can lead to tingling or numbness. This nerve damage is the reason people with diabetes are more likely to suffer foot ulcers and are at higher risk of amputation.

More than 100 lower limb amputations are performed every week due to diabetes and people with the condition are 20 times more likely to lose a limb than those who do not,⁴⁵ but the study found two out five (40%) people were unaware of this risk.

Researchers at St George’s, University of London have shown that patients with foot ulcers are also more likely to die from heart disease or a stroke.⁴⁶



ShARP notes: “Anyone with diabetes should see a podiatrist at least once a year and if they already have signs of nerve damage, skin changes or have had a previous ulcer, they should be seen every three to six months.”⁴⁷”

The importance of self-care and prevention was underlined by a recent report which exposed a shocking postcode lottery which means patients in some parts of the country are seven times more likely to lose a limb than those in areas with good foot care and screening.⁴⁸

Lack of vision

Constantly high blood sugar damages cells at the back of the eye and can lead to retinopathy, which if not treated can cause blindness. People with diabetes are 10 to 20 times more likely to lose their sight than a person with normal blood sugar levels.⁴⁹ That is why everyone over the age

of 12 who has diabetes is advised to have an annual eye examination.⁵⁰

Initially there are no signs of the damage being done, but as it progresses symptoms such as blurred vision and floaters — seeing shapes floating in your field of vision — may become apparent. In England alone, 1,280 people a year go blind because of diabetic retinopathy.⁵¹

There is no cure, but if caught early enough, retinopathy can be stalled through better diabetes control. If it is advanced, laser surgery or injections into the eye, can prevent further damage.

Another complication of diabetes is cataracts, vision that is blurred or dimmed due to clouding of the lens of the eye. Cataracts are increasingly common as we age, but tend to occur earlier in people with diabetes.⁵²

Worryingly, the ShARP survey revealed that only two out of five (42%) were aware of the risk and almost half (48%) had never had their eyes checked.

Renal risk

A third of people with diabetes will develop renal disease⁵³ because of the damage high blood sugar does to small blood vessels within the kidney. According to NHS estimates, a woman with diabetes is eight times more likely to develop chronic kidney disease than one who has no blood sugar problems. For men the risk jumps by a factor of 12.⁵⁴

ShARP notes: “The disorder is the biggest single cause of end stage renal disease. Kidney disease kills one in five (21%) people with Type 1 diabetes and one in 10 (11%) with Type 2 according to published reports.⁵⁵ High blood pressure, which is more common among diabetics, also adds to the danger.”

Early AGE-ing

Impaired insulin signaling adds to your AGEs, or Advanced Glycation End products.⁵⁶ These destructive compounds are associated with oxidative stress and inflammation⁵⁷ and literally make us old before our time.

Elevated AGEs have been linked to a host of health problems including coronary artery disease, liver damage,⁵⁸ formation of the amyloid plaques which lead to Alzheimer’s,⁵⁹ impaired kidney function⁶⁰ and more extensive brain damage from stroke.⁶¹

Dementia danger

Apart from the link between AGEs and dementia, there is also evidence that getting diabetes in middle age increases the odds of a form of brain damage associated with dementia.

Brain scans carried out at the world famous Mayo Clinic confirmed that having blood sugar problems can literally shrink the brain, with diabetics having an average of 2.9% less brain volume than those without the condition. The difference is most marked in the hippocampus, the region of the brain which holds both long-term memory and your ability to recall recent events.⁶²

Midlife diabetes was also associated with an 85% rise in the risk of micro-strokes and a 50% increase in thinking or memory problems. Leading research by Rosebud Roberts warns: “If you have type 2 diabetes, you have an increased risk of brain damage, but if you control your diabetes well, it should reduce the damage that is being caused in your brain.”⁶³

Dr Gill Jenkins from ShARP notes: “It is all too easy to think of diabetes as a simple problem with blood sugars, but all the evidence shows that it is an incredibly complex condition, with a myriad of risk factors and contributing causes.

“High blood sugar affects blood vessels throughout the body, both the main arteries and the fine blood vessels in organs such as the eyes and kidneys, damaging the tissue and causing it to fail. It also affects the fine nerves reducing sensation and risking damage to surrounding tissue. That’s why it is important to monitor more than just blood sugars.

“Eye checks, podiatry and regular cholesterol and blood pressure screening for those with diabetes will help to reduce the risk of life-limiting complications.”



Section 4: Myths busted

Only people who are overweight get diabetes

Three out of five (60%) of those questioned are convinced they are not at risk because they are not overweight, but staying slim does not mean you are safe from either form of diabetes – Type 1 or Type 2. Even if you are a healthy weight, having a close relative with diabetes increases the risk of Type 2 by 26%. Weight is not a factor in Type 1 diabetes.

Diabetes is caused by eating too much sugar

Two out of five (40%) people thought they were safe because they steer clear of sugar, but it's the total calories consumed, not where those calories come from, that counts. In the past decade sugar consumption in the UK has fallen by 6%, but over the same period the number of people with diabetes has leapt by 61%.⁶⁴

There is nothing you can do to reduce your risk of diabetes

One in ten (11%) respondents wrongly believes there is nothing they can do to protect themselves from diabetes and a further 13% were skeptical that diet and exercise can reduce the risk. But studies have shown that over a ten year period every kilogram of weight lost reduces the risk of developing diabetes by a third.⁶⁵

Controlling diabetes is all about cutting back on sugar

All food is converted into sugar before it hits the bloodstream, so in terms of blood sugar levels there is no difference between carbohydrates and sugar. It is true that some studies have suggested a link between sugary drinks and an increased risk, but experts, like ShARP believe this is largely down to weight gain rather than the form of calories responsible for piling on the pounds.⁶⁶

Only old people get Type 2 diabetes

It is true that Type 2 disease was once called 'late onset' because it was most commonly diagnosed in later life, but it can occur at any age. Around 500 children in the UK have been diagnosed with Type 2 diabetes and it is estimated a further 2,000 children and young people have the condition but have not been diagnosed.⁶⁷



Section 5: A healthy approach

The importance of routine health checks

Regular health checks play an important part in spotting the early onset of type 2 diabetes— for example changes in the eye are often the first sign of problems. It's essential that people realise the importance of their trip to the optician or once yearly visit to the dentist or podiatrist. Spotting the signs of type 2 diabetes early means that there is more of a chance that it can be managed and the risk reduced.

This report was produced by ShARP on behalf of Simplyhealth

Simplyhealth has been helping people access affordable healthcare for 140 years, through a variety of health cash plans, dental plans, private medical insurance, and mobility and living aids.

Simplyhealth has over three million customers serving nearly four million people, and is also healthcare provider of choice to 20,000 companies. While the company has changed and adapted over the years, its award winning commitment to do the right thing by its customers has not.

Simplyhealth is committed to its strongly held mutual values and to supporting communities. With no shareholders, it only invests its profits into running the business for the good of its customers, or donating them to health related charities. It donated £1.4m last year.⁶⁸

Its health cash plans help people with their everyday health, whether they use NHS or private practitioners. Its private health insurance works alongside the NHS, and is often provided by companies as an employee benefit to help staff at times of ill health.

Section 6: Last word

FACT: Every year 24,000 people with diabetes die prematurely.⁶⁹

FACT: By 2025 five million people are expected to have diabetes.

FACT: More than one in four people admitted to hospital with heart failure have diabetes.⁷⁰

FACT: Every week 100 people lose a toe, foot or lower limb because of poorly controlled diabetes.

Unlike a major accident or headline grabbing viral epidemic, diabetes is killing us softly. Symptoms often go unnoticed, or ignored, and even when it has been diagnosed; poor monitoring and erratic glucose control contribute to a catalogue of complications.

Dr Ralph Abraham, an expert in endocrinology and diabetes at London Medical and Guest Advisor to ShARP says: "Every day lives and limbs are being lost to diabetes, but what is heartbreaking is that in so many cases these personal tragedies can be prevented."

However, as this report from ShARP has revealed, far too many people are ignoring the risks and dicing with diabetes. One in three adults polled had a waist measurement which puts them at increased risk of developing diabetes,⁷¹ yet two out of five admitted they know 'very little' about the condition.

"Ignorance is not bliss, this level of denial could be deadly," warns Dr Gill Jenkins. "If you ignore diabetes it doesn't go away. It damages blood vessels, destroys sight and undermines almost every aspect of your health, until one day, there is a crisis and it becomes impossible to ignore."

“What is so sad is that you can head off so many hospital admissions and serious complications with regular health checks and by treating minor problems before they become major issues.”⁷²

Dr Gill Jenkins says: “Diabetes can be a dreadful disorder, but it doesn’t have to result in such severe complications. When patients take control of their condition it can make an enormous difference. Something as simple as a regular appointment with a podiatrist could prevent an amputation. Eye examinations can spot the early signs of vascular damage and perhaps head off a heart attack or blindness.”

Dr Ralph Abraham adds: “We must all take personal responsibility for our health. Hundreds of thousands of Brits have already been diagnosed with blood sugar problems or are squarely in the diabetes danger zone and it is vital that they head off problems with a proactive approach to their health.”

In summary ShARP notes: “Health cash plans, provide quick, affordable and hassle free access to healthcare practitioners without the need for GP referral. When it is this easy to take action there really is no excuse for ignoring the dangers of diabetes.”



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