

propels

The PROMotion Of Physical activity through structured Education with differing Levels of ongoing Support for those with prediabetes (PROPELS): *randomised controlled trial in a diverse multi-ethnic community*

Being at risk of developing type 2 diabetes

What does it mean and what you can do



‘Small changes for Life’

Introduction

This booklet is designed to:

- Explain why the prevention of type 2 diabetes is important
- Explain the risk factors of developing type 2 diabetes and what that means
- Explain ways to help prevent type 2 diabetes in the future

In the UK about 3 in 100 people aged over 40, and about 10 in 100 people aged over 65, have Type 2 diabetes.

What is type 2 diabetes?

Glucose is a type of sugar that is transported around the body in the blood and plays a vital role in keeping us healthy. Glucose comes from the food and drinks we consume. During digestion glucose is released into the bloodstream. Some of this glucose gets stored in the liver but some stays in the bloodstream to be used in the body's cells as energy.

To enter the body's cells glucose must go through a 'gate' in the cell wall. Insulin (a hormone produced in the pancreas) helps open the 'gate' allowing glucose to enter the cells where it can be used as energy so that we can function in our daily lives.

Type 2 diabetes develops when the body stops responding properly to insulin or when too little insulin is produced. This means the pancreas is forced to try and work harder to continue to produce enough insulin to control the amount of glucose in the blood. Over time, the pancreas gets worn out and makes less insulin. As a result less glucose gets into the body's cells and it stays in the bloodstream.

It is this extra glucose in the bloodstream that blood tests for Type 2 diabetes looks for. Because diabetes is called a 'progressive' disease, once you have it, it doesn't go away and it tends to become more serious over time.

How can you tell whether someone is at high risk of developing type 2 diabetes?

When someone's blood glucose levels are higher than normal but NOT high enough for a diagnosis of diabetes, we say they have impaired glucose regulation which means you have a higher than normal risk of developing type 2 diabetes in the

future. You may also hear it called Impaired Glucose Tolerance or Impaired Fasting Glucose (IGT/IFG) or Pre-diabetes.

Within the next 10 years, around 25% of people with impaired glucose regulation will progress to developing type 2 diabetes, around 50% will stay where they are and around 25% will return to having normal glucose levels.

Adopting a healthy lifestyle can greatly reduce the risk of developing type 2 diabetes and increase the likelihood of returning to normal glucose control.

What are the symptoms of Type 2 diabetes?

There are generally no symptoms associated with being at risk of developing type 2 diabetes but those who go on to develop type 2 diabetes will experience the following symptoms:

- Feeling tired - because the glucose in the bloodstream can't get into the body cells where it is needed for energy - and feeling sleepy, especially after food.
- Going to the toilet often to urinate, especially at night - this is one of the body's ways of getting rid of too much sugar from the bloodstream.
- Feeling thirsty – this is because you are going to the toilet a lot.
- Having more infections.

Are these symptoms the same for those with a high risk of developing type 2 diabetes?

There are no symptoms associated with being at a high risk of developing type 2 diabetes meaning that many people have higher than normal glucose levels without realizing it.

Why am I at risk, and what is *my* risk?

If have one or more of the following risk factors, you may be at risk of developing type 2 diabetes. Tick all the boxes that apply to you.

Risk Factor	
You have a mother, father, brother or sister with type 2 diabetes	
You are overweight	
You have high blood pressure, or take tablets for your blood pressure	
You have high cholesterol, or take tablets for your cholesterol	
You have had angina, a heart attack or a stroke in the past	
You had gestational diabetes when you were pregnant	
You are inactive (undertake less than 30 minutes of physical activity per day)	
You're a woman with polycystic ovary syndrome	
You have mental health problems (e.g. depression)	
You have a diet high in fat and low in fibre	
You've been told you have 'impaired glucose tolerance' or 'impaired fasting glycaemia' or 'pre-diabetes'	
You are South Asian, Black or another ethnic minority	

How many boxes did you tick? The more boxes you tick, the greater your risk.

It's useful that you have found out you are at risk of type 2 diabetes because by making small changes to your lifestyle now you can reduce your risk of developing the disease in the future. The sooner you make changes the greater your chance

of reducing your risk of developing the disease and its complications.

You don't have to make huge changes to make a difference; you can make small changes that fit in with your current lifestyle. There are some things that we cannot change (like your family history) but by eating a healthy diet and particularly by being more physically active you can dramatically lower your risk of developing type 2 diabetes.

How does being physically active help?

Physical activity is one of the simplest and most powerful things you can do to improve your health. Those that engage in regular physical activity have half the risk of developing type 2 diabetes compared to those who do no exercise.

Physical activity helps reduce the risk of developing type 2 diabetes by making it easier for glucose to get into the body's cells to be used as energy. This means that less glucose remains in the blood.

Being active also helps you:

- Improve mobility
- Reduce depression and stress
- Keep your bones, muscles and joints healthy
- Prevent heart disease
- Prevent high blood pressure
- Lose and maintain weight

How much activity do I need to be doing?

In order to gain health benefits and reduce your risk of developing type 2 diabetes in the future you need to be doing a minimum of 30 minutes of moderate intensity on most days of

the week. The 30 minutes can be accumulated throughout the day in 10 minute chunks and can include such things as brisk walking, swimming, cycling, aerobics or everyday activities such as vacuuming the house, washing the floor, digging the garden or mowing the lawn. These activities need to be done vigorously enough to make you somewhat breathless.

You don't have to go out and buy Lycra shorts and run round the park! Aim to find something you enjoy and can fit in around your lifestyle. Be as active as possible and as often as you can. Simple things like taking the stairs instead of using lifts, may be a good place to start.

Can increasing my activity levels be dangerous?

Doing moderate levels of activity, like walking, should not normally present a danger to your health. However if you have a history of heart disease or exercising makes you feel dizzy or gives you pains in your chest you should consult a doctor. If you plan to start doing vigorous forms of exercise that involve running or lifting heavy weights you should always consult your doctor before you start in order to rule out any underlying problems that may become exacerbated by vigorous activity.

If you do start an exercise program, remember to always start slowly and gradually increase the intensity and length of your sessions over time.

USEFUL RESOURCES

You may find the following resources useful to find out more about Type 2 diabetes and the risk factors for developing the disease.

<http://www.leicestershirediabetes.org.uk/>

This is the website to help promote the Department of Diabetes and Endocrinology at the University Hospitals of Leicester NHS Trust as one of the UK's leading 'Centre of Excellence' in Diabetes and Endocrinology.

<http://www.ndep.nih.gov/am-i-at-risk/>

This is the website of the National Diabetes Education Programme. The NDEP is an American organisation that translates the latest science and spreads the word that diabetes is serious, common, and costly, yet *controllable* and, for Type 2, *preventable*.

<http://www.diabetes.org.uk/>

Diabetes UK is the largest organisation in the UK working for people with diabetes, funding research, campaigning and helping people live with the condition.

Diabetes Careline: 0207 424 1030

Diabetes UK Careline provides support and information to people with diabetes as well as friends, family and carers.

<http://www.drwf.org.uk/> Tel: 023 92 637 808

This is the website of the Diabetes Research and Wellness Foundation. DRWF is a registered UK charity whose long-term mission is to discover a cure for diabetes and in the meantime to support, advise and educate people living with diabetes and the general public.

**<http://www.diabetesresearchnetworking.org/> Tel: 01865
857508**

Diabetes Research Networking is an innovative new website packed with information about diabetes and diabetes clinical research.

<http://www.patient.co.uk/health/Diabetes-Type-2.htm>

Patient UK is a website that provides comprehensive information as provided by GPs and nurses to patients during consultations.

<http://www.nhs.uk/Conditions/Diabetes-type2/Pages/Introduction.aspx>

Information on Type 2 diabetes from NHS Choices including causes, symptoms, diagnosis, risks and treatment and with links to other useful resources.