



# Diabetes Personal Handbook

● ————— Living Life with Diabetes



Supporting people and projects

With many thanks to Diabetes Norfolk  
<https://diabetesnorfolk.org/>





*The original work to create the Diabetes Personal Handbook was undertaken by West Norfolk Diabetes Network, with thanks to the generous sponsorship from Diabetes Norfolk.*



Supporting people and projects

Supporting projects that improve  
the lives of people with diabetes  
in Norfolk

This handbook is produced with funding from Diabetes Norfolk, a charitable organisation which seeks to improve facilities and care for the 65,000+ people in Norfolk with known or undiagnosed diabetes. It provides equipment, staff and facilities when NHS funds are not available, and this has led to a major improvement in the provision of services. The retinopathy service (now funded by the NHS) was previously supported by Diabetes Norfolk.

To date the charity has:

- Helped thousands of people living in the county
- Raised in the region of £3 million in order to support people with diabetes in Norfolk
- Backed hundreds of projects

Please visit our website: <https://diabetesnorfolk.org/>

Registered charity no 1002111





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## Personal details

Name: ..... Date of birth: .....

Address: .....

Telephone: Home: ..... Work: ..... Mobile: .....

Your GP: .....

Practice nurse: .....

Surgery address: .....

Telephone: Emergency: ..... Appointments: ..... Results: .....

Hospital consultant: .....

Diabetes specialist nurse: .....

Hospital: .....

Dietitian: .....

## Emergency contact information/next of kin

Name: ..... Date of birth: .....

Address: .....

Telephone: Home: ..... Work: ..... Mobile: .....





## Medical history

Date diabetes diagnosed: ..... Type 1 or Type 2 or Other  
eg GDM, MODY

Date of onset	Diabetes related complications

Date	Medical history/hospital admissions

Allergies:.....



## Useful telephone numbers

<b>Hospitals:</b>	Cromer Hospital	01263 513571
	James Paget University Hospitals NHS Foundation Trust	01493 452452
	Norfolk and Norwich University Hospitals NHS Foundation Trust	01603 286286
	Queen Elizabeth Hospital King's Lynn NHS Foundation Trust	01553 613613
Out of Hours contact <b>ring 111</b> or if medical emergency ring <b>999</b>		
<b>Central Norfolk</b> (North Norfolk, Norwich, South Norfolk)	Elsie Bertram Diabetes Centre <a href="https://elsiebertramdiabetescentre.org.uk">https://elsiebertramdiabetescentre.org.uk</a>	01603 288445
	EBDC Appointment Booking Team	01603 288480
	Diabetes Specialist Nurse Team	01603 288513
	Diabetes Specialist Dietitian Team	01603 287011
	Diabetes Nurse Facilitator Team	01603 288207
	Paediatric Diabetes Nurse Team	01603 287504
	Retinal Screening Service	01603 288433 / 288432
<b>West Norfolk</b>	Diabetes Centre in QEH	01553 613494
	Community Diabetes Team	01553 668778
	Retinal Screening Service	01284 848418
<b>Gt Yarmouth &amp; Waveney</b>	Diabetes Centre in JPUH	01493 453373
	East Coast Community Healthcare	01493 809977
	Retinal Screening Service	01493 848418
Wellbeing service		0300 123 1503
Diabetes Patient Supporters (Central Norfolk)		0800 032 0087



## Diabetes personal handbook

Your diabetes personal handbook provides important and useful information for you and the healthcare professionals (HCPs) involved in the management of your diabetes. Please bring it with you to all the following appointments:

- GP
- Hospital diabetes clinic
- Eye clinic
- Optician
- Diabetes nurse
- Dietitian
- Podiatrist
- Other hospital appointments or visits

This handbook may also provide useful information to any HCP who may provide you with temporary care, for example, in an emergency, whilst on holiday, or at an accident and emergency unit.

It is important that information in your personal handbook is regularly updated, so please ask HCPs to do this when necessary. Because this is your personal record it is also important that you also update the information.

If you are not sure about anything in the record, please ask your HCP.

**Important note:** Your personal handbook record may contain confidential information, so please keep it in a safe place.





## Diabetes the facts

### What is diabetes?

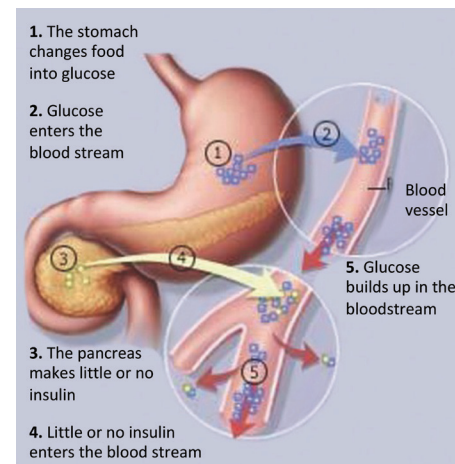
Diabetes Mellitus is usually known as diabetes and is a common condition where the amount of glucose (sugar) in the blood, is too high because the body is unable to use it properly. To understand diabetes, it is helpful to know how your body uses glucose.

When you eat, food enters the stomach and intestines where it is broken down releasing the sugar it contains. The sugar then goes into the blood stream and is carried around the body to tissues such as, the liver and muscles where it is used to provide energy. Sugar carried in the blood is known as glucose.

To get into the tissue cells, glucose needs the help of a natural hormone called insulin. Insulin acts like a key, unlocking the cell wall so that glucose can enter.

Normally, the level of glucose in the blood is carefully controlled by insulin, which is produced by the pancreas, a small organ near the stomach. However, when the pancreas is unable to produce enough insulin, or the insulin it produces is not able to work properly, the level of glucose in the blood stream rises and eventually symptoms of diabetes occur. These symptoms are thirst, passing urine too often, weight loss and fatigue.

Diabetes can develop at any age and whilst it is not hereditary, diabetes is more common if there is a family history of diabetes.







There are several types of diabetes; the two most commonly recognised are Type 1 and Type 2.

**Type 1 diabetes** occurs when there is a severe lack of insulin in the body because most or all of the cells that produce it in the pancreas, have been destroyed.



This type of diabetes is more common in younger people often in childhood, although it can occur at any age. Symptoms usually develop over hours or days.

Type 1 diabetes is treated by insulin injections and diet.

**Type 2 diabetes** occurs when the body can still make some insulin but this is either not enough for its needs, or the insulin produced does not work properly. This is known as insulin resistance.

Type 2 diabetes is more common in older people, although it can occur in young people who are overweight. When diagnosed, 80% of people with Type 2 diabetes are overweight or obese.

Because symptoms often develop over weeks or even months, this means that some people may have had diabetes some time before they are diagnosed.

Type 2 diabetes can be treated in different ways. The main treatment is a combination of diet and exercise which helps with weight loss and symptom control. However, virtually everyone will eventually need tablets or insulin injections as well as diet and exercise.





**Pancreatic Diabetes** can develop because of damage to the pancreas. It is sometimes referred to as secondary diabetes and sometimes as type 3c diabetes. This can happen for various reasons, such as pancreatitis or removal of the pancreas.

In this type of diabetes the pancreas stops producing enough insulin for the body to use. In addition, with this type of diabetes your body may also stop producing the enzyme that is used to help you digest food.

This type of diabetes can be treated with a tablet called Metformin but may likely need to be treated with insulin.

**MODY or Monogenic diabetes:** MODY (Maturity Onset Diabetes of the Young) is sometimes known as Monogenic Diabetes. This is a rare form of diabetes which runs very strongly in families. Experts estimate that only 1-2% of people with diabetes have it.

MODY is caused by a mutation (or change) in a single gene. If a parent has this gene, their child will have a 50% chance of inheriting it.

Key features are:

- Diagnosis under the age of 25
- Having a parent with diabetes in two or more generations
- Not necessarily requiring insulin therapy

There are many types of MODY each have different medical presentations and recommended treatments.





If your HCP suspects that you may not typically have type 1 or 2 diabetes, they may suggest blood tests for pancreatic antibodies or genetic testing.

**Gestational Diabetes** can develop during pregnancy in women who don't already have pre-existing diabetes.

It is usually diagnosed by a blood test at around 24-28 weeks in pregnancy but in some cases can be sooner. It is caused because the hormones that are produced during pregnancy can make it harder for the body to use the insulin properly. Some women can't produce enough insulin to overcome it. Once the baby is born it usually goes away.

Women are more at risk of gestational diabetes if they are overweight, have had it before, have a family history of diabetes, have had a large baby (4.5kg or more) in their last pregnancy or are from a South Asian, Black, African-Caribbean or Middle Eastern background.

Treatment to help control the blood glucose can be through diet, a tablet called Metformin or Insulin.



## Why it is important that you do not ignore your diabetes?

Managing your diabetes well can help to prevent long term complications that can arise.

It is important because you may not be aware that it has caused your blood glucose (sugar) levels to rise, even though it may cause symptoms such as tiredness, excessive thirst, passing urine too often especially during the night, blurred vision, recurrent thrush or infections, or unexplained weight loss.

Managing your diabetes means trying to maintain normal blood glucose levels. However, it is not just blood glucose that is important because diabetes can be associated with:

- High blood pressure
- High cholesterol levels – these will be checked once you are over 16 years old, or if it is clinically necessary
- Furring of the arteries that can cause heart disease, stroke and damage to the feet, kidneys, eyes and nervous system.

## Problems linked to diabetes

One of the biggest effects of Type 1 or Type 2 diabetes is that the blood vessels in the body can become damaged. Depending on which part of the body and the size of the blood vessels affected, this can cause a number of different problems.

Damage to the small blood vessels can cause problems in the eyes, kidneys and nerves. Damage to the larger blood vessels can cause heart problems and stroke. Research has shown that if you have diabetes you can reduce the risk of developing these problems by:





- ✓ Controlling your blood pressure, blood lipid (cholesterol) levels and blood glucose levels. Your HCP will give you advice about the levels you should be aiming for
- ✓ Managing your weight. Your HCP can give you advice about what weight you should be for your height
- ✓ Maintaining good levels of physical activity. Your HCP can give you advice about exercise or fitness plans.

You will increase your risk of having problems if you have had diabetes for a long time and if you:

- Have high blood glucose levels \*\* (see below)
- Have high blood pressure levels \*\* (see below)
- Are older
- Have high levels of certain fats or lipids in the blood, such as cholesterol
- Are a man (but other risk factors still apply to women)
- Smoke
- Have a family history of kidney problems
- Are of South Asian or African-Caribbean origin
- Have high levels of protein in your urine
- Are overweight or obese.

\*\* Levels that are high for you. This is different for each person, which means blood glucose or blood pressure levels that are high for one person, may be normal for another.



# Diabetes and cardiovascular disease

## Cardiovascular disease

Disorders of the heart, blood vessels or blood circulation are a particular risk for people with diabetes. High blood glucose levels, high blood pressure and high cholesterol levels all add to the damage, causing blood vessels to become furred up. This makes it more difficult for blood to flow through the vessels so the tissues do not get enough of the oxygen and nutrients they need to keep healthy.

If the blood vessels of the heart are affected, it can cause angina or even a heart attack “**myocardial infarction**”. This type of heart disease is known as **ischaemic heart disease** or **coronary heart disease**.

Circulatory problems of the legs and feet are known as **peripheral vascular disease**.

## Heart failure in diabetes

Heart failure, which is not to be confused with a fatal heart attack, describes any condition that prevents the heart from pumping blood around the body effectively enough. People who already have cardiovascular disease, high blood pressure or kidney disease can go on to develop heart failure. People with diabetes are more at risk of developing heart failure than those without diabetes. Symptoms include shortness of breath, swollen ankles or feet which may develop to include a swollen stomach and lower back and fatigue.





## Diabetes and the kidney

Your kidneys make sure that there is the right amount of water in your body and filter out harmful waste products which leave the body as urine. Damage to the small vessels that supply blood to the kidneys can cause this filtering to stop working properly. When this happens important proteins, such as albumin, can be lost from the body into the urine, and other waste products, such as creatinine, are not excreted properly which can cause levels in the blood to rise. Damage to the kidneys in this way is known as **diabetic nephropathy** or **renal disease**.

Examination of your urine and blood tests to check your kidneys should be carried out at least once a year, although this should be more often for some people with diabetes. This helps to find signs of kidney damage at an early stage. You may be asked to bring a urine sample which has been taken early in the morning, so it can be tested for protein or albumin.

If the signs of early kidney disease are found, then improving blood glucose levels, lowering blood pressure and certain medications can help reverse the condition or slow its progression.

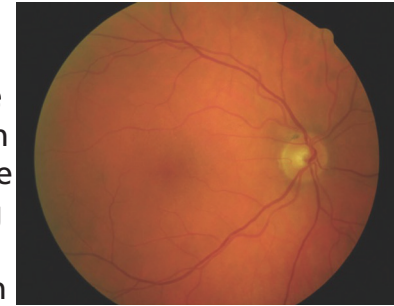
If you have heart disease or kidney disease – your HCP may suggest you try a specific type of blood sugar lowering medication as these are known to help to protect your heart and or kidneys.





## Diabetes and the eye

Damage to the small blood vessels in the inner layer of the eye (the retina) can cause a condition called diabetic retinopathy. So you can see properly, light must be able to pass through the front of the eye to the retina. Diabetic retinopathy may lead to bleeding or scarring of the retina which can affect your sight and in severe cases may cause blindness. The effects of retinopathy may be different in each eye.



**Cataracts** is another eye condition which is more common in people with diabetes. This is where the lens of the eye becomes blurred and cuts down the amount of light passing to the retina.

To help prevent diabetes related eye disease and to detect problems at an early stage, so that treatment can be given, it is important your eyes are examined regularly, which may be once a year, or more frequently, or sometimes every other year by retinal screening photography. The examinations and tests to check your eyes may include:

- Checking your visual acuity (how good your eye sight is)
- Looking for cataracts
- Examining the retina at the back of your eye.

Examining your eyes to check each retina may involve:

- Shining a light into your eyes using an ophthalmoscope
- Taking digital photographs of the retina (retinal screening)







## Diabetes and your feet

Having diabetes increases your risk of developing serious foot problems. Problems in the blood supply (circulation) to your feet can leave them feeling cold and unable to heal properly if cut or injured. The sensory nerves in your feet can also be damaged and this can cause **neuropathy** which is loss of sensation (feeling). It is important that you do not ignore neuropathy. If you have no sensation in your feet you are at risk of foot injury or infection. If you cannot feel pain you may not know that you have injured your foot or be aware of an infection. If this happens the infection can develop and spread to become a serious problem before you are aware of it. If your circulation is poor, it is difficult for the body to fight infection which can then make it very difficult to treat. In extreme cases this can result in the need for surgery or even amputation.

You can reduce the risk of this happening by following information in the next section – A guide to diabetic foot care.

In addition to everything already mentioned, you should also have your feet checked by your GP, practice nurse or podiatrist at least once a year. They can examine your feet for signs of circulatory problems or neuropathy.

If you notice any problems with your feet, you should always report this to a HCP immediately so treatment can be given to prevent a more serious problem. If you are not sure please phone for advice first.





## A guide to diabetic foot care

Diabetes can reduce the circulation and sensation in your feet. If you are not able to feel your feet properly, it is easy to damage them without realising it. This can lead to foot problems which can occur without you being aware of them.

Poor circulation may prevent wounds from healing as quickly as normal. Having diabetes also means that you have a higher risk of foot infection.

Serious foot problems can be prevented by taking a few simple steps:

- ✓ Wash your feet every day in warm, soapy water. Make sure the water is not too hot
- ✓ Dry your feet carefully with a soft towel, and apply a little surgical spirit between your toes if the skin tends to be moist
- ✓ Apply moisturising cream to dry skin but do not put between the toes
- ✓ Do not use corn or hard skin treatments as they contain acid which can damage your skin. Always read the label
- ✓ Check your feet every day. Check underneath, on top and between the toes, and look for
  - Cuts, cracks and open sores
  - Redness, swelling and areas that are weeping
  - Anything that you think is unusual



- ✓ Never walk around with bare feet. Before putting shoes on, check inside and remove any stones or other sharp objects
- ✓ Try to avoid temperatures that are too hot or too cold. Do not sit too close to fires and heaters, or put your feet on hot sand or hot water bottles as this may burn your skin.
- ✓ Cut nails straight across but not too short and never dig down the sides. Try filing your nails if they are thick. Ask someone to help you if you find nail care difficult
- ✓ Wear clean socks or tights every day and make sure they are not tight around your foot or ankle. Make sure tights and socks have smooth seams that do not rub your toes
- ✓ When you buy shoes, have your feet measured and make sure they are wide enough and deep enough for your toes. Choose lace up or bar fastening shoes, and avoid slip-on shoes and open toe sandals.

**Important note** – if you notice a problem or anything unusual, it is important that you contact your podiatrist, diabetes nurse or doctor immediately.





## Diabetes and mental health

About 25% of people with diabetes may suffer from low mood and anxiety. This can occur at any time but is particularly common in the months following diagnosis. Symptoms may include:

- A feeling of low mood
- Loss of interest in things which you normally enjoy
- Poor sleep pattern where you have difficulty getting off to sleep, or wake up during the night and cannot get back to sleep
- Feeling tired all the time
- Poor concentration or memory
- Feelings of anxiety
- Tearfulness
- A change in your appetite

Low mood and anxiety can also cause irritability which is something that may be noticed first by the people you live with. As part of your diabetes annual review, you may be asked questions that will help identify if you are suffering from low mood or anxiety. If so you can discuss this with your HCP.

Low mood and anxiety often improves by itself over a period of time and you may feel better just because the problem has been highlighted. If you or your HCP feel that it would help to have treatment for low mood and anxiety, there are different types you may be offered. Some people benefit from specialist counselling, others may be treated with antidepressant medication.

The Wellbeing service accepts self-referrals. You can ring them on 0300 123 1503 or via their website <https://www.wellbeingnands.co.uk/norfolk/>





## Diabetes and erectile dysfunction (impotence)

Men with diabetes, heart disease, circulation problems or who smoke can have trouble getting or keeping an erection. This is called erectile dysfunction or ED. Controlling blood sugar, blood pressure, cholesterol levels and giving up smoking can all help to prevent erectile dysfunction.

For many men the problem is mild and does not totally prevent intercourse, but for others it can be more of a concern. There are a number of different treatments now available, including tablets and injections, which can help.

Erectile dysfunction should be mentioned at each annual review, and if it is not, or you have a concern, do not be shy to mention it to your HCP.



## Managing your diabetes

### Blood glucose

For most people with type 2 diabetes self-monitoring of blood glucose may not be necessary and is not recommended. If you are advised that you do need to monitor your blood levels then your HCP can show you how to do this and they will also supply you with the appropriate equipment.



This type of blood glucose monitoring will tell you what your blood glucose level is at the time of the test, and if done over a period of time can help you manage your diabetes. It can also assist your HCP to decide which treatments are likely to be beneficial for you.



## HbA1c (pronounced H B A one C)

This is a special blood test which gives information about your blood glucose levels over the previous eight to twelve weeks. It is a useful guide to your overall blood glucose control and helps your HCP to decide if your diabetes medication is at the right level or needs to be changed.

Your HCP will help you set a target HbA1c to aim for. **This is different for each person** and will be based on your personal circumstances and previous HbA1c result.

Below target	Ideal	Above target	Poor control
	5 – 8	9 – 12	13 – 15+
	48 – 53	54 – 64	65 – 86+

Blood glucose (mmol/l)  
HbA1c (mmol/mol)

## Blood pressure

Blood pressure is the force at which your heart pumps blood through your arteries. Blood pressure is measured in millimetres of mercury (abbreviated to mmHg) for example 140/80 mmHg. A blood pressure reading shows:





- The pressure when your heart contracts (becomes smaller) and forces the blood into the arteries. This is the first or top figure and is known as **systolic blood pressure**
- The pressure when the arteries relax. This is the second or bottom figure and is known as **diastolic blood pressure**.
- High blood pressure, which is known as **hypertension**, increases your risk of diabetes related problems so it is important that it is checked regularly. If your blood pressure is constantly high your HCP may recommend medication to help lower it. Most people need several different medications to achieve this and in some cases, even with medication, it is difficult to lower blood pressure.

Even a small reduction in the level of your blood pressure helps to reduce the risks of diabetes related problems. An ideal level of blood pressure might be 130/75 mmHg, but this is not a realistic or achievable level for everyone.

Your HCP will help you set an individualised target for your blood pressure. Home blood pressure targets are different to clinical targets. This could be a general target such as 140/90 but if you have some other conditions your HCP may suggest a different target.

Below target	Ideal	Above target	Poor control	
	130 – 135	136 – 155	156 – 170	Systolic
	75 – 80	81 – 100	101– 115	Diastolic







## Fats and cholesterol

The fats in the blood are known as **lipids**. There are different types of lipids in the blood but the one most people know is **cholesterol**. Unfortunately for people with diabetes, lipids and cholesterol contribute to the risk of heart disease and stroke.

Your lipid levels (or lipid profile) can be measured by taking a blood sample. Even if your blood levels are not particularly high your HCP may still recommend medication which will reduce your risk of heart disease and stroke alongside lifestyle changes such as losing weight, taking more exercise, changing what you eat or giving up smoking. Information on giving up smoking can be found here: [www.smokefreenorfolk.nhs.uk](http://www.smokefreenorfolk.nhs.uk)

In addition to this, your HCP will recommend medication which will be specific to your needs.

Below target	Ideal	Above target	Poor control
	3mmol/l – 4mmol/l	6mmol/l	6mmol/l - 9+mmol/l



## Managing your weight

Being overweight or obese increases the risk of developing diabetes and makes it more difficult to manage your diabetes as well as contributing to the risk of complications. If you are overweight or obese you may need more medication to help control your blood pressure and blood sugars.

There are different ways of measuring your weight. In most cases this is a simple measurement in kilograms (kg), but it can also be measured by your Body Mass Index (BMI) or waist circumference.

Below target	Ideal	Above target	Poor control
<20	20 – 24.5	25 – 29	>30

< means less than

> means more

People with a South Asian, Chinese, other Asian, Middle Eastern, Black African or African-Caribbean family background are prone to central adiposity and their cardiometabolic risk occurs at lower BMI, so if this is relevant to you, your HCP will use lower BMI thresholds as a practical measure of overweight and obesity:

Below target	Ideal	Above target	Poor control
<20	20 – 23	25 – 27.4	>27.5

< means less than

> means more

There are a range of services available to help you with weight loss. If you would like to be referred for support with weight loss please ask your HCP.



## Diet

Anyone who has diabetes is advised to follow the same healthy eating plan that is recommended for everyone. This includes foods that are low in fat, sugar and salt, and plenty of fruit and vegetables. Special diabetic foods are not recommended and give no benefit to anyone with diabetes. Healthy meal planning is about getting the right balance and does not mean that you cannot have the foods and drinks you enjoy.

### Healthy eating with diabetes

- Eat regular meals and at each meal include starchy food (carbohydrate) such as, bread, pasta, chapattis, potatoes, noodles or rice.
- Choose wholemeal or wholegrain varieties where possible. This will increase your intake of fibre and can help you to feel full for longer, particularly useful if you are trying to lose weight. It also helps to keep your bowels healthy and prevents constipation. Remember to drink plenty of fluids
- Aim to eat similar amounts of carbohydrates at each meal as this will help to keep your blood glucose levels under control.
- Your main meal should consist of 2/5 starchy food, 2/5 vegetables and fruit, 1/5 meat, fish, eggs or cheese.
- If you are trying to lose weight, eat smaller portions than this and fill up with vegetables.
- Cut down the amount of fat you eat particularly animal fat because this type of fat is linked to heart disease.



- Examples of this are red meat, cheese, butter, full fat milk. Eating less fatty food will also help you lose weight so choose low fat dairy foods such as, skimmed milk or low fat yoghurt. Instead of frying food, grill, steam or bake it in the oven.
- Eat more fruit and vegetables, at least 5 portions a day. This will provide you with vitamins and fibre as well as balance your whole diet. Remember that fruit naturally contains sugar so eat this regularly throughout the day, not all at the same time.
- Cut down on sugar and sugary food although some can still be included as part of a healthy balanced diet without any harmful effect on your blood glucose levels.
- Sugar in soft and fizzy drinks tends to have an effect on your blood glucose levels because they are absorbed more quickly, so use diet or sugar free versions instead. Sweeteners such as Splenda, Canderel or Hermesetas can be a useful alternative to sugar.
- Cakes, biscuits, desserts and chocolate can be high in fat and calories making it more difficult to control your weight. A high fat diet can also increase your risk of heart disease.
- Use less salt and try flavouring food with herbs and spices instead.
- Drink alcohol in moderation only. This is a maximum of 14 units a week, spread over 3 or more days (1 unit is approximately one small glass of wine or half a standard strength beer or a standard measure of spirit; but different strengths available). It is usually recommended that you have several alcohol free days each week.



## Glycaemic (GI) effect of carbohydrate

All foods containing carbohydrate affect blood glucose levels differently. Choosing carbohydrates that are more slowly absorbed (low GI) may help control your blood glucose levels.

- Try eating more fruit, vegetables, beans and pulses
- Have meals that include pasta and sweet potato
- Try replacing long grain rice with basmati or easy cook varieties
- Choose wholegrain breads such as multigrain, granary or rye
- For breakfast try porridge oats and wholegrain cereal such as Bran Flakes.

For individual dietary advice, ask your HCP team to refer you to a registered dietitian.



## Eatwell Guide

Check the label on  
packaged foods

Each serving contains

Energy	Fat	Saturated	Sugars	Salt
1046kJ 250kcal	5g	1.3g	34g	0.9g
	LOW	LOW	HIGH	MED
12.5%	7%	6.5%	38%	15%

of an adult's reference intake  
Typical values (as sold) per 100g: 697kJ/ 167kcal

Choose foods lower  
in fat, salt and sugars

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food.  
It shows how much of what you eat overall should come from each food group.



Water, lower fat milk, sugar-free drinks including tea and coffee all count.

Limit fruit juice and/or smoothies to a total of 150ml a day.

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

Source: Public Health England in association with the Welsh government, Food Standards Scotland and the Food Standards Agency in Northern Ireland

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## Know your food labels

- Looking at the label on food can help you decide whether the product contains a small or large amount of fat, sugar and fibre.
- Use the 'per 100g' column on the label to compare the make up of similar food, and 'per serving' for different food.
- If the quantities fall between the smallest and largest figures this is a moderate amount.
- The figures for sugar don't tell you how much of the sugar comes from natural sugars for example, fruit sugar known as fructose and added sugars such as, sucrose.
- To check if the product is high in added sugar, look at the ingredients list which always starts with the biggest ingredient first.
- Remember you don't need to avoid all food and drink that contains a lot of fat, sugar or salt; it's the overall balance of your diet that is important.
- A tip for cereals, as reading food labels can be confusing. We look at total carbohydrate per 100g and ask for the 'sugar' to be a third or less. We therefore suggest Weetabix, Shredded Wheat, Cornflakes, Branflakes, Special K and No added sugar Alpen, but not All Bran or Fruit n' Fibre.





**Guideline Daily Amounts (GDA)** found on many food labels, are a useful guide to help you choose a healthy diet. GDAs are for adults of normal healthy weight. Individual needs will vary depending on age, weight, and activity levels. People trying to lose weight probably need fewer calories and fat.

Each day	Women	Men	This is a lot (per 100g)	This is a little (per 100g)
Calories	2000 kcal	2500 kcals	20g fat or more	3g fat or less
Fat	70g	95g	5g saturated fat or more	1g saturated fat or less
Saturated fat	20g	30g	10g sugars or more	2g sugars or less
Sugar	50g	70g	1.25g salt or more	0.25g salt or less
Salt	Less than 6g	Less than 6g	0.5g sodium or more	0.1g sodium or less
Fibre	16g	20g	3g fibre	0.5g fibre or less

Source: Diabetes UK 'Your guide to reading food labels'

## Nutrition claims

### What do claims such as low, reduced and less than 5% fat really mean?

- Low fat means the product contains less than 3g fat for every 100g or 100ml.
- Less than 5% fat or 95% fat free means the food contains less than 5g of fat for every 100g. This means that if you bought a snack which says it is a serving size of 200g, it would contain 10g of fat.
- Reduced fat must contain 25% less fat than a similar product. This does not mean that the product is low fat.







Use these claims as a guide only and check the nutrition panel for the total amount of fat per serving. Compare this with the GDA.

Be aware that a low or reduced fat food does not mean low sugar or calorie. These foods often contain lots of sugar which pushes up the calorie content.

## Sugar

Claims about sugar, are based on the total amount of sugar a product contains. This includes sugars which occur naturally in fruit and milk, plus any added sugar.

- No added sugar means no sugars from any source have been added.
- However, the product may still contain a lot of natural sugar for example; fruit juice contains a lot of natural sugar because of the sugar in the fruit.
- Low sugar means the product must contain no more than 5g of sugar for every 100g or 100ml.
- Reduced sugar means the product must contain 25% less sugar than the regular product.
- Look out for words such as glucose, sucrose and fructose on food labels because these are all types of sugar.





## Nutritional information

Typical values – cooked as per instructions

Per serving Per 100g

**Energy**

**Protein**

**Carbohydrates**

Of which are sugars

Of which are starch

**Fats**

Of which are saturates

Of which are monounsaturates

Of which are polyunsaturates

**Fibre**

**Sodium**

Per serving

**Guideline Daily Amounts**

Each day

Calories

Fat

Official UK government figures for average adults

### Energy

If you are watching your weight you may find the calories value. Kilocalories (kcal) are the same as calories. It is recommended that men have 2500 kcal and woman 2000 kcal every day

### Fats

Avoid saturated fats if you can and keep monounsaturates and polyunsaturates low. Sometimes the label shows the amount of each type of fat, sometimes it does not.

### Guideline Daily Amounts (GDA)

Some food labels show GDAs as a guide to the amount of calories and fats you should be eating per day. Compare the per serving figure to the GDAs.

Source: Food facts – Understanding the food labels. British Diabetic Association, Dec 2003



As well as using the GDA to find out if a product is high in calories and fat, use this quick guide: For a main meal or for a 100g snack food, check the following:

### Energy

- The amount of energy (calories) that a food provides is listed in the kcal figure. You should not eat more calories than you use each day and the recommended intake is 2500 kcal per day for men and 2000 kcal per day for women.

### Protein

- The protein in food is used for bodily growth and repair. Most diets contain plenty of protein.

### Carbohydrate

- These are sugary and starchy foods and most of the carbohydrates in your diet should come from starchy rather than sweet food.

To find out whether a food contains a small or large amount of a nutrient, look at the 100g figure for snack foods and the per serving figure for meals:

### Fat

- 3 grams of fat is a small amount
- 20 grams or more fat is a large amount

Of which saturates

- 1g or less of saturated fat is a small amount
- 5g or more is a large amount





## Fibre

Fibre keeps your bowels healthy, so it is good to eat a lot of it.

- 0.5g or less is a small amount
- 3g or more is a large amount

## Sodium

Sodium is salt which is something you should not eat too much of.

- 0.1g or less is a small amount
- 0.5g or more is a large amount

## Sugar

- 2g of sugar is a small amount
- 10g of sugar is a large amount

Sometimes sugar is not listed separately on food labels but is included in the carbohydrate figure.





## Physical Activity

Physical activity plays an important part in managing your diabetes because it helps to maintain normal body weight and control blood glucose levels and blood pressure.

You should choose an exercise that you enjoy, for example, walking, swimming, cycling or jogging. It is important to start gently, particularly if you have other medical problems such as heart disease. Gradually increase your activity level so you do not exert yourself too quickly.



Even simple forms of activity such as, brisk walking will improve your health and wellbeing. Ask your HCP for advice before doing any physical activity as they will be able to tell you what level of activity you should be doing.

Active Norfolk. <https://www.activenorfolk.org>

## Smoking

Smoking is particularly harmful to people with diabetes because it increases your risk of heart disease, circulatory problems and stroke. One of the most important things you can do to help prevent these problems is to stop smoking. Many surgeries run Smoking Cessation clinics that will give you advice and support to stop smoking. If you want to find out more about the help available ask your HCP or [www.smokefreenorfolk.nhs.uk](http://www.smokefreenorfolk.nhs.uk)





## Diabetes annual review

### What care to expect

You are the most important member of the team managing your diabetes. Your HCP will chat with you about any support or advice you might want about every part of your care and you will be included in making all decisions. You should be given the chance to discuss your diabetes regularly with members of the diabetes care team and, at least once a year, have a formal diabetes review (annual review).

	What you should be offered...	And why
A	An enquiry About you... how you are and how you feel things are going?	Your annual review should include an opportunity for you to raise any concerns you may have or anything you particularly want to discuss.
A	ACR test (a urine test)	The urinary ACR is one of the most important tests you will be offered. It checks for microalbumin (tiny proteins) that can be an early warning sign for kidney or heart disease. If spotted and treated early, it is possible to reduce the risk of heart or kidney disease. Please make sure you bring a urine sample with you. If you forget, you may be asked to go to the loo to produce a sample while you're in the surgery.
B	Blood pressure check	High BP puts you at risk of heart disease, kidney disease, stroke and other complications. If you have high BP it is very important that your blood pressure is well controlled.





B	<b>BMI check</b>	The Body Mass Index is a check of your weight. Achieving and maintaining a healthy weight is important for us all. If you have a high BMI ( $\geq 30$ , or $\geq 27.5$ depending on your ethnicity), there are different services available to help you if you would like support to lose weight. Please ask if this is not offered.
C	<b>Cholesterol check and Cardiovascular disease protection</b>	People with diabetes have an increased risk of cardiovascular disease (heart disease, circulatory disease and stroke). Having a high cholesterol level further increases that risk but even if your cholesterol level is good, you may still be at risk and will be offered medication to help reduce your risk.
C	<b>Contraception advice</b>	If you are a woman of childbearing age, you should be offered advice about contraception and pregnancy planning. Sadly, women with diabetes and their babies have a higher risk of pregnancy-related problems. A successful pregnancy and a healthy baby are more likely with careful pregnancy planning and preparation. Ensuring your blood sugar is well controlled before you get pregnant, reviewing any medications that might be harmful in pregnancy and taking a higher dose of folic acid (5mg a day) can all help reduce risks for you and your baby. Please speak to your HCP if you are thinking about pregnancy. If you aren't thinking about pregnancy and don't want to be pregnant, make sure you have reliable contraception.



D	<b>Dietary advice</b>	You should be offered advice to help you make healthy dietary choices that are right for you and to manage your diabetes.
D	<b>Dental care</b>	People with diabetes are at higher risk of periodontal (gum) disease, which can affect dental health. Looking after your dental health and having regular check-ups with a dentist can help improve diabetes control.
E	<b>Emotional wellbeing check</b>	Living with diabetes can be overwhelming. Whilst many people manage well, others may experience low mood or anxiety. If you need to monitor your blood sugars or are on injectable therapies, needle phobia might be a concern. Our Wellbeing Service can offer support for many mental health concerns. You can access the Wellbeing Service directly via the website <a href="http://www.wellbeingnands.co.uk">www.wellbeingnands.co.uk</a> or by calling <b>0300 123 1503</b> .





E	<b>Eye screening check</b>	<p>You should be offered regular retinal (eye) screening, although it may be offered on a different date to your practice diabetes annual review.</p> <p>For most people, eye screening is offered once a year, but for others it may be more frequently, or sometimes every other year. Some larger surgeries are able to host the retinal screening service and then you may be able to have everything done together but smaller surgeries may not have space to offer this. If you have not had a recent eye screening check, please let your HCP know when you attend for your diabetes annual review.</p>
E	<b>Erectile Dysfunction (ED)</b>	<p>Men should be offered an opportunity to discuss concerns about erectile dysfunction (also known as ED, or impotence). ED is more common in men with diabetes but there are treatments available that can help.</p>
F	<b>Foot check</b>	<p>You should be offered a foot check, including advice about the care of your feet and what to look out for. If you do notice a problem with your feet, it is important that you seek advice as soon as possible to reduce the risk of diabetic foot disease.</p>



F	<b>Frailty</b>	For older people, your diabetes annual review might include a check for frailty, along with advice about staying active to reduce the risk of becoming frail.
G	<b>Glucose check</b>	Your blood tests will include a test of glucose control (HbA1c). If you are advised to use regular glucose monitoring, your HCP may also offer a review of your glucose monitoring data.
H	<b>Highs and Hypos</b>	If you are on insulin therapy, your annual review will include a review your blood glucose data checking for any very high or very low blood glucose readings (hypos). Your diabetes team will advise you how you can manage or avoid these or may refer you for specialist support.
I	<b>Injection sites and injection technique</b>	For people on injectable therapies, your annual review should include a check of the areas you use for injections and offer an opportunity for support with your injection technique.
J	<b>Jabs</b>	Your annual review offers an opportunity to check that you are up to date with your vaccinations and to plan any that are due.



K	<b>Kidneys</b>	As well as the urinary ACR test, your blood tests will include a check of your kidney function.
L	<b>Lifestyle factors</b>	<p>Your HCP will chat to you about exercise, smoking and alcohol intake, offering advice and support as needed. To access opportunities for exercise, please visit Active Norfolk <a href="https://www.activenorfolk.org/">https://www.activenorfolk.org/</a></p> <p>If you smoke and would like support to quit, you can make a self-referral to Smoke Free Norfolk <a href="https://www.smokefreenorfolk.nhs.uk/">https://www.smokefreenorfolk.nhs.uk/</a></p> <p>If you are concerned about your alcohol intake and think you might need help, please access Change Grow Live <a href="https://www.changegrowlive.org/alcohol-drug-behaviour-change-norfolk">https://www.changegrowlive.org/alcohol-drug-behaviour-change-norfolk</a></p>
M	<b>Medication review</b>	A review of your medications should be included as part of your diabetes annual review.
N	<b>Next steps</b>	On completion of your diabetes annual review, you should be clear about the next steps. Your clinical team should involve you in decision making and you may be supported to set yourself goals or offered a diabetes care plan. You should feel able to ask any questions you might have and understand any changes recommended or any referrals required. You should be informed when your next appointment is due and how you can seek advice if you have any concerns before then.



Your diabetes annual review may be offered in 2 parts. Commonly, you will have an appointment with a Healthcare Assistant (HCA) or phlebotomist, who has been trained to undertake many aspects of the diabetes review, including all your blood tests (it looks a lot, but these are all effectively one blood test). After that you may have an appointment with your practice diabetes nurse, or other healthcare professional, such as a pharmacist or paramedic trained in diabetes, or a doctor, who can check through your results and undertake any elements of the annual review that need to be completed and discuss any concerns you have. Although you will need to attend in person for some elements, such as your blood tests and foot check, other aspects of the review may be offered by telephone or video appointment, although your HCP may advise an in-person face-to-face review. If you live with other long-term conditions in addition to diabetes, you may be offered a check for these at the same time.



## Vaccinations

### Coronavirus

In the event of catching coronavirus people with diabetes are more likely to become seriously unwell and require hospital admission. It is important that you are up to date with your vaccinations and attend when you are offered.

### Flu jabs

The main symptoms of flu are fever, headache, aching muscles, dry cough and sore throat. Flu usually happens quite suddenly. Although flu is usually a mild viral illness it can be more serious for people with other medical conditions such as diabetes. A flu vaccination helps prevent you getting a more serious illness and gives you protection for up to a year. It is recommended that you have a flu vaccine every year.

### Pneumo Vax

This vaccination gives you protection against a bacterium called pneumococcus which can cause a number of serious illnesses including pneumonia and septicaemia. Although pneumonia can usually be treated with antibiotics, these are not always effective as some bugs are resistant to antibiotics. Vaccination by a single injection can help protect you against pneumococcal infection for several years. If you would like this vaccination please talk to your HCP at your next appointment.

### Holidays and travel

Always plan ahead. If you need vaccinations, contact your surgery well before the date you are travelling because vaccines sometimes need to be given several weeks before you go.





Your HCP can give you advice about the vaccinations you need. Some surgeries run special travel clinics so ask at your surgery for details.

Check the latest Government guidance on requirements for a Covid pass.

<https://www.gov.uk/guidance/nhs-covid-pass>

If you are travelling within Europe: By the end of 2023, the EU is aiming to bring in a new visa waiver system, called ETIAS, which will be similar to the ESTA for travel to the US and be valid for three years. Once introduced, British passport holders travelling to the EU will need to apply and pay for an ETIAS, via an online system. For the latest information check the ABTA website: <https://www.abta.com/tips-and-advice/brexit-advice-for-travellers>

You can apply for a Global Health Insurance Card (GHIC) via this website <https://www.gov.uk/global-health-insurance-card>. This will replace the EHIC which is being discontinued.

Check your travel insurance policy to make sure that it provides enough cover particularly for situations that might be complicated because of your diabetes.

Check with your insurance company to find out if there are any conditions/ illnesses (pre-existing) which may exempt you from cover. Diabetes UK can provide further information if you are not sure.





Make sure that you have all your medications with you and that you have enough to last the whole length of your holiday. Be prepared for delays on your journey and if necessary make sure you have quick acting carbohydrates such as, glucose tablets and a snack with you.

It is advisable to keep your medication and any equipment, for example, blood glucose monitor, needles and syringes, insulin pens with you in your hand luggage (and it is preferable to split the medication in case one bag goes missing). Insulin should never be put in the hold of a plane as it can freeze. For security reasons you may need a letter or certificate from your GP confirming that you need to carry this with you at all times.

If you are taking insulin and will be travelling on a long flight across time zones, you may need to adjust your insulin regimen. Discuss this with your HCP before travel.

**Note: Insulin can keep for up to a month without refrigeration.**



## Employment

If your diabetes is well controlled it should not affect your ability to carry out most jobs. There are some occupations that are restricted if you are taking insulin for example, holding a HGV or PSV licence. It is advisable to tell your colleagues that you have diabetes and you must say that you have diabetes if asked about your medical conditions.

Take sensible steps so your diabetes does not cause problems at work. If you are taking medication or insulin, make sure you eat regularly and carry glucose tablets. If you are a shift worker you might require a more flexible treatment plan so discuss this with your HCP.

A leaflet about diabetes and employment can be obtained from Diabetes UK  
<https://www.diabetes.org.uk/guide-to-diabetes/life-with-diabetes/employment>

The Equality Act 2010 aims to protect the rights of employees with any condition which may affect them at work.







## Driving

If you have diabetes which is treated by insulin, the law says that you must tell the Driving and Vehicle Licensing Authority (DVLA). You may still drive a car but will have your licence renewed every 1-3 years. If you are treated with diet and tablets or GLP-1 you are not subject to any licence restrictions.

You should tell your insurance company that you have diabetes.

If you are on blood glucose lowering medication you must check your blood glucose before you drive. It must be above 5mmol/l to drive.

Plan your trips carefully and take regular breaks (at least every 2 hours) as this will make sure everyone including you is safe.

Avoid hypos. Make sure you always carry some quick acting carbohydrate such as glucose tablets and a snack of biscuits or fruit.

If you do have a hypo, make sure that you pull over to a safe place, remove the key from the ignition, move from the driver's seat into the passenger seat and then treat your hypo with the appropriate management. Wait 45 minutes before driving and ensure your blood glucose level is above 5mmol/l before driving.

If you suffer more than 1 severe hypo (requiring the assistance of another person) within a 12 month period you must inform the DVLA. If you have a Group 2 licence you must inform the DVLA immediately after the first episode.

Check DVLA [www.dvla.gov.uk](http://www.dvla.gov.uk) and Diabetes UK <https://www.diabetes.org.uk/guide-to-diabetes/life-with-diabetes/driving> websites regularly for updates.



## Prescriptions and medicines

### Medication record

Your repeat prescription list is your up-to-date medication record. You should show this to any HCP that you see, for example, at the hospital, local pharmacy, dentist, or optician.

### Free prescriptions

If your diabetes needs treatment with either tablets or insulin, you are entitled to free prescriptions. Ask your pharmacist or other HCP for advice about how to apply for an exemption certificate.

## Understanding your medication

There are a number of different therapies to manage type 2 diabetes, you may be on none, one or a combination of therapies.

The following pages contain information about some of the more common medicines used to treat diabetes. It is not possible to list all the drugs that might be used. If you have any questions or want to know more about the medication you are taking, talk to your pharmacist or other HCP.

Important note: The following information is intended as an educational aid only and does not cover everything about the medicines. The information should be read together with the manufacturer's patient information leaflet which you will find in the prescribed medication packaging.





## Biguanides

### Metformin

Metformin is a well-established medication for people with type 2 diabetes and its benefits are well known as it has been used for a long time.

Metformin helps to maintain a lower blood glucose by:

- Reducing the amount of glucose that your body makes and
- Increasing the amount of glucose used around the body by improving the effect of insulin. This helps to move glucose out of the bloodstream and into muscle cells.

Metformin is suitable for people with Type 2 diabetes particularly where there is insulin resistance because it helps to overcome this. If you have kidney problems your HCP may advise you to reduce the dose or stop the metformin.

Your HCP will help decide what is the best dose for you and when to take it, but Metformin can be taken between one and three times a day with meals.

### Problems to watch for

Gastro-intestinal side effects: sometimes a change in the type of Metformin helps you to tolerate it so please speak to your HCP if you are experiencing problems.

### Sick day rules

If you are vomiting or have severe diarrhoea, you should get medical advice immediately. You may be advised to stop taking your Metformin whilst you are unwell.





## **X-Rays**

Metformin can interact (have an effect) with some special dyes or contrast media that are used for certain specialised X-ray examinations. If you need to have an X-ray examination requiring special dyes, contact your HCP or the radiographer several days beforehand to let them know that you are taking Metformin. They will then give you advice about what you need to do.

## **Sulphonylureas**

### **They include gliclazide and glipizide.**

These medicines work by making the body produce more insulin which is the hormone that normally controls blood glucose levels. The medicines work quickly and usually begin to take effect within a few days.

### **Problems to watch for**

Side effects are usually mild and do not happen very often, but they can cause hypoglycaemia which means your blood glucose level is too low. Your HCP will give you advice about how you can tell if you are becoming hypoglycaemic and what you should do.





## Glitazone

### **Pioglitazone.**

Pioglitazone helps to reduce your body's insulin resistance, helping it to work more effectively. They increase the amount of glucose that is taken up from the blood as it travels round the body; this means the total amount of glucose in the blood falls.

They are taken once a day only and are usually prescribed together with other glucose lowering medicines.

They can take as long as 3-6 months before the full benefit of the medicines is achieved.

### **Problems to watch for**

The body usually accepts these drugs quite well, although they can cause fluid retention leading to ankle swelling or breathlessness. You should tell your HCP if you notice this symptom.

Discuss this medication and its possible side effects with your HCP. Your HCP may ask you to reduce or stop your Pioglitazone if you develop specific types of diabetic eye disease, have osteoporosis, heart failure or if you have kidney or bladder cancer. If you notice blood in your urine or need to urinate more often, or urgently you should contact your HCP.



## **Acarbose**

Acarbose works by slowing down the rate which some foods are broken down into glucose in the intestine. This means that glucose enters the blood stream more gradually which helps to balance blood glucose levels.

Acarbose is sometimes used together with other medications but can be used on its own if you cannot take other types of glucose lowering medicines. It is usually started at a low dose and gradually built up. The tablets should either be chewed with the first mouthful of food, or swallowed whole with a little liquid immediately before food.

### **Problems to watch for**

The most common side effects are flatulence, abdominal distension and diarrhoea. Usually these are mild and tend to decrease with time, but if they are causing a problem you should tell your HCP.

## **Prandial glucose regulators**

**They include nateglinide and repaglinide.**

These work by helping the pancreas to produce insulin. They are usually taken with meals and take effect within a few days.

### **Problems to watch for**

These can cause hypoglycaemia.





## Gliptins

**These include sitagliptin, vildagliptin, saxagliptin, linagliptin, alogliptin.**

These tablets help the body produce more insulin only when it is needed and reduce the amount of glucose being produced by the liver when it is not needed.

### Problems to watch for

Gliptins do not usually cause hypoglycaemia but can do so in combination with other glucose lowering therapies.

These tablets can cause nausea, constipation, diarrhoea and upper abdominal pain. These tablets may be prescribed with other blood glucose lowering medication, therefore the undesirable effects experienced will depend on which tablets they are combined with.

### Incretin Mimetics GLP-1

**These include Dulaglutide, Exenatide (Byetta and Bydureon), Liraglutide (Victoza), Lixisenatide (Lyxumia) and Semaglutide (Ozempic)**

With the exception of Rybelsus (a newer oral version of this medication which could be selected depending on clinical need) these are given by injection which is not insulin.

This medication is only given to people with type 2 diabetes. They work by helping your body produce more insulin when it is needed whilst reducing the amount of glucose being produced by the liver when it is not needed. It reduces the rate at which your stomach digests food and empties, and it reduces appetite. Common side effects include nausea but these medications can help with weight loss which is helpful. They are usually only prescribed to people who struggle with their weight and who also need blood sugar control.





## **Exenatide**

Byetta is taken twice daily within 60 minutes before the morning and evening meal (or two main meals of the day if 6 hours or more apart). It should not be given after a meal. If an injection is missed, the treatment should be continued with the next scheduled dose.

Bydureon is taken once weekly.

## **Liraglutide**

Liraglutide is taken once a day at any time, independent of meals.

## **Lixisenatide**

Lixisenatide is a once daily given within an hour prior to your breakfast or evening meal.

## **Dulaglutide**

Dulaglutide 0.75 – 4.5mg per week.

## **Semaglutide**

0.25 – 1mg once weekly

## **Oral Semaglutide (rybelsus)**

3 – 14 mg. To be taken as directed once daily. Needs to be taken 30 minutes prior to eating, drinking or taking other oral medication to ensure full absorption.







## **SGLT-2s**

**dapagliflozin, canagliflozin, empagliflozin.**

These work by eliminating glucose through the kidneys. This means you will pass glucose in your urine. If you have not had a recent blood test your HCP may require you to have a test to check your kidney function before you start the medication. Some people with diabetes who have heart or certain kidney problems may particularly benefit from this type of medication.

### **Problems to watch for**

Because this medication means that you have glucose in your urine it does mean that you may have a slightly increased risk of urinary tract infection, thrush and other genital infections. It is essential that that you contact your HCP if you get any symptoms of soreness, discomfort or redness down below, or urinary frequency or pain as you pass water.

Other problems might be pain or hypos, when used with insulin or sulphonylureas.

**These medications can sometimes, although rarely, cause diabetic ketoacidosis without an increase in your blood glucose. If you notice any of the symptoms (abdominal pain, nausea or vomiting, headache, difficulty breathing or fast breathing, feeling tired or confused, passing urine more often, feeling very thirsty, or have dry skin or sweet-smelling breath) you should stop taking the medication and contact your healthcare professional immediately.**



**You should stop taking this medication if you are hospitalised for major surgery or if you have a major acute illness. You may be able to start taking them again when you have recovered.**

### **Diabetes medications and Sick Day Rules**

Even a simple illness such as a stomach upset can result in hospital admission for someone with diabetes. Following these simple instructions may help to avoid this.

- Act immediately if you feel unwell or need treatment for infections.
- Avoid dehydration by drinking plenty of sugar-free liquids. If you are vomiting and have diarrhoea and feel you cannot drink, contact your HCP for advice.
- If you are taking insulin for your diabetes, never stop taking it.
- If you are taking tablets for your diabetes you should continue to take them. However, if you are prescribed a drug that ends in 'gliflozin', eg dapagliflozin, canagliflozin or empagliflozin, then these must be stopped until you are back to normal and no longer ill. In addition, if you are taking Metformin and have severe vomiting, you should stop taking your Metformin and contact your HCP immediately.



## **Blood pressure lowering medicines**

There are a lot of medicines available to help lower blood pressure. They are usually grouped together according to the way they work and within each group there are several different drugs.

It is common for people with diabetes to need a combination of different drugs to lower blood pressure. There may be reasons why a particular drug is either suitable or unsuitable for you.

Your HCP will give you advice about what they recommend you take. They will also give you advice about how and when to take your medicine(s) and what side effects you should watch for.

Some drugs used to lower blood pressure have the benefit of helping to treat early signs of diabetic kidney problems and may be prescribed for this reason. Because many of these drugs have an effect on the kidney, you may be advised from time to time to have a blood test to monitor your kidney function.



### **Cardiovascular protection with cholesterol lowering medications.**

Reducing your risk of cardiovascular disease (heart disease, circulatory problems and stroke) is an essential part of your diabetes care. Cholesterol lowering drugs including statins can help protect your heart and blood vessels and reduce your risk. Most people with type 2 diabetes are likely to benefit from these types of medications. There are a few exceptions to this. If you have not been offered a statin please speak to your HCP and they can advise you.

### **Problems to watch for**

Side effects are uncommon but can include muscle ache, however, evidence suggests that when this happens changing the dose or the preparation can help ensure you can continue the medication.

If you start or change the preparation or dose of your statin you may be advised to have a blood test a few weeks later to check your liver function.

### **Special Instructions**

Before you start to take these medications you should have a blood test to check your liver function. Further blood tests for liver function and muscle enzyme should be taken 1-2 months after starting these drugs or changing the dose.





## Insulin

There are many different types of insulin and different ways of taking them.

- If you have **Type 1** diabetes your insulin injections are vital to keep you alive and must be taken everyday.
- If you have **Type 2** diabetes you may also need to take insulin. This may be given either as a replacement for, or in addition to your other medication.

If you need to start taking insulin, your HCP will talk to you about the different types available and when they should be taken so an agreement can be reached about the best one for you. They will give you all the advice and support necessary to adjust and manage your diabetes in this way.

## Problems to watch for

Insulin can cause hypoglycaemia which means your blood glucose level is too low. Your HCP will give you advice about how you can tell if you are becoming hypoglycaemic and what you should do.

## Sick day advice for insulin

If you are using insulin, it is important that you always have enough supplies (and in date), as well as glucose testing strips and for type 1 diabetes, ketone testing equipment. Insulin should NEVER be stopped (as the body always needs it) although dose adjustments may be needed.



## Adjusting insulin doses during illness

Your HCP will talk to you about this. If your blood tests are 17-28 mmol/l or more even after this advice, contact your doctor.

Blood test less than 12mmol/l	Continue usual insulin
Blood test 12 – 17mmol/l	Increase usual insulin dose by 10%
Blood test above 17mmol/l	Increase usual insulin dose by 20%

Explained by .....

Date .....

**Note:** Individual advice will be given to you by your HCP.

- If for any reason you are unable to take your medication, contact your HCP immediately.
- Try to eat your normal diet if you can, but if this is not possible replace your normal meals and snacks with fluids such as, milk, Lucozade or fruit juice. Also drink plenty of sugar free liquids as well.
- Test your blood glucose 4 times a day. If this stays below 12, continue with your usual treatment
- If you are continually vomiting and are not able to keep food or drink down, contact your HCP urgently.
- Test your urine for ketones each time you pass urine. If ketone 2++ or more are present seek medical advice immediately.
- If at all concerned seek medical advice immediately.





## Snack replacement

### Approximately 10gms carbohydrate (1 portion)

Lemonade	100mls
Coca Cola/Pepsi	100mls
Milk	200mls
Ice cream	1 scoop/small brickette
Natural or Diet yoghurt	150gms, for example, 1 small pot
Sugar/Glucose	2 level teaspoons
Fruit juice (orange, apple, pineapple)	100mls
Honey/Jam	2 level teaspoons

## Meal replacement

### Approximately 30gms carbohydrate (3 portions)

Lucozade (original)	175mls
Sweetened fruit yoghurt	150gms, for example, 1 small pot
Rice/Milk pudding	small cereal bowlful
Bread	2 medium slices
Digestive biscuits	3



## Diabetic emergencies

### Diabetic Ketoacidosis (DKA)

DKA is an important medical emergency that can affect people with diabetes. It more commonly affects people with type 1 diabetes, particularly around the time of diagnosis or if you are unwell. It less commonly affects people with type 2 diabetes but is more common if you are on SGLT2 inhibitors (the “Gliflozins” see above), or for some people on insulin therapy.

People with DKA are usually extremely unwell and require admission to hospital.

Symptoms of DKA may include: a high blood sugar level (but NOT always), nausea, vomiting, pain in the stomach area, difficulty breathing, feeling tired and confused, feeling very thirsty, passing urine more often, dry skin, and sweet-smelling breath.

It is important to get medical advice if ketones 2++ are present.

### Hypoglycaemia - ‘hypos’

Hypoglycaemia or hypos happen when the blood glucose level goes too low, usually below 4mmol/l. Hypos can occur in people with diabetes who are treated with insulin or in less common cases, Sulphonylureas or Prandial Regulators (see prescriptions and medicines section). They may be caused by:







- late or missed meals or snacks or eating less carbohydrate in the meal.
- too much insulin or too strong a dose of medication
- unexpected exercise
- alcohol
- hot weather
- impaired injection sites

Symptoms can come on quite suddenly and may include sweating, confusion, hunger, shakiness, drowsiness, irritability or tingling around the mouth.

### What to do

If your blood glucose is below 4mmol/l, take 5 glucose / dextrose tablets OR five jelly babies OR have a small glass of sugary (non-diet) drink OR a small carton of pure fruit juice OR two tubes of a glucose gel such as GlucoGel®. Retest your blood glucose 10 minutes later. If your blood sugar is still below 4mmol/l repeat the above.

When your blood sugar is above 4mmol/l follow this up with some long-acting carbohydrate, for example, a sandwich, biscuits or toast. Test your blood glucose after 10 minutes or so to check that your blood glucose level is rising.

So other people know that you have diabetes and can get you medical help if your hypo is severe, always carry an identity card or wear special jewellery, for example, a medic alert bracelet. Let those who live or work with you know how to help if you are having a hypo.

**Note: 3 glucose tablets will increase blood glucose by 2-3 mmol/l**  
**Always carry fast acting carbohydrates with you at all times.**



## Charts and records

### Appointments diary

Appointment due	Who with	For (specify)	Blood test	Appointment





## Appointments diary

Appointment due	Who with	For (specify)	Blood test	Appointment





## Appointments diary

Appointment due	Who with	For (specify)	Blood test	Appointment



## Appointments diary

Appointment due	Who with	For (specify)	Blood test	Appointment





## Personal goals

Goal	Importance /10	Action plan	Confidence /10	Review



## Personal goals

Goal	Importance /10	Action plan	Confidence /10	Review





## Personal goals

Goal	Importance /10	Action plan	Confidence /10	Review





## Personal goals

Goal	Importance /10	Action plan	Confidence /10	Review





## Record of results

	Date	Weight (kg)	BMI	BP	HbA1c	Cholesterol	Creatinine	Urine ACR	Comments/Advice
Results									
Set targets									
Results									
Set targets									
Results									
Set targets									
Results									





## Record of results

	Date	Weight (kg)	BMI	BP	HbA1c	Cholesterol	Creatinine	Urine ACR	Comments/Advice
Results									
Set targets									
Results									
Set targets									
Results									
Set targets									
Results									



## Check list for educational sessions

Topic	Date	Date	Date	Date	Comments
What is diabetes?					
Diet					
Tablets					
Physical activity					
Insulin and injection techniques					
Hypoglycaemia					
Hyperglycaemia					
Illness and sick day rules					
Blood testing					
Urine testing					
Foot care					



## Check list for educational sessions continued

Topic	Date	Date	Date	Date	Comments
Eye checks					
Alcohol					
Smoking					
Complications					
Driving / insurance					
Travel					
Sexual					
Pregnancy planning					
Diabetes UK					
Prescriptions					
Benefits					



## Medication List

It is advisable that you see your community pharmacist on an annual basis for a medications review.

Medication	Dose





## Medication List continued

Medication	Dose





## Notes

Date	Notes





## Notes

Date	Notes



## Notes

Date	Notes



## Notes

Date	Notes



## Useful information

Telephone numbers and websites that you may find useful. Many of the web sites listed have links to other useful sources of information.

### Contact

### Web site address

### Telephone

British Heart Foundation

Wellbeing service

British Dietetic Association

Smoke Free Norfolk

Diabetes UK

Runsweet (Diabetes and sport)

Active Norfolk

Diabetes and Benefits

DVLA

Heron (Health Information for Norfolk)

NICE (National Institute of Clinical Excellence)

Online education for T1 diabetes

Online education for T2 diabetes

[www.bhf.org.uk](http://www.bhf.org.uk)

[www.wellbeingnands.co.uk](http://www.wellbeingnands.co.uk)

[www.bda.uk.com](http://www.bda.uk.com)

[www.smokefreenorfolk.nhs.uk](http://www.smokefreenorfolk.nhs.uk)

[www.diabetes.org.uk](http://www.diabetes.org.uk)

[www.runsweet.com](http://www.runsweet.com)

<https://www.activenorfolk.org/>

[www.diabetes.co.uk/diabetes-and-benefits.html](http://www.diabetes.co.uk/diabetes-and-benefits.html)

<https://www.gov.uk/diabetes-driving>

[www.heron.nhs.uk](http://www.heron.nhs.uk)

[www.nice.org.uk](http://www.nice.org.uk)

<https://www.mytype1diabetes.nhs.uk>

<https://www.healthyliving.nhs.uk>

0300 330 3311

0300 123 1503

0121 200 8080

0800 0845 113

0207 424 1000

0118 322 7969



## List of references and resources

Diabetes UK 2023 Giving your patient their Health Information

[https://www.diabetes.org.uk/in\\_your\\_area/scotland/professional-conferences1/scotland\\_phs](https://www.diabetes.org.uk/in_your_area/scotland/professional-conferences1/scotland_phs)

Diabetes UK: Ethnicity and Type 2 Diabetes 2023

<https://www.diabetes.org.uk/diabetes-the-basics/types-of-diabetes/type-1/symptoms>

Diabetes UK: Ethnicity and Type 2 Diabetes 2023

<https://www.diabetes.org.uk/preventing-type-2-diabetes/diabetes-ethnicity#:~:text=Peoplefrom-BlackAfricanCAfricanCaribbeanandSouthAsianbackgrounds,theirriskincreasesfrom040>

National Institute for Health and Care Excellence (NICE) Type 2 diabetes in adults: management, NICE guideline (NG28) published December 2015 updated June 2022

<https://www.nice.org.uk/guidance/ng28>

National Institute for Health and Care Excellence (NICE) Hypertension in adults: diagnosis and management, NICE guideline (NG136) published August 2019 updated March 2022.

<https://www.nice.org.uk/guidance/ng136>

NHS Diabetes Eye Screening Programme, Overview of patient pathway, grading pathway, surveillance pathways and referral pathways. Published 2017. Public Health England. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/648658/Diabetic\\_Eye\\_Screening\\_pathway\\_overviews.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/648658/Diabetic_Eye_Screening_pathway_overviews.pdf)

NHS Diabetic Eye Screening Programme Information for Health Professionals (pdf leaflet) <https://www.hct.nhs.uk/media/1227/diabetic-eye-screening-information-sheet-for-healthcare-professionals.pdf>

National Institute for Clinical Excellence 2022 Type 2 Diabetes (NG28) Information for the Public:

<https://www.nice.org.uk/guidance/ng28/ifp/chapter/terms-explained#nephropathy>

Diabetes UK How to look after your feet, 2023 available at: <https://www.diabetes.org.uk/guide-to-diabetes/complications/feet/taking-care-of-your-feet>

NICE guideline (CG189). Updated Sept 2022 – Obesity: identification, assessment and management.

<https://www.nice.org.uk/guidance/cg189>



Supporting people and projects

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<https://improvinglivesnw.org.uk/>

and

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<https://diabetesnorfolk.org/>



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