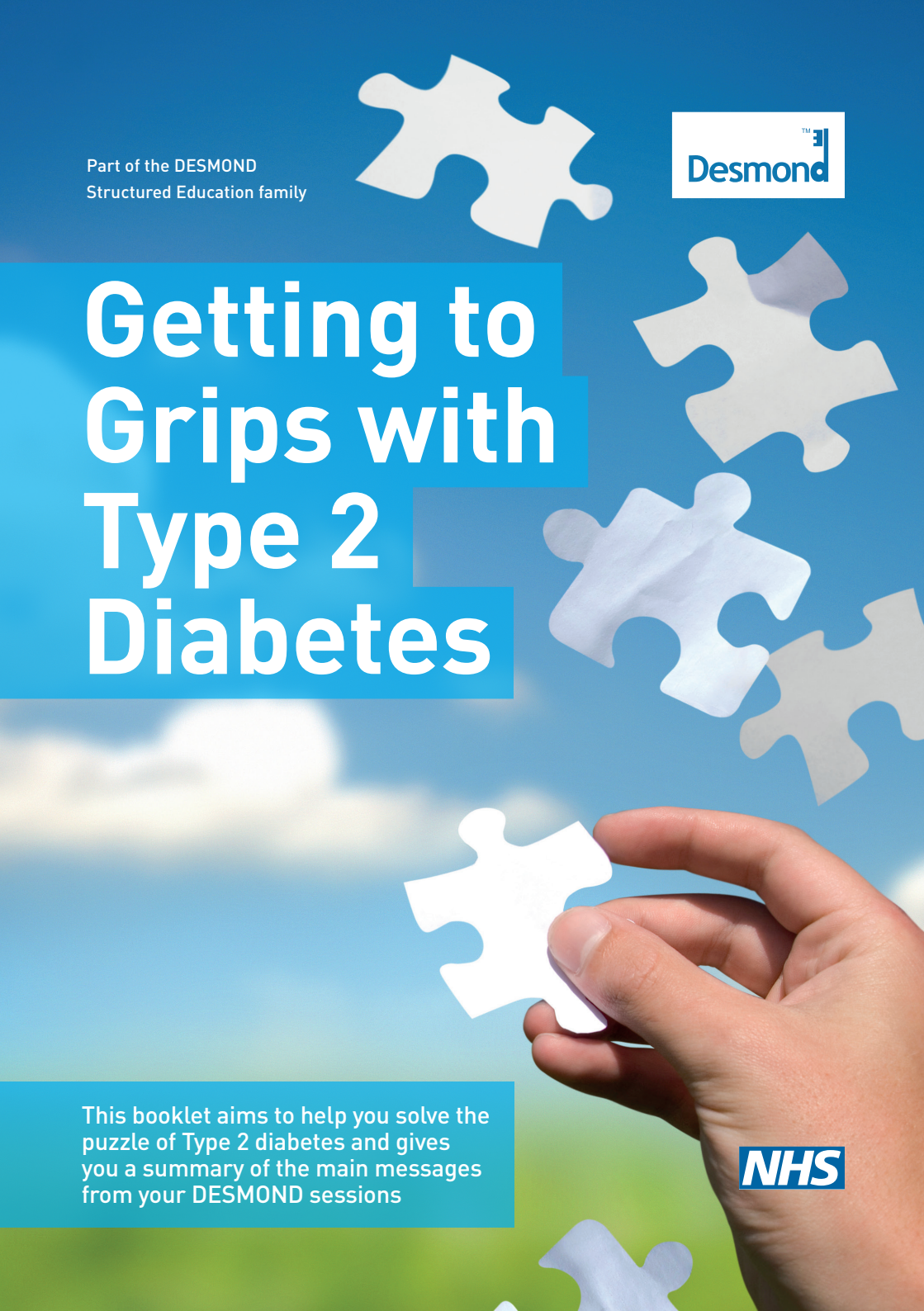
Part of the DESMOND
Structured Education family

Desmond™

Getting to Grips with Type 2 Diabetes



This booklet aims to help you solve the puzzle of Type 2 diabetes and gives you a summary of the main messages from your DESMOND sessions

NHS

HOW TO USE THIS HANDBOOK...

This handbook is for people who have Type 2 diabetes, and are taking part in a DESMOND group session.

We hope that after DESMOND, the information will help you continue to look after yourself with your diabetes.

You probably have questions about diabetes, and we hope that most of these will be answered during the DESMOND group session. If at any time there is advice you need or things you want to know that this handbook can't answer, please make an appointment to see your doctor or nurse.

You may also choose to share your action plans in your **Resources for You** booklet with your doctor or nurse.

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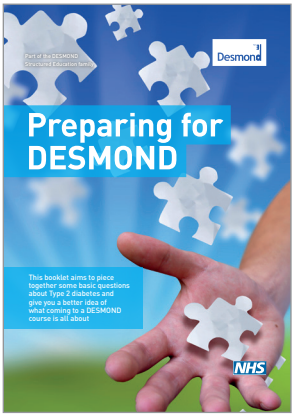
WHAT IS TYPE 2 DIABETES?

Your diabetes – your questions

In the **Preparing for DESMOND** booklet, you may have written down some of the questions you had about your diabetes.

During the DESMOND group session you will have had a chance to think about what diabetes is, and what it means to you. You will also have had the opportunity to have your questions answered, and to share your experiences with other people who also have diabetes.



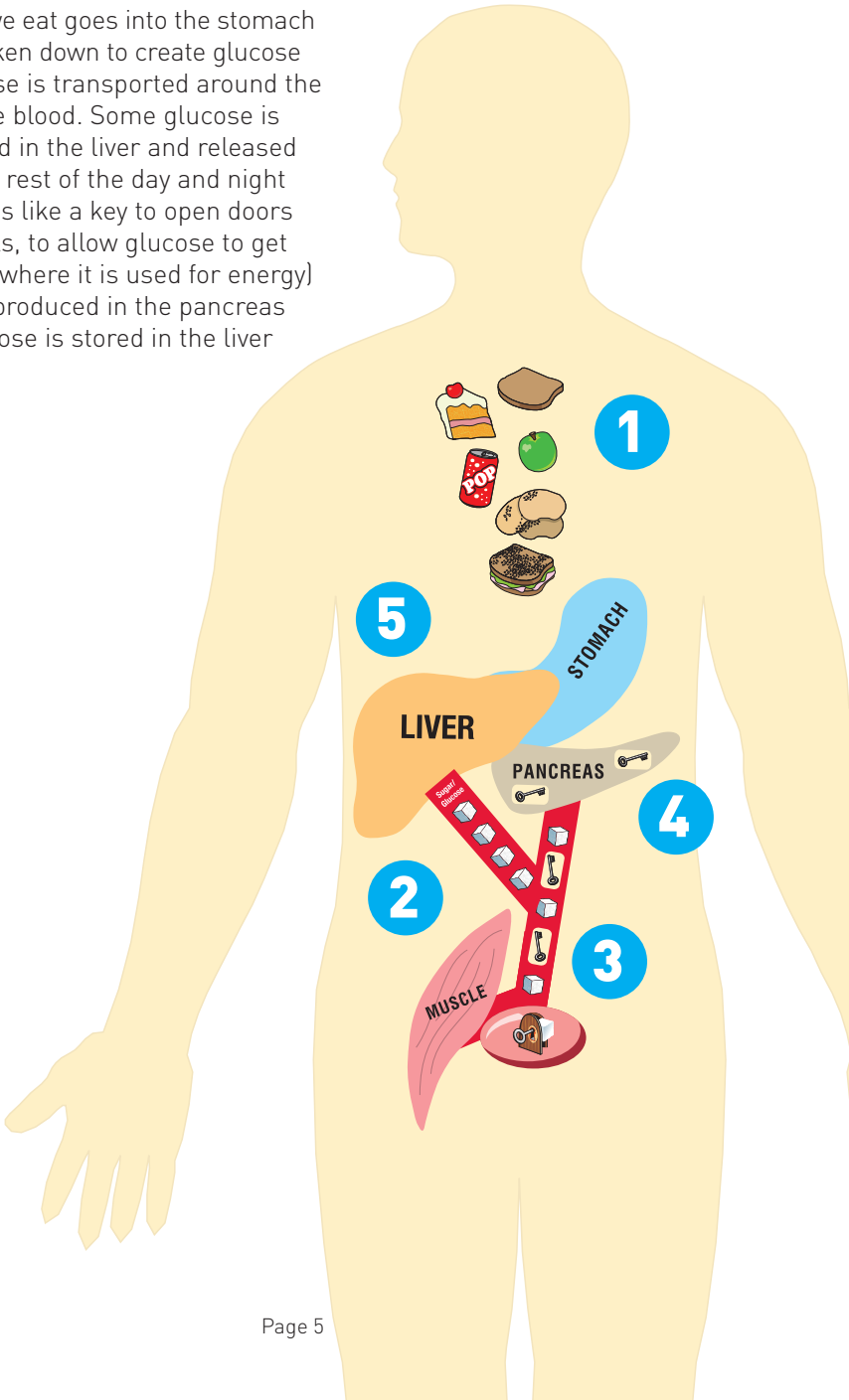
Understanding diabetes

In your DESMOND session you will have discussed what diabetes is, and how it affects individuals. This section highlights the main points to remember about diabetes.

- Diabetes is a condition in which there is too much glucose (a type of sugar) in the blood
- There are different types of diabetes, your type is called Type 2 diabetes
- The amount of glucose in the blood is normally kept steady by a hormone called insulin
- In Type 2 diabetes the pancreas produces insulin, but the body does not use it very well. This is sometimes called insulin resistance
- Diabetes can progress, this happens if the pancreas produces less insulin
- Diabetes is a condition that needs to be checked on a regular basis, as it is a condition that will change over time
- Once you have diabetes it will not go away
- But, keeping glucose levels under control can limit the complications of diabetes

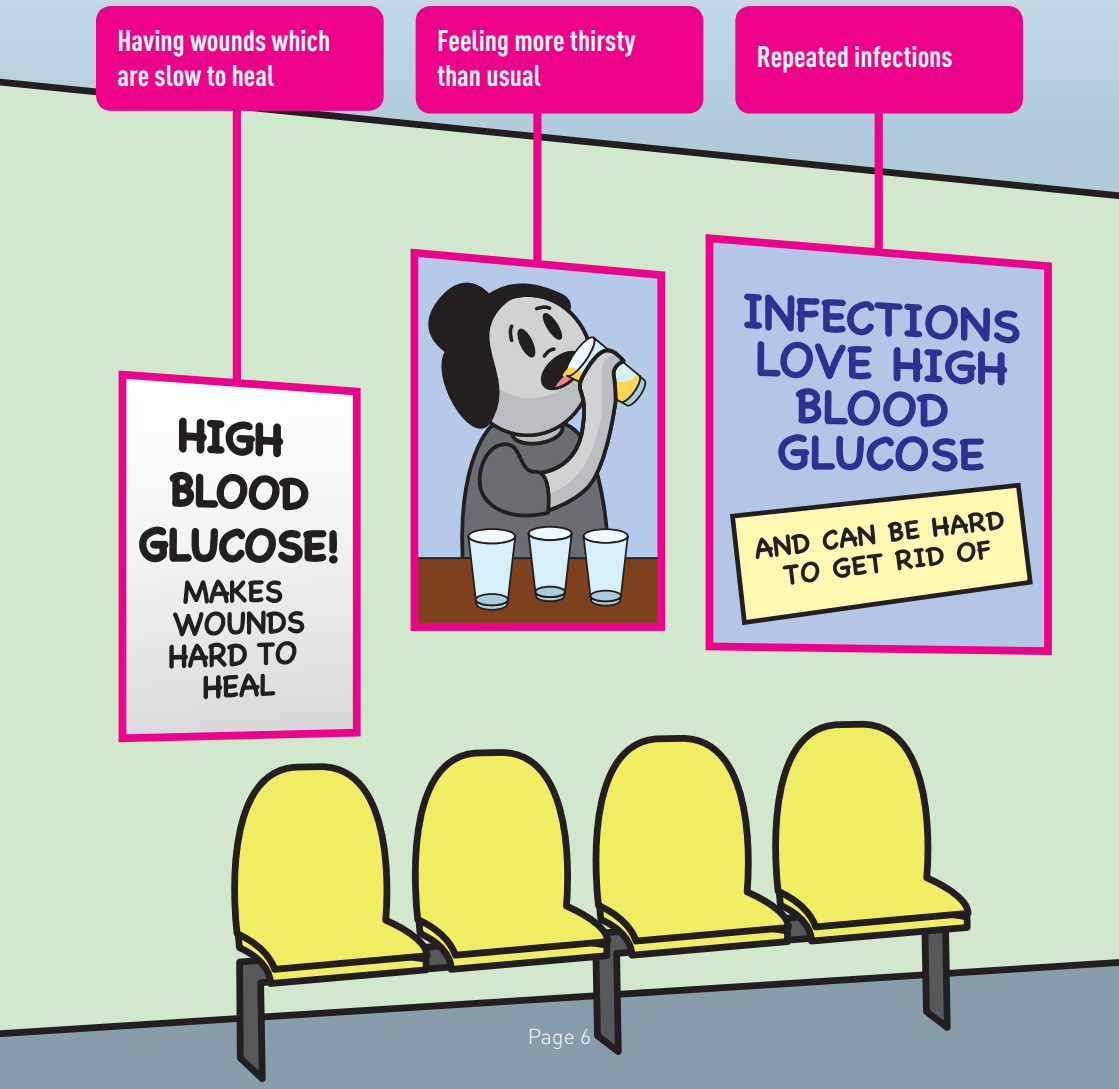
Understanding your body

1. The food we eat goes into the stomach and is broken down to create glucose
2. The glucose is transported around the body in the blood. Some glucose is then stored in the liver and released during the rest of the day and night
3. Insulin acts like a key to open doors on the cells, to allow glucose to get into cells (where it is used for energy)
4. Insulin is produced in the pancreas
5. Extra glucose is stored in the liver



What are the symptoms and management of diabetes?

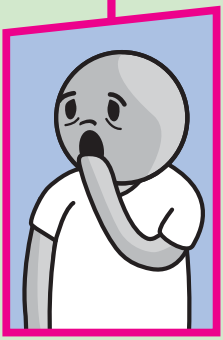
You will have discovered during the DESMOND session that people with diabetes can develop quite varied symptoms. Developing any of these symptoms, or having symptoms which worsen, may indicate that your blood glucose levels are too high. If this happens, you might like to consult your doctor or nurse.



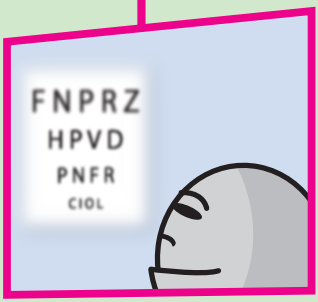
Here are some of the more common symptoms, which can be caused when levels of glucose in the blood are too high.

- [x] **Some people have no symptoms at all. This can sometimes be misleading, and doesn't necessarily mean their glucose levels are normal. It could just mean their diabetes has been diagnosed very early.**

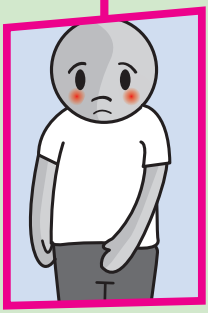
Feeling more tired than usual



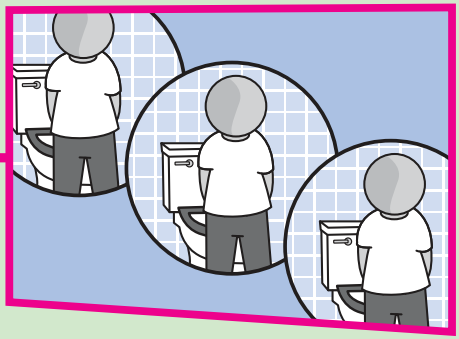
Blurred vision



For men, difficulty in getting erections



Needing to pass urine more often than usual
(and maybe even getting up during the night to go to the toilet)



Treatment of diabetes

At the DESMOND session you will have had the chance to hear about the different ways in which your diabetes can be treated. You will also have heard why it is that people need different treatments, and how this situation can change with time.

Some key points which may be useful for you to have in mind are:

- Changes in food choices can help keep glucose levels lower
- Insulin resistance can be improved by losing weight and increasing physical activity
- Tablets can help – **metformin** improves insulin resistance, **glitazones** (another group of tablets), help the body to be more sensitive to insulin and a group of tablets called **sulphonylureas** help the pancreas to make insulin. **SGLT2** medications work by reducing the amount of glucose being absorbed in the kidneys so that is passed out in the urine
- Over time, the pancreas can't keep up even with tablets, and about a half of people with Type 2 diabetes will need **insulin injections** Needing insulin does not your diabetes is more serious or severe
- Some medication works with naturally occurring chemicals in the body called **incretins**, which increase insulin release. **DPP-4 inhibitors** make the naturally produced incretins last longer. **GLP-1** mimics the action of incretins causing more insulin to be released. Both these medications help to lower blood glucose

What are the long-term effects of Type 2 diabetes?

You may hear some people describe Type 2 diabetes as 'mild'. It is easy to think this is true, particularly if you have no symptoms. From your DESMOND session you will know that unfortunately, no matter what type of diabetes you have, there can be serious risks and medical complications. You may know people with diabetes who have health problems.

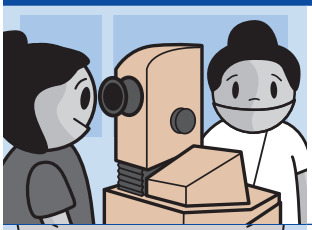
☑ **The good news is that there is a lot you can do to reduce these risks!**

How is the damage caused?

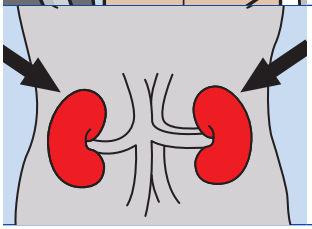
Diabetes can cause damage to large blood vessels, small blood vessels and nerves. These can be found all over the body. The high blood glucose levels from diabetes means that the glucose can stick to the sides of these blood vessels, causing them to 'fur-up' and harden.

This results in the smaller blood vessels becoming weaker, and all your blood vessels becoming narrower. The result? They are more likely to get clogged up.

Small blood vessels



High glucose levels can 'clog' small blood vessels in the eyes...



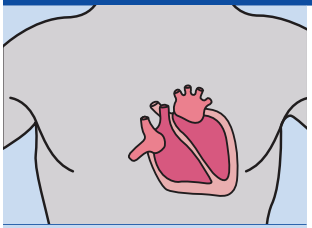
...and in the kidneys

You can do something to help reduce these risks, see the Taking Control section.

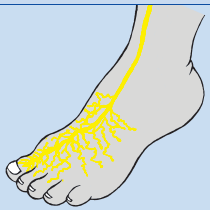
The large blood vessels supplying blood to the heart, brain and feet are also more likely to get blocked, increasing your chance of a stroke, heart attack, or problems with circulation in your lower legs and feet. High blood glucose levels also damage your nerves, particularly in your feet. For men, all these things can combine to cause problems with getting erections, and new evidence suggests diabetes can affect women's sexual health too.

Despite this bad news, it is important to remember that during the DESMOND session, you looked at some of these issues and the changes you might want to make to help prevent these problems from occurring. For those people who might already have some of these problems, you can do things to prevent them getting worse, and in some cases, where the damage is early, reverse it.

Large blood vessels



High glucose levels can 'clog' the large blood vessels which supply blood to the brain and heart



High blood glucose levels also damage your nerves, particularly in your feet

High glucose levels can affect men and women's sexual health. For men, the effects of high glucose levels in the blood vessels and damage to the nerves can lead to problems in getting erections

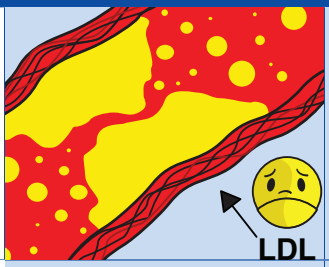
In addition to high blood glucose levels; high blood pressure, high cholesterol, weight around your middle, and smoking all increase your risk of damage to your blood vessels. Depression, or feeling low, is common in people who have diabetes. This can affect your diabetes and make it more difficult for you to manage it successfully.

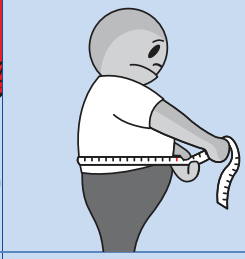
All of these things are called 'risk factors', and if you have some or all of them, you are more likely to have problems. Following your DESMOND session, you may have already made some changes to reduce these risks.

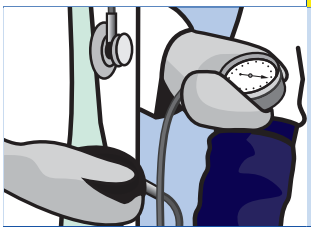
☑ **In a later section: Taking Control, we will look again at how you can reduce these risks.**

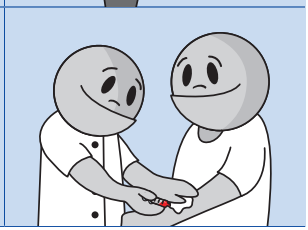
Other risk factors

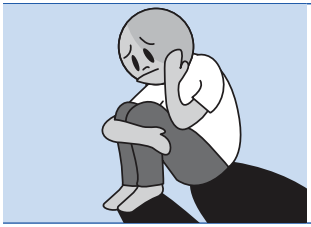
High blood pressure, high cholesterol, high glucose levels, weight around your middle and smoking, all increase your risk of damage to your blood vessels











Depression and feeling low can affect how you manage your diabetes

MONITORING

Short-term or day-to-day tests

In your DESMOND group, you will have explored the various ways of monitoring your glucose levels.

Testing glucose levels in your blood or your urine are two ways of carrying out the day-to-day, or **short-term test**. These are ways of knowing if your blood glucose level is above normal.

Usually, people who do not have diabetes do not have glucose in their urine. When your blood glucose rises above the normal level, glucose spills into the urine.

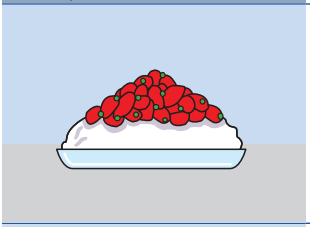
Testing your blood for glucose tells you how much glucose is in your blood at that moment.

Why might I test my urine or blood?

Testing your urine or blood tells you if the changes you have made are working and if they are helping to keep your blood glucose under control.

What might affect my test results?

You can observe the effect on your urine or blood glucose levels by testing your urine or blood at the time of:

	Activity/exercise
	Medication
	Meals and high carbohydrate foods
	Illness
	Stress

How do I test my urine?

You can test your urine for glucose by using urine test strips. You can either hold a test strip in your stream of urine or dip it into a specimen you have collected.

After a fixed amount of time, the test strip will change colour according to how much glucose is in your urine. Remember, there is a delay between high glucose levels in the blood stream showing up in the urine test.

Your doctor or nurse will explain how to obtain the urine test strips, together with how to use them, should you agree together that it would be useful for you to urine test.

How do I test my blood?

A blood glucose measurement can be carried out easily by taking a small drop of blood from your finger. It gives an immediate indication of blood glucose levels. In order to test the glucose level in the blood, you will need to have the appropriate equipment.

If you agree together with your doctor or nurse that it would be useful for you to blood test, they will explain how to obtain this equipment, together with detailed instructions on how to use it.

When might I do my tests?

- First thing in the morning (before breakfast)
- Before meals
- Two hours after your meals
- Before and after activity
- Before and after high carbohydrate foods
- During illness or if you feel unwell
- To see the effect of medication
- When your medication has been changed

You will work with the doctor or nurse to decide useful times for you to test. This will help you to understand how the changes you are making are affecting your glucose control. You might want to record these results in a diary, together with other information, to help you monitor your progress.

If the tests show raised levels of glucose, you should test more frequently and continue with the changes to your food and activity levels. If tests continue to show raised levels of glucose, you will need to discuss them with your doctor or nurse. A regular record of test results will help give a better idea of your level of control.

Long-term test (HbA1c)

There are other ways of monitoring your glucose control in the long term. You may have a blood sample taken from your vein to test your diabetes control.

This test is called haemoglobin A1c (HbA1c) and it shows you what has been happening with your overall blood glucose levels over the last 2-3 months. This long-term test and your home self-monitoring, together give a clearer picture of your blood glucose levels.

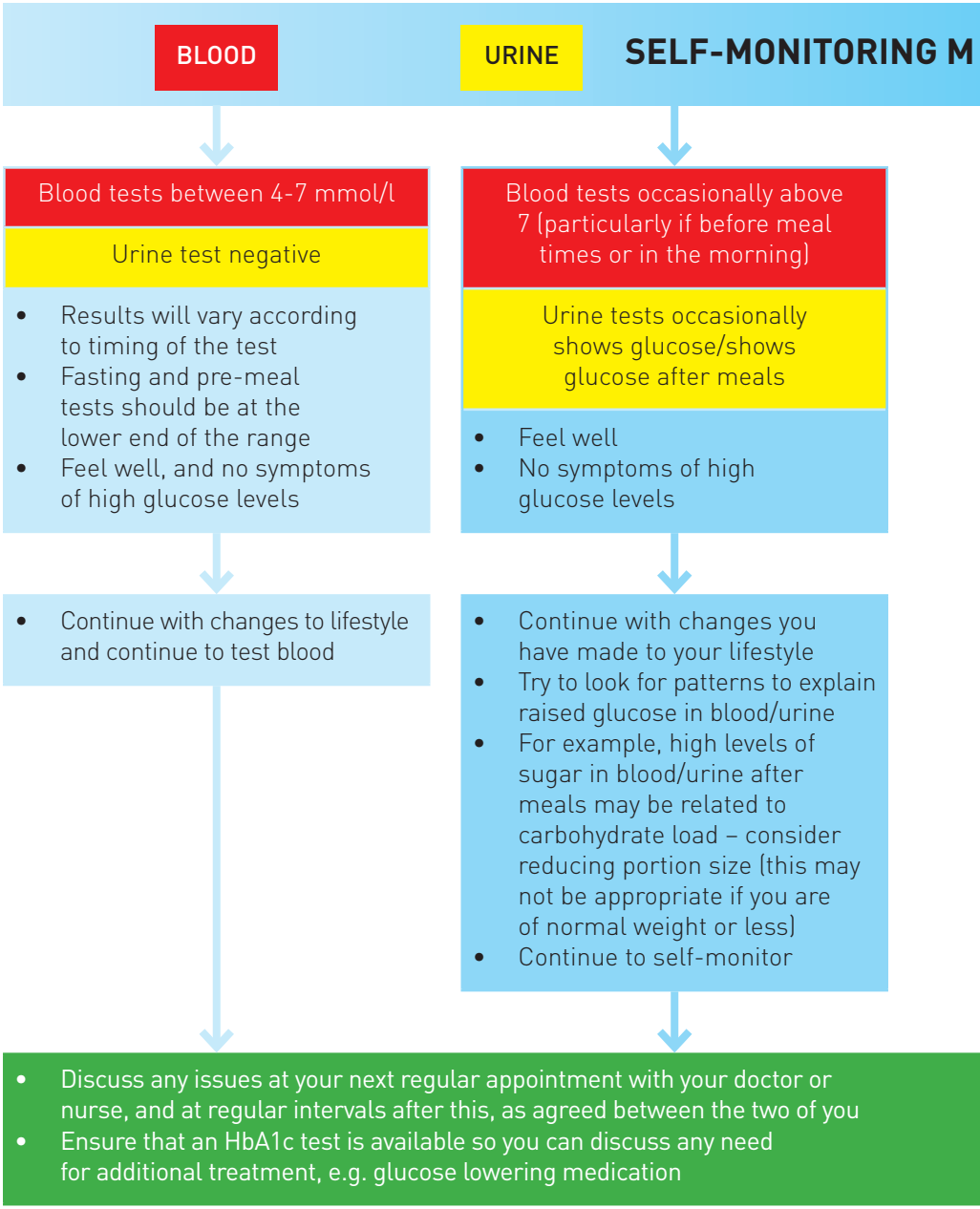
- ☑ **If you have chosen to do urine tests and they are negative for glucose, but your haemoglobin A1c is raised, you may benefit from doing finger-prick blood tests at home, because the urine tests are likely to be misleading you.**

What does the way I'm feeling tell me about my glucose control?

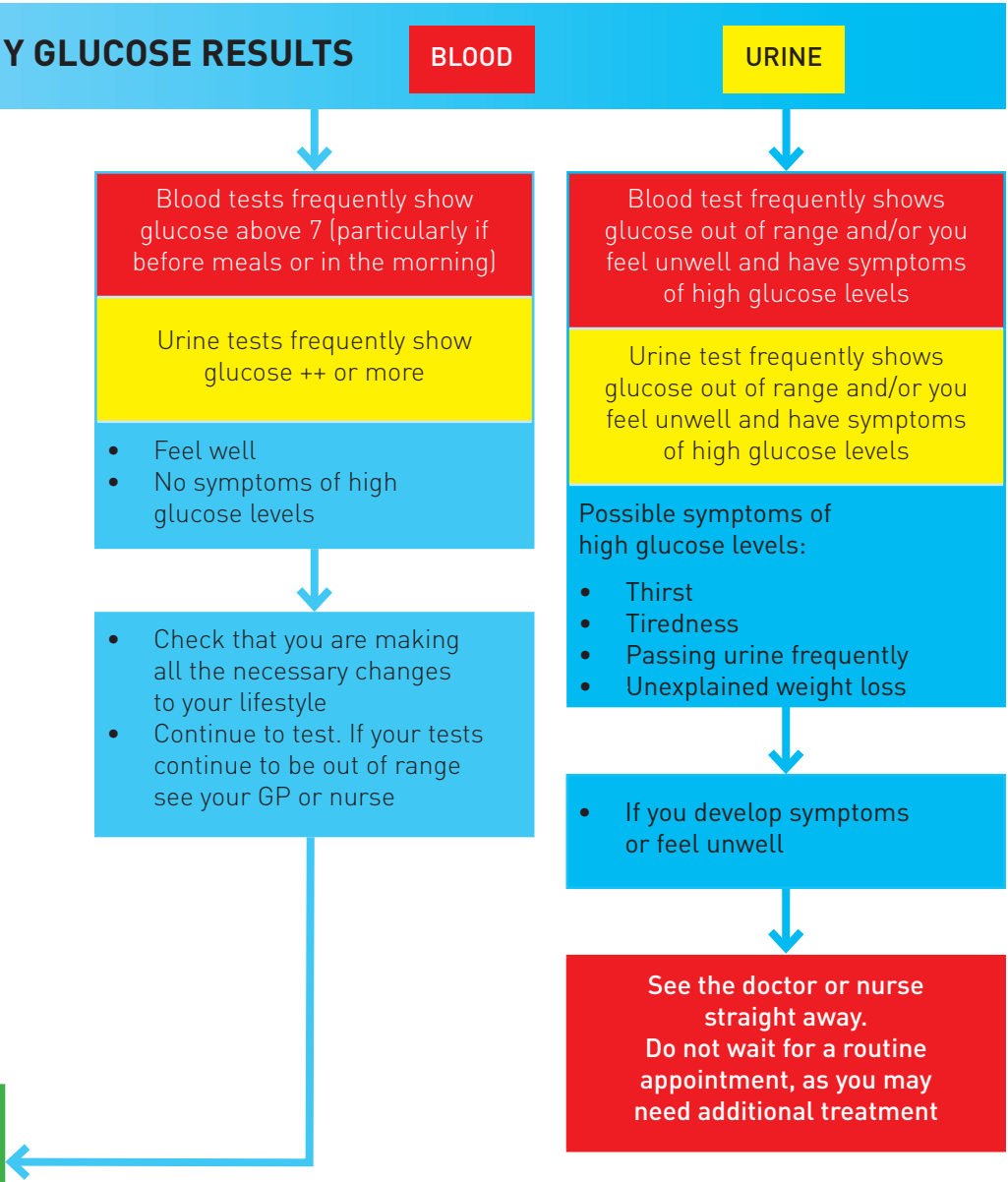
If you feel thirsty, are passing urine frequently, feel tired or lethargic, or have any other symptoms that are associated with diabetes, it may indicate that your blood glucose levels are high.

Some people do not have any symptoms, even when their glucose levels are high. That is why urine or blood tests are important. Unexpected weight loss may indicate raised blood glucose levels and should be discussed with your nurse or doctor.

Some people experience a blood glucose level below the normal range, for example below 4 mmol/l. This only happens when people take certain tablets and insulin to achieve normal blood glucose levels. You may feel dizzy, shaky and sweaty. This should be treated with sugary drinks or glucose tablets and discussed with your healthcare professional.



Please note: if you have been prescribed tablets called SGLT2 (e.g. canagliflozin, dapagliflozin) you cannot monitor by testing your urine, as this medication works by increasing glucose in the urine.



If at any time you are concerned about your diabetes, or feel unwell, contact your doctor or nurse as soon as possible.

What other factors might influence the frequency of testing?

- Changes to your normal routine
- Lifestyle changes, e.g. a new job
- If your food choices change, for example, if you are trying to lose weight or your eating patterns change because of shift work
- Changes to your medication

In these or other circumstances, you may wish to test more often to see what effect this has on your urine or blood glucose levels.

Sometimes other illnesses (like colds, flu, infections, etc.) cause glucose levels to rise and may influence the frequency of your testing. Should this happen you will need to seek the advice of your nurse or doctor.

Less tests may be required when your home urine or blood glucose monitoring and HbA1c are within the normal range.

If you experience symptoms of high or low blood glucose levels, you may wish to test more often.

What else should I know?

You should have a regular follow-up appointment with a healthcare professional (e.g. a doctor or nurse) to review your diabetes. Attending your appointments is important and asking about your blood results, such as your HbA1c level, will support you in making decisions about your diabetes.

What if I am worried about my diabetes, or feel unwell – what should I do?

If, at any time, you are concerned about your diabetes or feel unwell, do not hesitate to contact your doctor or nurse.

For further information on monitoring, please contact your GP, Practice Nurse or local diabetes service.

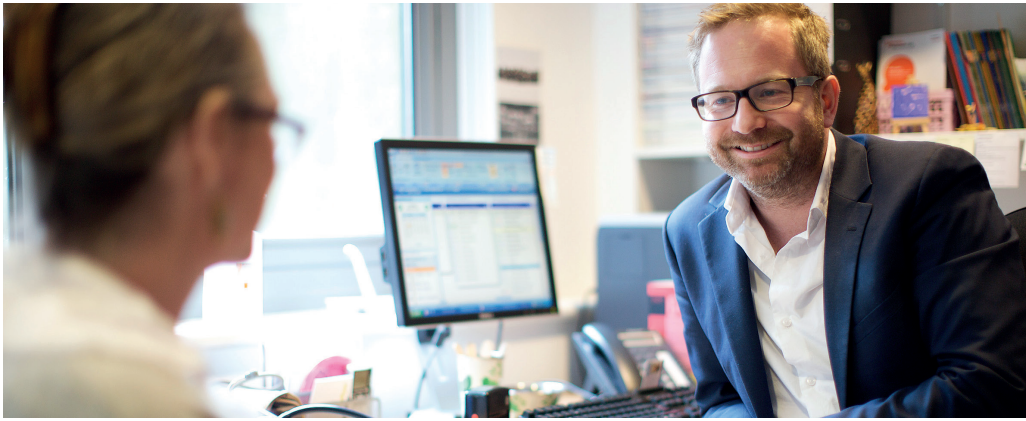
Options for reducing your risks

Having looked at what Type 2 diabetes is, and about how to monitor it, this next section looks at 'taking control'.

By knowing your risk factors for complications, you can work with your healthcare providers, for example Practice Nurse, GP or clinic, to decide what you need to do to prevent these problems occurring.

Now that you know there are problems which can result from diabetes, the best way to improve your risks is to make some changes. You may already have done this.

Some of these changes are things you can do on your own, and others are things you might want to discuss with your doctor or nurse first. You will see that some changes (such as being more active) can benefit your health in a variety of ways.



WHAT CAN I DO TO REDUCE MY RISKS?

Keeping Your Heart and Blood Vessels Healthy

- Reduce blood pressure
- Reduce blood glucose levels
- Reduce cholesterol
- Stop smoking
- Lose weight
- Five portions of fruit and veg a day
- Eat at least two portions of fish per week, including oily fish

Stopping Smoking

- Using nicotine replacement therapy – patches, inhaler, gum
- Attending a smoking cessation programme or group
- Setting a quit date
- Enlisting support from family and friends – tell people
- Accessing local stop smoking services
- Trying E-cigarettes

Managing Blood Glucose

Blood Glucose (Day-to-day)

- Taking medication: tablets or insulin
- Physical activity/exercise
- Having less sugary foods
- Eating smaller portions of starchy carbohydrates
- Eating foods that break carbohydrates down into glucose more slowly

Insulin Resistance (Long-term)

- Eating less fat and in particular saturated fat
- Losing weight and reducing waist circumference
- Being more active

Reducing Blood Pressure

- Being more active
- Taking medication
- Losing weight and reducing waist measurement
- Food choices:
  - Having less salt
  - Eating more fruit and veg (five portions a day minimum)
  - Alcohol within healthy limits (less than three units per day for men & less than two units per day for women)
  - Smaller portion sizes lead to weight loss

Lowering Cholesterol

- Being more active
- Take medication (statins)
- Food choices:
  - Eating less fat
  - Changing from saturated to monounsaturated fats
  - Eating more fruit and veg portions (Aim for five per day)

Losing Weight and Reducing Your Waist Measurement

- Eating less calories
- Eating less fat (all types)
- Having less alcohol
- Eating more vegetables and salad
- Eating smaller portions
- Being more active

Promoting Psychological Well-Being

- Increasing physical fitness
- Support of, and socialising with, family or friends
- Talking about the things you find a burden about your diabetes
- Counselling
- Cognitive Behavioural Therapy, or other intervention locally available – to discuss with doctor
- Medication – discuss with GP

Your health profile

You will have completed a **My Health Profile** during the DESMOND session, and have had a chance to discuss it with the Educators. You will find extra copies of the **My Health Profile** in the **Resources For You** booklet of this folder.

Your health profile shows how you are doing at present. You can make the most difference to your health by working on ways to move as many of the 'risk factors' as possible into the left side of the **My Health Profile** scale. The following information supports the discussions you may have had during your DESMOND sessions. Over time, you might find your health profile changes, and this could influence what action you wish to take in the future.

MY HEALTH PROFILE

Blood Pressure Systolic	Less than 130 mmHg	145 mmHg	160 mmHg	175 mmHg	More than 185 mmHg	
Blood Pressure Diastolic	Less than 70 mmHg	85 mmHg	100 mmHg	115 mmHg	More than 125 mmHg	
Total Cholesterol	Less than 3.1 mmol/l	4.0 mmol/l	5.0 mmol/l	6.0 mmol/l	7.0 mmol/l	More than 8.0 mmol/l
HDL	More than 1.5 mmol/l	1.2 mmol/l	1.0 mmol/l	0.8 mmol/l	0.6 mmol/l	Less than 0.4 mmol/l
LDL	Less than 2.0 mmol/l	2.5 mmol/l	3.0 mmol/l	3.5 mmol/l	More than 4.0 mmol/l	
HbA1c	Less than 6.5%	7.0%	7.5%	8.0%	8.5%	9.0% More than 9.5%
HbA1c	Less than 48 mmol/mol	53	58	64	69	75 More than 80 mmol/mol
Smoking	NON	PASSIVE	SMOKER			
Waist Circumference Male	Less than 94 cm (37 inches)	More than 102 cm (40 inches)				
Waist Circumference Female	Less than 80 cm (31.5 inches)	More than 88 cm (34.5 inches)				
Depression	0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40+					

The health profile tests

Blood Pressure (BP) – Your blood pressure is the pressure on the walls of your arteries. As people get older and arteries 'fur-up', they become stiffer and this pressure increases. Higher pressure means more stress on the artery wall, which can lead to damage.

Blood Pressure Systolic

Blood Pressure Diastolic

Taking a blood pressure measurement checks the amount of pressure in your blood vessels. High blood pressure increases the risk of heart attacks and strokes. Lowering blood pressure reduces these risks.

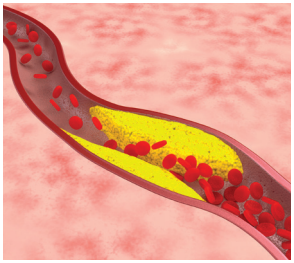
This measurement is done by your doctor or nurse. You will find it helpful to know what your blood pressure numbers are. To reduce your risk of heart attack and strokes, aim for the level **140/80 or less**. If you have kidney, eye or circulation problems it is recommended to reduce your blood pressure to **less than 130/80**.

Cholesterol (Blood Fats) – Cholesterol is the main type of fat that we worry about in the blood. If you have too much cholesterol in your blood, it can fur-up the blood vessels and make them more prone to blocking. However, there are different types of cholesterol. The 'bad' cholesterol which does the damage is called **low density lipoprotein or LDL**. But another type of cholesterol, called **high density lipoprotein or HDL**, is 'good' cholesterol, and helps prevent the arteries furring-up and becoming clogged.

Cholesterol

HDL

LDL



The test for cholesterol will usually be carried out by a doctor or nurse, using blood from a vein. Sometimes you are asked not to eat and drink before the test.

To lessen your risk of strokes, heart attack and circulation problems, it is recommended to keep your total cholesterol levels below 4mmo/l. Your LDL levels should be less than 2 and HDL levels should be greater than 1 for a male and greater than 1.3 for a female.

Many doctors will recommend tablets to lower cholesterol in patients with Type 2 diabetes, as this might lower their chances of complications such as heart attacks or strokes.

HbA1c

HbA1c – Blood sugars: HbA1c is the test used to measure how much glucose gets stuck to the red blood cells in your blood vessels. It is used as a guide to the amount of glucose that has stuck to other parts of the body that can be damaged by diabetes.

HbA1c can tell you how you have been doing over the past 2-3 months in relation to your blood glucose levels and in controlling your diabetes. This test is done by your local doctor or nurse using blood from a vein.

If you are newly diagnosed, you should aim to have an HbA1c level of **less than 48mmol/mol (6.5%)**. But if you are on two or more diabetes drugs then it should be **less than 59mmol/mol (7.5%)**. Your local health service may use a target HbA1c different to the one above. We always advise you to follow your local guidelines. You will find it useful to discuss this with your doctor, nurse or other healthcare professional.

Smoking

Smoking – Smoking damages your blood vessels and increases your chances of a heart attack, strokes and problems with the blood supply to your legs. Smoking and diabetes combined, drastically increase your risk of these by 4-9 times.

What are the benefits of giving up? This is the countdown from taking your last cigarette:

20 minutes	Blood pressure and pulse return to normal
8 hours	Chances of a heart attack start to fall
24 hours	Lungs start to clear out mucus and debris
48 hours	Nicotine is no longer detectable in the body. The ability for taste and smell is improved
72 hours	Breathing becomes easier. Energy levels increase
2-12 weeks	Circulation improves throughout the body
3-9 months	Breathing problems improve. Lung function increased by 5 - 10%
5 years	Risk of heart attack about half that of a smoker
10 years	Risk of lung cancer about half that of a smoker. Risk of heart attack similar to that of someone who has never smoked

- [x] **Even if you have tried to quit before, it is important to keep trying. Help is available through your doctor and local groups. For support, contact the Smokefree NHS service by visiting their website at www.nhs.uk/smokefree or by calling 0300 123 1044**

Shape – In Type 2 diabetes, one of the problems is that your body becomes resistant to insulin. We know that people who put on extra weight around the middle tend to be more insulin-resistant. Changing your body shape can help with this. That is why your waist measurement is important.

Waist Circumference Male

Waist Circumference Female

Depression – There is some evidence to suggest that depression may be linked to the development of Type 2 diabetes, and it has also been found to be particularly common in people with diabetes.

Depression

There are three main reasons for this:

- No one likes to feel low and a diagnosis of something like diabetes can make people feel worse
- People who are depressed often eat more, drink more and sit more, all of which are the opposite to key messages around diabetes
- It is believed that there may be production of a chemical in the body of people who are depressed which blocks the action of insulin

There is a 'depression scale' in your **Preparing for DESMOND** booklet, which you also had the opportunity to complete as part of the DESMOND course, to help you think about how you are feeling.

You may find it useful to complete this questionnaire at other appropriate times in the future. We've given you some information to help you understand what your score means. If your score is greater than 16, we recommend that you discuss this with your doctor or nurse. You will find a spare copy of the scale in the **Resources For You** booklet, but feel free to photocopy more if you need to.

Taking medication

Having diabetes can sometimes mean you have to consider taking tablets to achieve some targets for glucose, blood pressure, depression and cholesterol.

It is not unusual for people to be on several different types of medication. Evidence suggests that people with diabetes may find it difficult to take all of these tablets on a regular basis. There are many reasons for this, such as remembering to take tablets, understanding how they help, or being put off because some have the side effect of making you feel unwell.
If you are prescribed tablets, ask your doctor, nurse or pharmacist what they are for and when to take them, as different tablets may need to be taken at certain times.

Try to have a routine for taking them. If they make you feel unwell, or you don't like taking them, discuss it with a healthcare professional. Don't just stop taking them! They may be able to prescribe alternatives.

National guidance does not recommend the use of aspirin for people with diabetes unless they have a history of cardiovascular disease (CVD), however it has been shown to protect against future CVD risk in those with diabetes and a history of CVD.

For further advice and information we recommend discussing the use of aspirin with your healthcare professional.

Being more active

You may want to check the section on physical activity in your **Preparing for DESMOND** booklet and the information you noted down at the time.

There are benefits to being more active:

- It helps you to relieve stress and anxiety, and improves your mood
- It helps to lower your blood pressure
- It can improve the levels of cholesterol in your blood
- It can burn calories and help you lose weight
- It helps keep your blood glucose down by reducing insulin resistance in your body
- It helps keep your heart healthy

It is suggested that you should aim to build up to at least 150 minutes of moderately intense activity each week. We suggest breaking this down into 30 minutes at least five days per week.

Moderately intense means activity that makes you breathe a little harder and feel warm, and your heart beat a little faster. The pace should make you breathe harder but you should still be able to talk!

You can build up your activity by doing several short periods each day, but each period should be at least 10 minutes long.

Any increase on what you do now will be of benefit. You can choose any activity which you enjoy that can be realistically carried out on a regular basis.

It could be: housework, cleaning, gardening, walking; or something you do as a hobby, e.g., swimming, cycling, or dancing.

It's also important to do muscle strengthening activities for two or more days per week that work on all major muscle groups. This could be free weights, working with resistance bands, digging the garden or yoga, for example.

If you are unable to do any additional physical activity then try at least to break up sitting time. Every 30 minutes, try to stand up and walk around for two minutes.

“Any increase on the activity you do now will be of benefit to your health”

FOOD CHOICES

You will have discovered in your DESMOND session that the choices you make about the kinds of food you eat can reduce your risk of complications. Here is some information to support the discussions you may have had at your DESMOND session.

Carbohydrates and sugar

Carbohydrates are sugars (glucose, table sugar, etc.) and starches (e.g. potato, rice, pasta, bread, cereals). Both can cause blood glucose levels to rise.

- Food and drinks that have sugar as the main ingredient tend to cause blood glucose levels to rise very quickly
- Some people find that eating more than their usual portion of starchy carbohydrates can increase their blood glucose levels

By monitoring your urine or blood glucose levels, you can begin to work out for yourself how your body copes with carbohydrate foods. You can remind yourself of some of these things by having a go at the **Carbohydrate Activity** at the end of this section.

Labels and sugar

You can use a food label as a guide to sugar content, but you may find out that other things, such as how much you have of a particular food and how often you have it, also have an impact on your glucose levels.

These are some definitions used on labels:

- No added sugar/unsweetened – no sugar has been added, but natural sugar may still be present
- Low sugar – contains no more than 5g of sugar per 100g/100mls of food/drink
- High sugar – contains more than 15g of sugar per 100g/100mls of food or drink

Types of fat

There are different types of fat in the food we eat.

- Saturated fat causes insulin resistance and can push up cholesterol levels
- Monounsaturated fat does the least harm.

But all kinds of fat are equally high in calories, and so can easily affect weight.

Saturated

- Lard
- Block cooking fats
- Butter
- Solid oils
- Hard margarines
- Also found in, sausages, pies, pastries and most cheeses

Polyunsaturated

- Corn oil
- Soya oil
- Sunflower oil
- Margarines or low-fat spreads that are labelled as 'high in polyunsaturates'

Monounsaturated

- Rapeseed oil
- Olive oil or olive oil spreads
- Blended vegetable oils, labelled as being high in monounsaturated fat

Eating lots of fat and fatty foods means that:

- It is difficult to lose weight
- Insulin resistance and blood glucose levels become worse
- The heart and circulation get damaged

Labels and fat

You can use food labels as a guide to the fat content of a food, but you may wish to consider other factors, such as the amount of that particular food you eat, and how often you eat it. These are some of the definitions used on labels:

Low fat:	Contains less than 3g fat per 100g/100mls
Reduced fat:	Contains 25% less fat than the standard product. **May still be high in fat**
X% less fat:	Similar to above, depends on how much the fat is reduced by and how high in fat the original was. **So in the end, the food may still be high in fat**

Turn over the page to the **Fat Continuum** for some information about common foods, and their fat content.

- [x] **REMEMBER – it's the Frequency, Amount and Types of foods that you select from these groups that are important to your overall fat intake.**

Frequency
Amount
Type

Fruit and vegetables

Eating more fruit and vegetables can help with blood pressure, and helps the heart and circulation.

If you replace other food choices with more fruit and vegetables then they could help you lose weight.

It is recommended that you eat five portions of fruit and vegetables each day.

One portion is:

- two to three tablespoons of vegetables
- one dessert bowl of salad
- one piece of fruit
- two small fruits (e.g. satsumas or plums)
- two tomatoes/seven cherry tomatoes
- two to three tablespoons of fruit tinned in natural juice

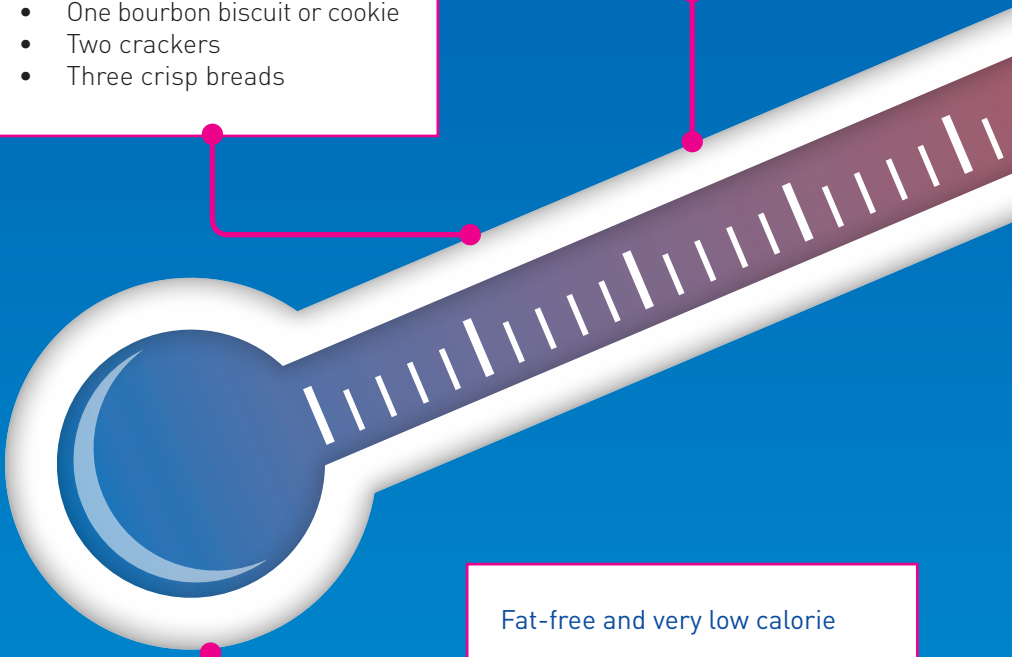
FAT CONTINUUM

Low fat and low calories

- Chicken, turkey, fish, lean meat
- Beans, lentils
- Fruit
- Bread, potato, rice, pasta, cereals (starchy carbohydrates)
- Crumpets and teacakes
- Semi-skimmed milk and low fat yogurt
- One bourbon biscuit or cookie
- Two crackers
- Three crisp breads

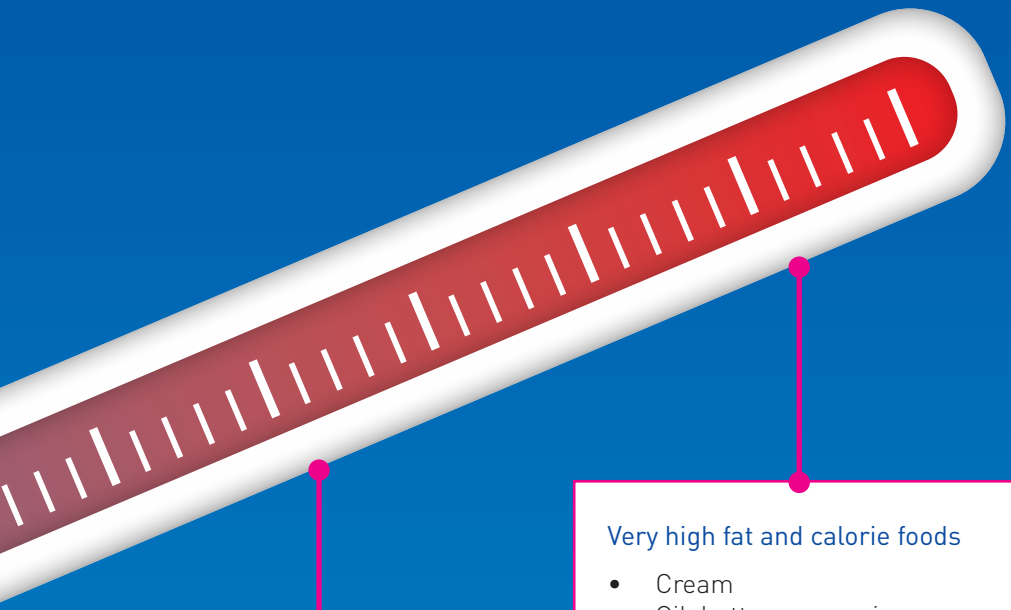
Medium fat and calorie

- Chocolate, cakes and biscuits
- Crisps and cheesy crackers
- Oven chips and roast potatoes
- Mashed potato with fat added
- Full fat milks and yogurt
- Pizza slice
- Ice cream



Fat-free and very low calorie

- Vegetables
- Diet and low calorie drinks
- Sour fruit
- Fat-free dressing



High fat foods

- Fried foods e.g. fried rice
- Whole pizza
- Cheese
- Pastries (sweet and savoury)
- Fish tinned in oil
- Some ready meals
- Desserts made with cream and/or pastry
- Meat products e.g. sausages and burgers

Very high fat and calorie foods

- Cream
- Oil, butter, margarine
- Nuts
- Mayonnaise, creamy dips and some salad dressings
- Some manufactured sauces and ready meals

Weight management

Small changes in what you eat, or small increases in your activity levels, can lead to a significant reduction in your weight. Just eating 100 calories less each day or using up 100 calories through physical activity will either help you lose weight or stop you from gaining weight.

Here is an example of how eating just 100 calories less each day can help you lose weight:

- **If an 80kg (12 stone and 8 pounds) man or woman was to eat 100 calories less each day they would lose 1 stone in about a 1 year period**
- **If he or she continued to eat 100 calories less each day, they would maintain this weight loss**
- **For a man, it would mean reducing from 2500 calories each day to 2400 calories each day**
- **For a woman, it would mean reducing from 2150 calories each day to 2050 calories each day**

The tables opposite and overleaf list some options for either eating 100 calories less, and increasing your activity levels to burn an extra 100 calories.

Remember that if you have high blood glucose levels, it is possible that the glucose you have been losing in the urine will have been either keeping your weight from going up or will have caused you to lose a bit of weight.

100 calorie portions – A quick guide to portion sizes:

Biscuits

- 1 chocolate biscuit
- 1 ½ digestives
- 2 Jaffa Cakes
- 2 custard creams
- 3 chocolate fingers
- 4 morning coffee

Milk & Milk Products

- 1oz (30g) full-fat cheese
- 2 tbsp (30ml) double cream
- 2 tbsp (30ml) condensed milk

Fats & Oils/Fried Food

- ½ oz (12g) butter
- ½ oz (12g) sunflower margarine
- 1 tbsp (12g) oil
- 1 small roast potato
- 1 oz (30g) low-fat spread

Pastry

- ½ mini pork pie
- ½ small pastry
- ½ sausage roll
- 1 small dumpling
- 2 small Yorkshire puddings
- 2 cocktail sausage rolls

Sweets, Chocolate & Sugar

- ½ small bar chocolate
- 1 tube fruit pastilles
- 1 oz (30g) toffee
- 1 pkt Polo mints or fruits
- 1 fun size bar
- 2 oz (60g) Turkish Delight
- 4 barley sugars
- 4 Rolos
- 5 tsp (20g) sugar

Sauces, Pickles & Jams

- 1 tbsp (15g) mayonnaise
- 2 tbsp (30g) salad cream
- 2 dsp (20ml) French dressing
- 3 tbsp (45ml) gravy made with fat
- 6 tbsp (90g) tomato sauce
- 7 tsp (30g) jam

Cakes & Baked Goods

- ½ hot cross bun
- ½ doughnut
- 1/3 Danish pastry
- 1 fondant fancy

Crisps & Snacks

- ½ oz (15g) peanuts
- 1 small packet of crisps

Puddings & Desserts

- ½ portion (30g) fruit pie
- ½ portion (40g) apple crumble
- 1 ladle of custard
- 1 bowl (approx. 40g) of jelly
- 2 scoops (approx. 250g) ice cream
- 1 portion of rice pudding (approx. 125g)

Drinks

- ½ pint (280ml) beer or lager
- ½ pint (280ml) medium/sweet cider
- 1 small (125ml) glass of wine
- 1 glass of cola
- 2 pub measures (70ml) of spirit
- 2 glasses of lemonade
- 2 glasses of unsweetened fruit juice
- 2 glasses of fruit squash
- 4 tsp (10g) of milkshake powder
- 5 tsp (20g) Horlicks
- 6 tsp (25g) drinking chocolate

Physical activities and calories

- Want to increase the amount of physical activity in your daily life?
- Would the 'little and often' approach suit you best?

This list shows how you can burn up 100 calories by increasing the amount of time you spend on activities you enjoy.

Remember! This must be in addition to what you normally do each day.

Activity	Time
Aerobics (low impact)	18 mins
Badminton	15 mins
Billiards/Snooker	33 mins
Cleaning the house	25 mins
Cycling (gentle)	25 mins
Dancing (ballroom)	28 mins
Decorating (in the home)	33 mins
Gardening (digging)	12 mins
Gardening (weeding)	28 mins
Ironing	50 mins
Jogging (slowly)	12 mins
Knitting/Sewing	67 mins
Shopping	25 mins
Squash	7 mins
Stair climbing	9 mins
Swimming (slowly)	12 mins
Typing	50 mins
Vacuum cleaning	22 mins
Walking (slowly)	25 mins
Washing dishes	50 mins

Carbohydrate Activity

How many hidden sugar cubes are in these foods and drinks?

☑ **1 sugar cube = 3g of carbohydrate**

Medium brown bread roll	
Medium baked potato (fits in the palm of your hand)	
3 tablespoons of cooked rice	
Orange juice (200ml)	
Orange	
Can of cola	
Can of diet cola	
Bottle of original Lucozade (500ml)	
Fruit jelly (approx 135g)	
Sugar-free jelly	
Jam (100g)	
Jam portion (20g)	
Ketchup (20g)	
Müller Fruit Corner yogurt (150g)	
Müllerlight yogurt (175g)	
Tube of fruit pastilles (53g)	

Answers for sugar cube totals (multiply by 3 for total carbohydrate):

- Medium brown bread roll = 6
- Medium baked potato = 16
- 3 tablespoons of cooked rice = 10
- Orange juice (200ml) = 7
- Orange = 2
- Can of cola = 12
- Can of diet cola = 0
- Bottle of original Lucozade = 22
- Fruit jelly (approx 135g) = 31
- Sugar free jelly = 0
- Jam (100g) = 23
- Jam portion (20g) = 4
- Ketchup (20g) = ½
- Muller Fruit Corner Yogurt (150g) = 7½
- Müllerlight Yogurt (175g) = 4½
- Tube of fruit pastilles (53g) = 14

NEXT STEPS

Making a plan

During the DESMOND session you will have had the chance to:

- Look at your own risks (See: **My Health Profile** in **Resources for You**, which you will have completed during the course)
- Discover how lowering those risk factors into target levels will help reduce your likelihood of developing further problems
- Think about the options you have for making changes to your lifestyle to improve your health profile
- Think about things you want to discuss when you go to see your doctor, nurse or dietitian

Choosing a risk factor to work on

During the DESMOND session, you will have made an action plan in your **Resources for You** booklet. You will have referred to:

- **My Health Profile**
- **What Am I Going To Do Now?**

Using the information about reducing risks (see: **Taking Control**), decide which specific option you would like to change. It could be anything from this list:

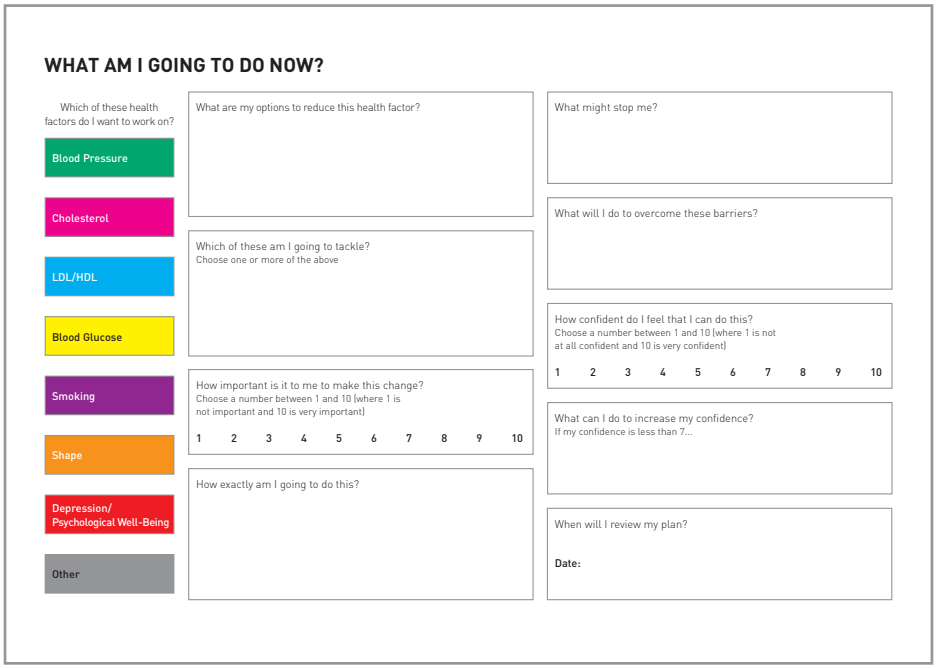
- Blood pressure
- Cholesterol
- Blood glucose
- Smoking
- Shape
- Depression/Psychological Well-Being

For example, if you wanted to stop smoking, you might want to decide to find out about 'Stopping Smoking' services in your local area. Or, if you decided you wanted to reduce your blood pressure, you might decide to look initially at being more physically active or losing weight.

Now for the plan!

Whilst you were at the DESMOND session, you will have used the **What Am I Going To Do Now?** work sheet which looked at the risk factors you wanted to focus on (see below).

You may find it useful to review this plan from time to time. We know from research that the best way to make lifestyle changes is to have a specific plan, and update it every so often. You will find a copy of **What Am I Going To Do Now?** in the **Resources For You** booklet.



WHAT AM I GOING TO DO NOW?

Which of these health factors do I want to work on?

- Blood Pressure
- Cholesterol
- LDL/HDL
- Blood Glucose
- Smoking
- Shape
- Depression/ Psychological Well-Being
- Other

What are my options to reduce this health factor?

Which of these am I going to tackle?
Choose one or more of the above

How important is it to me to make this change?
Choose a number between 1 and 10 (where 1 is not important and 10 is very important)

1 2 3 4 5 6 7 8 9 10

How exactly am I going to do this?

What might stop me?

What will I do to overcome these barriers?

How confident do I feel that I can do this?
Choose a number between 1 and 10 (where 1 is not at all confident and 10 is very confident)

1 2 3 4 5 6 7 8 9 10

What can I do to increase my confidence?
If my confidence is less than 7...

When will I review my plan?

Date:

Making changes

During the DESMOND course you will have looked at how people go about making changes. There are times in our lives when we feel more able to make changes than others. During the DESMOND session, you made some plans for managing your diabetes. You may feel you are now ready to update your **What Am I Going To Do Now?** work sheet, or make a new one.

Keeping change going

Helpful points to remember when making a change:

- A slip or relapse is a chance to learn more about yourself and how you can manage change in the long-term
- When we feel that life is full of things we *should* do, life can seem out of balance and this can make us feel more like treating ourselves with food or alcohol
- Slips are common; it is how we manage them that is important
- Sometimes having a plan in advance can help prevent a slip or relapse
- If you do have a slip, think about the support you will need to get back on track

Top tips for managing slips and relapses:

- Avoid challenging situations in the short-term
- Supportive friends and family can be a great help
- Have a list of positive reasons why you should stick with your lifestyle changes
- Think of, or have an image of how you will feel if you slip, and how you will manage the situation
- Think of, or have an image of how you will feel if you do not manage the slip
- Have a prepared list of statements to say when people tell you it doesn't matter if you don't keep to your plan
- Consider learning some relaxation or assertiveness skills for managing the areas of stress/conflict that could lead to a slip or relapse

Use the box below to write down any tips you find help you to avoid slips and relapse:

What happens next?

After the DESMOND session, your doctor or nurse will ask you to go for regular appointments to:

- Offer you support
- Discuss your future options for looking after your diabetes
- Check and measure your risk factors; for example, your diabetes risk, blood pressure and cholesterol level
- To detect early complications promptly so they can be treated

You will be asked to attend an appointment once a year for some special checks to be carried out. These are:

- Eye check
- Kidney check (blood and urine samples)
- Foot assessment
- Blood pressure

You may have questions you want to ask the doctor/nurse/dietitian when you see them. A good tip is to make a list of your questions and take it with you when you go to the appointment. It's easy to forget something on the day!

Support organisations – Diabetes UK

You will know from being on the DESMOND session that talking to other people with diabetes and sharing each other's experiences and good ideas is a great way of getting support – and making new friends. So we are including the following information about Diabetes UK. Diabetes UK is the largest organisation in the UK working for people with diabetes, funding research, campaigning and helping people to live with the condition.

10 Parkway, London NW1 7AA
Tel: 0345 123 2399
Email: info@diabetes.org.uk
Web: www.diabetes.org.uk

DIABETES UK
CARE. CONNECT. CAMPAIGN.

For more information about DESMOND,
contact your local co-ordination team

Newly Diagnosed and Foundation

www.desmond-project.org.uk
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