

# Summary sheet 11

## Preventing diabetes (Part a)

---



### What is diabetes?

Normally our body produces glucose (sugar) when we digest food. The cells in the body use the glucose for energy. A hormone called **insulin** helps the glucose to enter the cells, which helps to regulate how much glucose is in the blood.

Diabetes develops when the body doesn't produce enough insulin, or when the insulin that is made doesn't work effectively. This leads to an abnormally high level of glucose in the blood.

### How are Type 1 and Type 2 diabetes different?

**Type 1 diabetes** is when the body is unable to make **any** insulin. This usually happens in children and young adults.

**Type 2 diabetes**, which is more common, is when **not enough** insulin is produced, or when the insulin **doesn't work** properly. It:

- tends to develop gradually as people get older – usually after the age of 40
- is closely linked with being overweight and being physically inactive
- is more common in people with a family history of diabetes.

### How common is diabetes?

Over two and a half million adults have been diagnosed with diabetes in the UK<sup>1</sup>. However, this number is increasing all the time, and it is worrying that Type 2 diabetes is now being diagnosed more in younger people. This is mainly due to unhealthy eating habits and increasingly sedentary lifestyles.

South Asians and some African Caribbeans living in the UK have a higher risk of developing diabetes than other people in the UK. And for some groups, the risk is particularly high. For example, compared to the general population:

- African Caribbean and Indian men are twice as likely to develop diabetes
- African Caribbean and Pakistani women are two and a half times more likely<sup>1</sup>.

However, Black African women have a lower incidence than the general population.

# Summary sheet 11

## Diabetes (Part b)



### How does diabetes affect your heart?

Diabetes significantly increases the risk of coronary heart disease and can cause other serious health problems too. People with diabetes have three times the risk of a heart attack of those who do not have diabetes<sup>2</sup>.

Diabetes damages the heart in several ways:

- High glucose levels in the blood affect the walls of the arteries, making them more likely to develop **atheroma** (fatty material).
- Diabetes increases the damage done by the major risk factors of **smoking – high blood pressure and high blood cholesterol**.
- People with Type 2 diabetes often have higher **triglyceride** levels and lower levels of HDL cholesterol (the 'protective' type of cholesterol).
- People with diabetes are more likely to have high blood pressure.
- Diabetes can affect the heart muscle itself, making it pump less efficiently.
- Diabetes can affect the nerves to the heart, so that the symptoms of heart disease are not felt in the usual way. This leads to delay and difficulties in diagnosis.

If you have a risk assessment, your doctor or nurse may do a blood test to check your glucose level to check for diabetes.

### Practical tips on how to control diabetes

#### Control your blood glucose

Set yourself a routine so that you eat meals and measure your blood glucose level at regular times.

#### Keep to a healthy weight and body shape

If you're overweight, losing weight will help you control your diabetes. (For more information on losing weight, see Summary sheet 13)

#### Eat a healthy, balanced diet

- Eat at least five portions of a variety of fruit and vegetables a day.
- Reduce the total amount of fat you eat.
- Cut down on saturated fats and trans fats.
- Replace saturated fats with monounsaturated and polyunsaturated fats.
- Eat one or two portions of fish a week. (One of the portions should be oily fish.)
- Eat high-fibre, wholegrain foods.
- Cut down on salt.

(For more information on eating a healthy, balanced diet see Summary sheets 12a and 12b)

#### Get active

Physical activity can help you to manage your blood glucose level. Build up to doing 30 minutes of moderate-intensity activity a day, on at least five days a week. The activity should make you feel warm and breathe slightly more heavily than usual, but you should still be able to talk (See Summary sheet 8). Ask your healthcare professional about which type of activity is best for you. If you have diabetes, you should make sure that you have a healthy snack with you when you exercise. This is to make sure that your blood sugar does not alter significantly.

## Control your blood cholesterol and blood pressure

High cholesterol and high blood pressure are more common in people with diabetes. It's important that you make lifestyle changes to help control these, and take your doctor's advice and any medicines your doctor prescribes for you. (For more information on blood pressure see Summary sheet 7)

## If you don't have diabetes, reduce your risk of developing it

You can greatly reduce your risk of developing diabetes by staying a healthy weight and body shape, doing regular physical activity and, making sure that you do not eat food that is high in sugar.

### For more information

**bhf.org.uk**

**BHF Heart Helpline: 0300 330 3311** – for information and support on anything related to heart health.

This service is available in English only. Phone lines open 9am to 5pm Monday to Friday, similar cost to 01 or 02 numbers.

#### **BHF booklets:**

***Diabetes and your heart*** (in English)

***Diabetes and how it affects your heart*** (aimed at South Asians, in English and five South Asian languages)

To order these *free* resources, call the **BHF Orderline** on **0870 600 6566**

#### **Other organisations:**

**Diabetes UK: 0845 120 2960 [www.diabetes.org.uk](http://www.diabetes.org.uk)** Email: [info@diabetes.org.uk](mailto:info@diabetes.org.uk)

1. Scarborough P, Bhatnagar P, et al (2010). Coronary Heart Disease Statistics 2010 edition. British Heart Foundation: London.

2. Yusuf S, Hawken S, Ounpuu S, Dans T, Avezum A, Lanas F, McQueen M, Pais P, Varigo J, Lisheng A, on behalf of the INTERHEART Study Investigators (2004) Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART Study): case-control study: *The Lancet*; 364: 937-952.