

MACMILLAN
CANCER SUPPORT

DIABETES AND CANCER TREATMENT

In partnership with

DiABETES UK
KNOW DIABETES. FIGHT DIABETES.



● A lot of worries come with cancer. My sister's been very supportive all the way along. But the best support comes from a group I'm a part of. ●

Clare, diagnosed with cancer and diabetes



About this booklet

This booklet is about diabetes and cancer treatment. It is for anyone who has been diagnosed with cancer and also has diabetes. You may also want to read it if you have been told your cancer treatment may increase your risk of developing diabetes.

The booklet explains how some tests used to diagnose cancer and some cancer treatments can affect your diabetes. They can make it difficult to control your blood sugar. It also has some tips to help you cope with side effects of cancer treatment if you have diabetes.

We hope it helps you deal with some of the questions or feelings you may have. We cannot give advice about the best treatment for you. You should talk to your doctor, who knows your medical history.

For more information

We have produced this booklet in partnership with Diabetes UK. It does not explain diabetes in detail. For more information about diabetes, contact Diabetes UK. You can call their helpline on **0345 123 2399 (0141 212 8710** in Scotland), Monday to Friday, 9am to 6pm, or visit **diabetes.org.uk**

If you have more questions or would like to talk to someone, call the Macmillan Support Line free on **0808 808 00 00**, 7 days a week, 8am to 8pm, or visit **macmillan.org.uk**

If you would prefer to speak to us in another language, interpreters are available. Please tell us, in English, the language you want to use.

If you are deaf or hard of hearing, call us using NGT (Text Relay) on **18001 0808 808 00 00**, or use the NGT Lite app.

We have some information in different languages and formats, including audio, eBooks, easy read, Braille, large print and translations. To order these, visit **macmillan.org.uk/otherformats** or call **0808 808 00 00**.

How to use this booklet

This booklet is split into sections to help you find what you need. You do not have to read it from start to finish. You can use the contents list on page 3 to help you.

On pages 111 to 115, there are details of other organisations that can help.

There is also space to write down questions and notes for your doctor or nurse on page 116.

If you find this booklet helpful, you could pass it on to your family and friends. They may also want information to help them support you.

We have included quotes from people who have cancer and diabetes. Some are from Clare, who is on the cover of this booklet. Others are from our Online Community. Clare and others have chosen to share their experiences with us. To share your story, visit **macmillan.org.uk/shareyourstory**

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ABOUT DIABETES AND CANCER

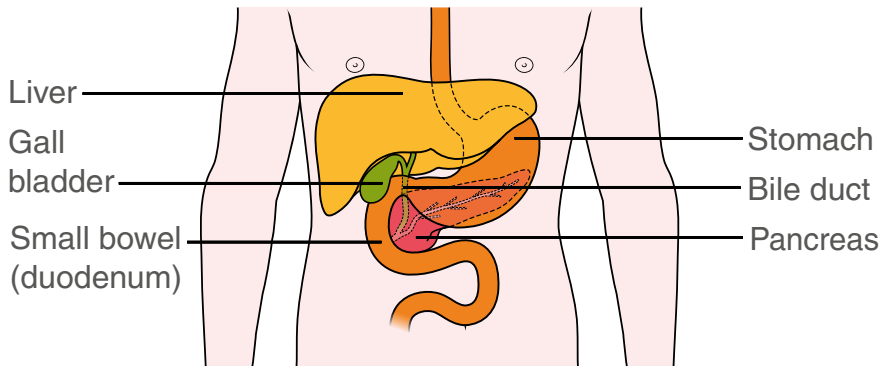
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What is diabetes?

Diabetes is a condition where there is too much glucose in the blood. Glucose is a type of sugar. Our bodies use sugar for energy.

The amount of sugar in the blood is usually controlled by the hormone insulin. Insulin helps move sugar into the body's cells. This is where it is converted into energy. Insulin is made in a gland called the pancreas. The pancreas is in the upper part of the tummy (abdomen), behind the stomach.

The pancreas



If the pancreas stops making insulin, or does not make enough, too much sugar stays in the blood. This is called hyperglycaemia (a hyper). Sometimes insulin is produced but it does not work properly. This is called insulin resistance.

There are 2 main types of diabetes:

- type 1 diabetes, where the pancreas does not make any insulin
- type 2 diabetes, where the pancreas does not make enough insulin or the insulin does not work properly.

Type 2 diabetes is a lot more common than type 1. About 9 in 10 people with diabetes (90%) have type 2.

Causes and risk factors of diabetes

Type 1 diabetes

In type 1 diabetes, part of the pancreas is attacked and destroyed by the body's immune system. The immune system normally protects the body against illness and infection. This means the pancreas cannot make insulin. We do not know why the immune system does this. But we do know that type 1 diabetes is not linked to diet or lifestyle.

Type 1 diabetes can happen at any age. But it is more common in children and young adults. It can sometimes run in families (be hereditary).

Type 2 diabetes

People can develop type 2 diabetes because of certain risk factors:

- age – the risk of developing type 2 diabetes increases with age
- genetics – you have a higher risk if a close family member (parent, brother or sister) has type 2 diabetes
- weight – being overweight will increase your risk, especially if you have fat around your waist
- ethnicity – people of South Asian, Chinese, African-Caribbean and black African origin are more likely to develop type 2 diabetes.

Some medicines used to treat other conditions can increase the risk of developing diabetes. This is called drug-induced diabetes. These medicines include steroids that are commonly used to treat cancer. See pages 36 to 41 in this booklet about steroids and cancer treatment

Some women develop high blood sugar during pregnancy (gestational diabetes). Gestational diabetes usually goes away after the birth. However, women who have had it are more likely to develop type 2 diabetes.

Signs and symptoms of diabetes

When too much sugar stays in the blood, our bodies cannot use it for energy. We try to find energy from other sources, such as fat stored in the body. Our bodies get rid of the extra sugar by passing it out in the pee (urine). This can cause the following symptoms:

- feeling very tired (fatigue)
- passing a lot of urine, especially at night
- being really thirsty
- cuts and wounds that take a long time to heal
- itching in the genital area or thrush infections
- losing weight for no obvious reason
- blurred vision.

The symptoms of type 1 diabetes usually develop quickly. With type 2 diabetes, the symptoms are usually less obvious. They often develop slowly over months or years. Some people with type 2 diabetes may not have any symptoms. This means they do not realise they have developed type 2 diabetes. Drug-induced diabetes can sometimes develop quickly.

Talk to your cancer doctor or GP if you think you have symptoms of diabetes. It is important to remember that these symptoms can be caused by many other conditions.

Treating diabetes

The aim of treatment is to keep the amount of sugar in your blood as normal as possible. This helps to manage symptoms and prevent any problems. Type 1 and type 2 diabetes are treated in different ways.

Type 1 diabetes

Type 1 diabetes is treated with insulin. Insulin is given by injections using an insulin pen, or with an insulin pump. An insulin pump is a small electronic device that gives regular doses of insulin throughout the day and night.

Keeping to a healthy weight, eating a balanced diet and being physically active are also important. Our booklets **Physical activity and cancer**, **Managing weight gain after cancer treatment** and **Healthy eating and cancer**, have more information about maintaining a healthy lifestyle. See page 110 for ways to order them.

Type 2 diabetes

Type 2 diabetes can be managed by:

- making lifestyle changes, such as keeping to a healthy weight, eating a balanced diet and being physically active
- taking tablets and medicines that help to reduce the amount of sugar in the blood
- taking insulin, but this is less common.

Many people with type 2 diabetes have a combination of treatments.

We have more information about eating a balanced diet in our booklet **Healthy eating and cancer**. See page 110 for ways to order this.

An insulin pen



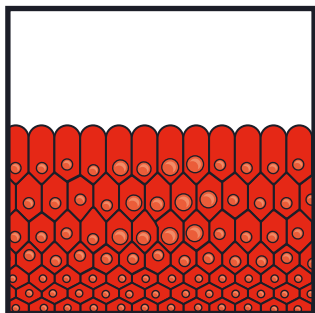
What is cancer?

Cells are tiny building blocks that make up the body's organs and tissues. Cells receive signals from the body, telling them when to grow and when to divide to make new cells. This is how our bodies grow and heal. These cells can become old, damaged or no longer needed. When this happens, the cell gets a signal from the body to stop working and die.

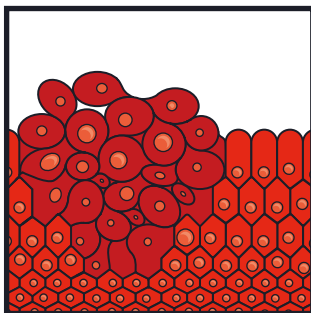
Sometimes these signals can go wrong, and the cell becomes abnormal. The abnormal cell may keep dividing to make more and more abnormal cells. These cells can form a lump, called a tumour.

Cells forming a tumour

Normal cells



Cells forming a tumour



Not all tumours are cancer. Doctors can tell if a tumour is cancer by taking a small sample of cells from it. This is called a biopsy. The doctors examine the sample under a microscope to look for cancer cells.

A tumour that is not cancer (a benign tumour) may grow, but it cannot spread to anywhere else in the body. It usually only causes problems if it grows and presses on nearby organs.

A tumour that is cancer (a malignant tumour) can grow into nearby tissue.

Sometimes cancer cells spread from where the cancer started (the primary site) to other parts of the body. They can travel around the body in the blood or through lymph fluid which is part of the lymphatic system. When these cancer cells reach another part of the body, they may grow and form another tumour. This is called a secondary cancer or a metastasis.

Some types of cancer start from blood cells. Abnormal cells can build up in the blood, and sometimes the bone marrow. This is where blood cells are made. These types of cancer are sometimes called blood cancers.

Your data and the cancer registry

When you are diagnosed with cancer in the UK, some information about you is collected in a national database. This is called the cancer registry. It helps the NHS and other organisations plan and improve health and care services.

Your hospital will give information about you, your cancer diagnosis and treatment to the registry automatically, unless you ask them not to. As with all medical records, there are strict rules to make sure the information is kept safely and securely. It will only be used for your direct care or for health and social care planning and research.

Talk to your doctor or nurse if you have any questions about the registry. If you do not want your information included in the registry, you can contact the cancer registry in your country to opt out. To find details about the cancer registry in your area, see page 115.

Diabetes and cancer risk

It is estimated that about 1 in 5 people with cancer (20%) also have diabetes. But the actual number may be higher than this.

People with diabetes are more at risk of developing certain types of cancer. We do not know exactly why this is.

Type 2 diabetes and some types of cancer have some similar risk factors. For example, being overweight means there is a higher risk of developing diabetes and cancers of the gullet (oesophagus), bowel, breast, womb and kidney. Both diabetes and cancer are also more common in people as they get older.

People with type 2 diabetes have a higher risk of developing cancer of the:

- pancreas
- liver (primary liver cancer)
- womb (endometrium)
- bowel (colon and rectum)
- bladder
- breast.

People with type 2 diabetes have a lower risk of developing prostate cancer. This may be because some men with diabetes have a smaller amount of male hormone (testosterone) in the body.

We do not know as much about the risk of developing cancer for people with type 1 diabetes. But they may have a higher risk of developing cancer of the:

- cervix
- stomach.

Research is trying to find out if diabetes treatments affect the risk of developing cancer. At the moment there is no evidence that any diabetes treatments increase the risk. Metformin, one of the more commonly used drugs to treat diabetes, may help lower cancer risk.

Cancer and risk of diabetes

Your risk of developing diabetes may be higher if you have certain types of cancer. For example, you have a higher risk if you have cancer of the pancreas. You may also have a higher risk of developing diabetes with other cancers.

Reducing your risk of cancer if you have diabetes

If you have diabetes, you may be able to reduce your risk of developing cancer by:

- keeping to a healthy weight for your height
- eating a healthy diet
- keeping active
- not smoking.

We have more information to help you with these healthy lifestyle choices. Visit **[macmillan.org.uk/healthylifestyle](https://www.macmillan.org.uk/healthylifestyle)**

Diabetes UK also has some useful information to help you lead a healthy lifestyle. Visit **[diabetes.org.uk/guide-to-diabetes/managing-your-diabetes/healthy-eating](https://www.diabetes.org.uk/guide-to-diabetes/managing-your-diabetes/healthy-eating)**



PLANNING YOUR CANCER TREATMENT

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How treatment is planned

A team of health professionals will plan your cancer treatment. This team is called a multi-disciplinary team (MDT). Depending on what type of cancer you have, it may include a:

- surgeon – a doctor who specialises in a specific cancer type and does operations
- medical oncologist – a doctor who specialises in treating cancer with chemotherapy and targeted therapy
- clinical oncologist – a doctor who specialises in treating cancer with radiotherapy, chemotherapy and targeted therapy
- radiologist – a doctor who specialises in reading scans and x-rays
- pathologist – a doctor who specialises in looking at cells under a microscope and diagnosing the cell type
- nurse specialist – a nurse who gives you information and support during treatment.

During your treatment you may also see a pharmacist. They can give you information and advice about your medicines.

Your MDT will not usually include a diabetes specialist doctor or nurse. If you have diabetes, your diabetes team will often be asked for advice. Ask your cancer doctor and specialist nurse if they have talked about your treatment with your diabetes team.

Managing two conditions

Some cancer treatments can affect the amount of sugar in your blood. This means you and your cancer specialist may need to plan cancer treatment more carefully. You may understand your diabetes and how to manage it better than the team treating your cancer. It is important that you talk about your needs and are involved in planning your treatment.

Your diabetes treatment can be changed to fit around your cancer treatment if needed. During cancer treatment, you may need to change your diabetes medicine to control the amount of sugar in your blood.

Some cancer treatments, such as chemotherapy, are given in cycles. This means you will have days when you have treatment, followed by days when you have no treatment (rest days). The amount of sugar in your blood may go up and down at different times during each cycle of treatment. This can make things more difficult to manage. Your cancer doctor or specialist nurse will talk to you about your treatment plan.

Short-term increases in blood sugar should not have a long-term effect on your diabetes. You might want to talk to your diabetes team about ways to try and prevent higher blood sugars. You can also look at different ways to help control high blood sugar.

Before your cancer treatment starts, you should contact your diabetes specialist or ask to be referred to the local diabetes team. This is so they know you may need some extra support during your cancer treatment.

If you have lost a lot of weight before you start cancer treatment, the medicines you take to lower your blood sugar may need to change. Your diabetes team can give you advice about this.

'I was type 2 diabetic and managed my diabetes with healthy eating. Chemotherapy and steroids treatment caused my sugar levels to go up.'

Pavitter, diagnosed with ovarian cancer

Long-term health problems

Diabetes can cause long-term health problems, such as:

- damage to the heart and blood vessels (cardiovascular disease)
- nerve damage (neuropathy)
- kidney damage (nephropathy)
- damage to the blood vessels in the eye (retinopathy).

Some cancer treatments can also cause these problems, or make them worse in people who already have them. If you have diabetes, you will often need extra tests and investigations to check your health. These tests will make sure you are well enough to have cancer treatment.

During treatment, you may need to be monitored more closely than people who do not have diabetes. If the side effects from treatment become very severe, your cancer treatment may need to be adjusted or changed. Your cancer doctors will sometimes suggest a different type of cancer treatment.

Adjusting or changing your cancer treatment may affect how well it works. But not changing it may cause serious long-term health problems. Your cancer doctor will talk to you about the benefits and risks of your treatment. You will be involved in any decisions to change your treatment.

Diabetes UK has more information on the other health problems that diabetes can cause. Visit **diabetes.org.uk/guide-to-diabetes/complications**

Controlling your blood sugar

When you are ill or stressed, the amount of sugar in your blood increases. This helps your body fight the illness or deal with the stress. People who do not have diabetes will produce more insulin to stop the sugar level getting too high. But if you have diabetes, your blood sugar level can keep getting higher.

While you are having cancer treatment, it is important to try to keep your blood sugar in a safe range. This is not always possible, and a slightly high blood sugar level is not a big problem if it is only for a short time. But very high blood sugars can be a problem. They can cause symptoms such as being more thirsty and needing to pee a lot. This can lead to dehydration. Get advice from your diabetes team if you notice these symptoms.

Having high blood sugars may increase the risk of developing other problems while you are having cancer treatment. These can include infection and wounds not healing properly.

Most people with diabetes know how to manage their food and medicines. They may not find it difficult to keep their blood sugar levels normal during treatment. You may need more help if:

- you have only recently been diagnosed with diabetes
- you often have problems controlling your sugar levels.

Before you start your cancer treatment, talk to your diabetes nurse or ask to see one. They can give you more advice.

Some people with diabetes, especially those with type 2, may not monitor their blood sugar level. You may need to start monitoring it while having cancer treatment. Your cancer doctor or diabetes team can give you advice before you start treatment. If you do not already have monitoring equipment, ask your diabetes team for some. The diabetes team can tell you:

- how to test your blood sugar
- how many times to test a day
- the sugar level you should be aiming for.

You should be given the contact number of a diabetes specialist. You can call them to talk about any worries you have about your diabetes.

We have more information about how different cancer treatments might affect your diabetes (see pages 36 to 63).

Going into hospital

You may need to spend some time in hospital during or after your cancer treatment. This will depend on the type of cancer you have and the treatment that is planned. You may only have to stay in hospital for a few hours. But you may have to stay longer.

You will usually know when you are going into hospital. This means you can plan to make sure that you have everything you need to manage your diabetes.

Your blood sugar levels may be higher or lower than usual while you are in hospital. This can happen because you are being less active and eating different food. It can also be caused by the stress of being in hospital (see page 24). Your blood sugar will be checked regularly. Your doctors may need to adjust your diabetes treatment. They will talk to you about this first.

All the ward staff should know that you have diabetes. You should tell them when you first meet. They should also know about your diabetes care. If you cannot give them this information, they can contact your local diabetes team. You may also find it helpful to talk about your care with the hospital's diabetes team, if there is one.

Being in hospital and having cancer treatment can make it more difficult to manage your diabetes. If you need help to control your blood sugar, it is important to ask the team looking after you.

Diabetes equipment

When you go into hospital, you may want to take your own diabetes equipment. This could include your:

- blood-testing kit
- insulin pen
- insulin pump, if you use one.

The hospital may not use the equipment you are used to. And they may not have all the equipment you need. Before you go in, you could talk to the staff about what they have and what you would like to bring.

The nurses will check your blood sugar using the hospital equipment. You can use your own blood-testing kit too, if you prefer.

Diabetes medicines

If you are admitted to hospital overnight or longer, take your insulin or tablets with you. The hospital pharmacy should be able to give you the medicines you normally use. Or they may give you something similar. Not every ward or unit will have all the different drugs used to treat diabetes. This means it can sometimes take a while to get them.

You may only spend a few hours in hospital at a time. For example, this might be if you are having chemotherapy in a day unit. It is a good idea to take some food and your medicines with you. Try to keep to your normal routine as much as you can.

Tests and scans

There are lots of different tests and scans that are used to help diagnose cancer. Some of these tests are also used during treatment and as part of your follow-up care. Many of these tests will not affect your diabetes. But you should contact the hospital before the test and tell them that you have diabetes. They can give you advice.

Some tests will take a few hours. When you contact the hospital, ask how long you will need to be there. You can then plan ahead so that you have everything you need with you. This could include your diabetes equipment and some food.

Some tests need a bit more planning. For example, you may need to stop eating for a few hours before the test. Or you may need to follow a careful diet so that you have an empty bowel.

The hospital staff will let you know how to prepare for the tests. You may need to go into hospital the day before. You can ask your diabetes team for more advice too.

If your blood sugar level goes too low (below 4 mmol/l) at any time before the tests, you should eat or drink a fast-acting carbohydrate. This could include glucose tablets or Glucojuice®. You should take some glucose tablets with you when you go to the hospital.

Not eating before a test

You may be asked not to eat for a few hours before some tests. This could be before an MRI scan or a CT scan. These scans are used to build up a picture of the inside of the body.

Not eating may be a problem for some people with diabetes. Because of this, you may have a shorter time when you cannot eat than people who do not have diabetes.

The hospital staff will tell you when you can eat and when to take your diabetes medicines. It is important to follow this advice carefully. They should also give you an early morning appointment. This will help shorten the amount of time when you cannot eat.

If you use an insulin pump

CT and MRI scanners and some x-rays can affect the way your insulin pump works. If you use an insulin pump, it may need to be removed before the scan or x-ray starts. A few days before the scan, you should tell the scanning or x-ray staff that you have an insulin pump.

Some procedures take more than an hour. If your pump is removed, you may need to have injections of a short-acting insulin during this time. Ask the staff how long your scan or x-ray will last. This will help you plan how to control your diabetes. Your diabetes team can also give you advice.

Having a colonoscopy or a barium x-ray

A colonoscopy and a barium x-ray look at the lining of the bowel from the inside. The bowel needs to be completely empty, so you will need to follow a careful diet before the test. You will not be able to eat for a few hours before the test. You will also need to take a laxative.

The staff doing the test can give you information on controlling your blood sugar before, during and after the test. It is important to follow this advice. Contact your diabetes team if you are not sure how to manage your blood sugar during the procedure.

You should also be given a morning appointment for these tests. This helps to shorten the amount of time you cannot eat and drink. Contact the hospital if you have been given an afternoon appointment. It might be possible to change the time.

Having a PET scan

A PET scan uses low-dose radioactive sugar to measure the activity of cells in different parts of the body. It can be used to find out if a tumour:

- is cancerous or non-cancerous
- is growing
- has spread to other parts of the body.

A PET scan is often combined with a CT scan.

About 2 hours before the scan, you have an injection of a sugary fluid that has a small amount of radioactivity. The injection is given into a vein. This is usually in your arm. Cancer cells are usually more active than normal cells, so they take up more of the radioactive sugar. The sugar helps the cancer cells show up on the scan.

How well the PET scan works depends on how well your diabetes is controlled:

- If your blood sugar level is high, the cancer cells may not take up much of the radioactive sugar. This is because they already have enough sugar from your blood. If the cancer cells do not take up the radioactive sugar, they will not be seen on the scan.
- If the amount of insulin in your blood is high, your normal cells will take up more of the radioactive sugar. This means the cancer cells take up less sugar and do not show up on the scan as clearly.

Before a PET scan, your blood sugar level is checked. If the blood sugar level is too high, the scan may have to be moved to another day.

A few days before your PET scan, you should tell the scanning department that you have diabetes. They will give you information about:

- what and when to eat
- which diabetes medicines to take in the days before the scan
- what food and diabetes medicines you should take with you to the hospital.

It is important that you follow this advice carefully.

The amount of radioactive sugar you are given is small. It should not affect your diabetes.

Scans using a dye (contrast medium)

Some types of scan include having an injection of a dye. This dye makes some areas of the body show up more clearly. The dye is known as a contrast medium. It is used in many different types of scan, including:

- a CT scan
- an MRI scan
- an IVU (intravenous urogram) – a test to look at the urinary system
- a venogram or an angiogram – tests to look at the blood vessels.

A contrast medium can temporarily affect how your kidneys work. This can be a problem if you take the diabetes medicine metformin. If you do, you will be asked not to take it on the day of your appointment and for about 2 days afterwards. You will be given information about when to take it and how to manage your blood sugar during this time.

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HOW CANCER TREATMENT CAN AFFECT YOUR DIABETES

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Steroids

Steroids (sometimes called corticosteroids) are substances that are naturally produced in the body. They help control the way our body works. This includes the way our body uses food. Steroids regulate our immune system and the balance of salt and water in our bodies. They also help to reduce inflammation.

Steroids can be made into drugs and used for cancer treatment. They can be given as tablets or injections. Common types of steroids used in cancer treatment include:

- hydrocortisone
- dexamethasone
- methylprednisolone
- prednisolone.

Steroids can be used:

- as part of your treatment, to help destroy cancer cells and make chemotherapy more effective
- to help reduce an allergic reaction to certain chemotherapy drugs
- in small amounts as anti-sickness drugs
- to improve your appetite.

How steroids can affect your diabetes

Steroids can increase blood sugar levels in people who have diabetes. It can also increase blood sugar levels in people who do not have diabetes. This can happen because:

- the liver produces more sugar during steroid treatment
- steroids make it harder for sugar to move out of the blood
- your body may become resistant to insulin while you are taking steroids.

A rise in your blood sugar level when you are taking steroids is called steroid-induced hyperglycaemia.

'I was declared diabetic due to the steroids. I was taught how to self-inject and test my blood sugars. I found that adjusting my diet helped.'

John, diagnosed with myeloma

You may find it more difficult to control your blood sugar level when you are taking steroids. How your blood sugar is affected will depend on:

- the type of diabetes you have
- how you normally manage your diabetes
- which steroids you are taking
- how you are taking the steroids – your blood sugar may start to increase a day or two after taking steroid tablets, but could increase a few hours after having a steroid injection
- the dose of steroids – the higher the dose, the more likely your blood sugar will increase
- the time of day you take the steroids
- how long you are taking the steroids for.

If you do not have diabetes

If you do not have diabetes, a rise in your blood sugar level is called steroid-induced diabetes.

Tell your cancer doctor or specialist nurse if you feel unwell or develop any of the symptoms of diabetes. These could include:

- being really thirsty
- having blurred vision
- passing a lot of urine (pee)
- feeling very tired.

If you are at risk of developing diabetes (see pages 6 to 8), they may ask you to monitor your blood sugar level while you are taking steroids.

Your blood sugar level may go back to normal when you stop taking steroids. Some people may need to start treatment to help control their blood sugar. Your cancer doctor or specialist nurse will talk to you about this.

Controlling your blood sugar when taking steroids

Before you start taking any steroids, talk to your doctors about how to keep your blood sugar within your target range.

If you have diabetes, it is very important that your blood sugar level is tested during steroid treatment. If you do not already check your blood sugar, you will need to start checking it. If you do, you will need to check it more often. When you first take the steroids, make sure you have enough blood-testing equipment with you at home.

Your doctor may also suggest you check your blood or urine for ketones. Ketones are chemicals that can sometimes build up in the body when there is a severe lack of insulin. Ketones are toxic to the body and large amounts can be very serious. A high level of ketones in the body is called diabetic ketoacidosis (DKA). It mainly affects people with type 1 diabetes, but it can affect anyone with diabetes who uses insulin. It can also affect people who control their diabetes with tablets and their diet, but this is rare.

You should keep a record of your blood sugar levels and when you take the steroids. This is so you can see if there is a pattern. You can share the record with your doctors and nurses.

You should talk to your cancer doctor, diabetes team or your GP as soon as possible if:

- your blood sugar levels are high (more than 15 mmol/l) on more than 2 or 3 occasions
- you feel unwell or develop any of the symptoms of diabetes, such as being really thirsty, having blurred vision, passing a lot of pee (urine) or feeling very tired.

If your blood sugar level stays high while you are taking steroids, your cancer doctor or specialist nurse may change the dose. They may also change the time you take the steroids. They may spread the dose out during the day.

You may need to change the way you control your diabetes:

- If you use your diet to control your diabetes, you may need to start taking tablets to control your blood sugar.
- If you already take tablets, you may need to increase the dose or start using insulin for a short time.
- If you already use insulin, you may need to increase the dose or use a different type of insulin.

Correction doses of insulin can be used to reduce very high blood sugars. These may not work as well when you are taking steroids. Your diabetes team can give you advice. They may suggest you take more insulin.

You should never stop taking your steroids without talking to your cancer doctor first.

The dose of steroids you take as part of your cancer treatment will usually be reduced and stopped. Ask your cancer doctor or specialist nurse, so you can change your diabetes treatment as this happens.

Some people may need to continue to take a small dose of steroids for a long time. Your diabetes team can help you manage your blood sugar during this time.

Long-term risks of steroids

Sometimes steroids used to treat cancer can lead to permanent diabetes in people who were already at risk of developing diabetes (see pages 6 to 8). The blood sugars may reduce once you stop taking the steroids, but the diabetes may still need treatment. This is called steroid-induced diabetes and is like type 2 diabetes (see page 8).

Chemotherapy

Chemotherapy uses anti-cancer (cytotoxic) drugs to destroy cancer cells. Cytotoxic means toxic to cells. You may have one chemotherapy drug or a combination of different drugs. Chemotherapy is usually given as a few sessions of treatment, with rest periods in between. Chemotherapy and the rest period make up one cycle of your treatment. Your cancer doctor will explain the number of cycles you will need.

Chemotherapy is often used to treat cancer. It is sometimes used on its own, but is commonly used in combination with other cancer treatments. These can include:

- radiotherapy
- targeted therapy
- immunotherapies.

How chemotherapy can affect your diabetes

When you have chemotherapy treatment, there is a risk that your blood sugar level may get too high or too low. This is because of the side effects of chemotherapy, such as sickness, diarrhoea and loss of appetite (see pages 66 to 76).

Some chemotherapy drugs, such as asparaginase and busulfan, can cause your blood sugar level to rise. Your cancer doctor or specialist nurse can tell you more about the drugs you will take.

Some chemotherapy drugs can damage the nerves in your body. This can lead to pain and a change in sensation called peripheral neuropathy. The pain can sometimes be worse if the nerves are already damaged by diabetes. Peripheral neuropathy caused by chemotherapy does not usually last long, but it can sometimes be permanent.

The chemotherapy drugs most likely to cause peripheral neuropathy are the:

- platinum based drugs – cisplatin, carboplatin and oxaliplatin
- taxanes – docetaxel (Taxotere) and paclitaxel (Taxol)
- vinca alkaloids – vinblastine, vincristine and vinorelbine.

Talk to your cancer doctor or specialist nurse if you are worried about peripheral neuropathy. They can give you more information about your treatment and advice on the best way to manage any pain. We have more information that might be helpful in our booklet **Managing cancer pain**. See page 110 for ways to order this.

Controlling your blood sugar when having chemotherapy

Before you start chemotherapy, talk to your doctors and nurses about any side effects you might have (see page 47). Ask them for information about the best way to manage your diabetes during treatment. You may need to test your blood sugar levels more often than normal. If you do not already test your blood sugar, you may need to start. We have more information about chemotherapy in our booklet **Understanding chemotherapy**. See page 110 for ways to order this.

- If you use insulin to control your diabetes, you may need to change the type of insulin you use. You may need to increase or reduce the dose.
- If you control your diabetes with tablets, your specialist may suggest you change the dose. They may ask you not to take them on the day of your treatment.
- If you control your diabetes with your diet, you may find that your blood sugar levels still increase.

Your cancer doctor may want you to stay in hospital when you have your first session of chemotherapy. This is so the nurses can closely monitor your blood sugar level and treat you if it gets too high or too low.

Having chemotherapy



It is important to tell doctors how well you are managing to control your blood sugar level during your chemotherapy. If you are finding it difficult, your cancer doctor may change the dose of the chemotherapy. They may change it for another drug that has fewer or less severe side effects. Your doctors will talk to you before making any changes.

It is usually possible to manage your blood sugar without making these changes.

If you feel unwell during your chemotherapy treatment, it can be difficult to know if it is:

- a side effect of the chemotherapy
- because your blood sugar is too high or too low.

You should always check your blood sugar if you feel unwell. Talk to your cancer doctor or specialist nurse if you are not sure.

You should talk to your doctor if your blood sugar levels are:

- always 10 mmol/l or higher and you feel unwell
- less than 4 mmol/l on more than two occasions.

Radiotherapy

Radiotherapy uses high-energy rays, such as x-rays, to treat cancer. Treatment is usually given every day from Monday to Friday, with a rest at the weekend. A course of radiotherapy is often given over 3 to 8 weeks. Sometimes just 1 or 2 treatment sessions are needed.

Radiotherapy is used to treat many different types of cancer. It is sometimes given with chemotherapy (chemoradiation). For more details on chemotherapy, see pages 43 to 47.

We have more information about radiotherapy in our booklet **Understanding radiotherapy**. See page 110 for ways to order this.

How radiotherapy can affect your diabetes

During and immediately after radiotherapy, your blood sugar level may rise. This happens because the body releases extra sugar to help you cope with the treatment.

Depending on your diabetes treatment, your blood sugar may sometimes drop after the radiotherapy.

Tiredness (fatigue) is a common side effect of radiotherapy. It can last for weeks or a few months after treatment. If you are very tired, you may not be as active as you normally are (see page 77). This can affect your blood sugar level.

Some people find that radiotherapy makes them feel sick (see pages 66 to 69). It may also make eating and drinking more difficult (see pages 74 to 76). Feeling sick and not being able to eat or drink normally can be a problem when you have diabetes. You may not be able to keep your blood sugar at a normal level. You could also become dehydrated.

Controlling your blood sugar when having radiotherapy

During your course of radiotherapy treatment, it is important to test your blood sugar more often than usual.

Your diabetes team can give you advice on how to manage your blood sugar. It is important to tell doctors how well you are managing to control your blood sugar level during your radiotherapy. You may need to adjust or change your medicines or insulin.

If you inject insulin, try not to have your injections in the area of skin where you are having radiotherapy.

Surgery

Surgery means treating illness by cutting away body tissue. It is one of the main treatments for many cancers. The type of surgery you have and how it may affect you depends on the type of cancer.

How surgery can affect your diabetes

Having diabetes may give you a higher risk of problems during and after surgery. For example, any surgical wounds you have may heal slower than those of someone who does not have diabetes (see pages 88 to 89). You are also more likely to get a wound infection if your blood sugar level is not well controlled (see page 85 to 87).

If you have an operation to remove the whole pancreas, you will not be able to produce insulin (see page 6). After surgery, you will need to start injections of insulin. You will need to regularly test your blood sugar level. A diabetes specialist team will help you with this.

If you have had part of the pancreas removed, the remaining pancreas may not be able to make enough insulin straight away. This means your blood sugar levels will not be controlled. You may need to have an insulin drip into a vein, called an infusion. You will usually only have this until the remaining pancreas recovers and starts to make insulin again. Your doctor or specialist nurse will explain this to you. The ward staff in the hospital will closely monitor your blood sugar while you recover. If you do not already have diabetes, there is a higher risk of developing it in the future after this operation.

Planning your operation

To help prevent problems, your operation should be carefully planned. You will be closely monitored during and after the operation. Most operations for cancer are planned. This means you should have time to prepare. Very occasionally you may need to have an emergency operation. It is more difficult to plan for this, but you will still be closely monitored.

You can reduce the risk of any problems by keeping your diabetes as well-controlled as possible in the weeks before your operation. Your diabetes team can help you with this.

Before your operation, you should have an appointment at a pre-surgery assessment clinic. This is to talk about the plan for your care. Tell the doctors that you have diabetes and about any problems you have. Having surgery can be more risky if you have problems because of diabetes. This includes problems with your heart, eyes or kidneys.

If you have lost any feeling in your feet, your doctor may arrange tests to check your health before your operation. They will explain the tests and why you need them.

Talk to your diabetes team about your operation. They can talk to your surgeon and make sure you get the best advice to help you prepare. This advice will depend on how you manage your diabetes:

- If you take tablets, you may be asked to stop them for a short time before and after the operation.
- If you use insulin, you may need to change the dose. You should not stop taking insulin.

Ask your doctors or specialist nurse for some written information so you know exactly what you need to do and when.

Before your operation, you will meet the doctor who puts you to sleep and makes sure you are safe during the operation (the anaesthetist). They will tell you how they will care for you and control your blood sugar during surgery.

The day of your operation

You will normally be admitted to hospital on the morning of your operation. Sometimes you may be asked to come in the day before, so that the nurses can monitor your blood sugar level. You may have a drip (infusion) of sugar and insulin to help keep your blood sugar level well-controlled.

Your doctor will ask you not to eat or drink anything for a few hours before the operation. This is to help reduce the risk of you being sick.

Where possible, you should be the first person on the operating list for that morning or afternoon. This will help reduce the amount of time you cannot eat. The hospital team will plan the best way to manage your diabetes when you are not eating. This will depend on how long you cannot eat:

- If you miss one meal, you should be able to control your diabetes by adjusting your normal routine.
- If you miss 2 or more meals, you may need a drip of sugar and insulin for a short time. How much insulin you have will depend on your blood sugar level. Your nurses will regularly check this.

Having an operation can increase the risk of a blood clot in the leg. Compression stockings (also known as anti-embolic stockings) help to reduce this risk. You might be asked to wear compression stockings during your operation and for a while afterwards. Tell your doctor or nurses if you have any problems with feeling or circulation in your feet. If you do, you should not wear compression stockings.

After your operation

You should start to manage your diabetes again as soon as possible after your operation. The hospital team will help you do this. You may have trouble controlling your blood sugar at first. This may be because you are:

- not allowed to eat normally
- being sick
- in pain
- less active than normal
- stressed.

The nurses on the ward will check your blood sugar level regularly. You will not have to manage your diabetes yourself until you are well enough.

You will have the drip of sugar and insulin until you can start eating and drinking again. Some people will be able to eat soon after their operation. For others, it may take longer. This will depend on the type of operation you have had. Your doctors will try to get you eating normally as soon as possible. They will tell you how soon you can start eating and drinking again. They will also tell you when you should start taking your usual diabetes medicines.

If you are in bed for a long time, you are at risk of developing bedsores (pressure sores). It is important that you move around the bed and change your position. It is even more important if you have less feeling in your hands and feet. This is because you may not feel if you are developing a sore. You should try to get up soon after your operation. The ward staff will help you with this. Moving around will also help your blood sugar level return to normal.

Your cancer doctor or specialist nurse will tell you when you can go home. You may have to stay in hospital longer than someone who does not have diabetes.

Any stitches, clips or staples in your wound are usually taken out 7 to 10 days after the operation. The wound may take longer to heal if your blood sugar level is not well-controlled. The practice nurse at your GP surgery can remove any stitches. If you cannot leave home, a district nurse can visit you. The nurses on the ward can arrange this before you go home.

If your diabetes is not well-controlled, you are more at risk of developing an infection (see page 85). Let your nurse or doctor know straight away if your wound becomes hot, painful or starts to bleed or leak any fluids. You should also tell them if this happens when you go home.

Hormonal therapy

Hormones are substances produced naturally in the body. They act as chemical messengers and influence the growth and activity of cells.

Hormonal therapies work by changing the production or activity of some hormones in the body. They are most commonly used to treat breast cancer and prostate cancer. There are several different types of hormonal therapy. They are usually given as tablets or injections. Treatment is often given for a few years.

How hormonal therapy can affect your diabetes

Some hormonal therapy drugs can increase your blood sugar level.

These include the following hormonal therapy drugs:

- cyproterone acetate (Cyprostat[®])
- degarelix (Firmagon[®])
- diethylstilboestrol (Stilboestrol[®])
- goserelin (Zoladex[®]) – when given to men
- leuprorelin acetate (Prostap[®])
- medroxyprogesterone acetate (Provera[®])
- megestrol acetate (Megace[®])
- triptorelin (Decapeptyl[®], Gonapeptyl Depot[®]).

Your blood sugar levels will usually go back to normal once the hormonal therapy treatment is finished.

If you do not have diabetes, there is a small risk of developing it when taking some hormonal therapy drugs. Usually the benefits of the hormonal therapy outweigh the risk of diabetes. Your cancer doctor or specialist nurse can talk to you about this.

Talk to your doctor if you do not have diabetes but develop any of its symptoms (see page 9) while having hormonal therapy.

Controlling your blood sugar when having hormonal therapy

During your hormonal therapy treatment, you may need to check your blood sugar level more often than normal. Your diabetes team will monitor you during treatment and give you advice on how to manage your blood sugar. Sometimes, you may need to change your insulin or tablet dose.

It is important to tell your doctors about how well you are managing to control your blood sugar level during your treatment.

Targeted therapy and immunotherapy

Targeted therapies and immunotherapies can be used to:

- control the growth of cancer cells
- stimulate the immune system
- overcome side effects of treatment.

They are used to treat many different types of cancer.

There are many different targeted therapy and immunotherapy drugs. They can be given by tablet, injection or drip (infusion). A course of treatment may last a few months, but can also last a few years.

The side effects of some of these drugs can be worse if you have diabetes. Your cancer doctor or specialist nurse can give you more information.

How targeted therapy can affect your diabetes

Some targeted therapy drugs may affect your blood sugar level while you are having treatment. Depending on which drug you are taking, your blood sugar level may get higher or lower.

Your blood sugar levels should return to normal once you stop having targeted therapy treatment.

The targeted therapy drugs sorafenib (Nexavar®) and sunitinib (Sutent®) can lower your blood sugar.

The following targeted therapy drugs can increase your blood sugar level:

- bortezomib (Velcade®)
- carbozantinib (Cabometyx®, Cometriq®)
- ceritinib (Zykadia®)
- dabrafenib (Tafinlar®)
- everolimus (Afinitor®)
- gemtuzumab (Mylotarg®)
- lenvatinib (Lenvima®, Kispalyx®)
- nilotinib (Tasigna®)
- panitumumab (Vectibix®)
- ponatinib (Iclusig®)
- rituximab (Mabthera®)
- temsirolimus (Torisel®)
- trametinib (Mekinist®).

Controlling your blood sugar during targeted therapy

During treatment, you may need to check your blood sugar level more often. Sometimes, you may need to change your insulin or tablet dose. Your cancer doctor or specialist nurse will help you with this.

It is important to tell your doctors how well you are controlling your blood sugar level during your treatment.

How immunotherapy can affect your diabetes

Immunotherapies are cancer treatments that aim to stimulate the immune system to kill cancer cells. The stimulating effect can cause high blood sugar levels for people who have diabetes.

Rarely, immunotherapies can trigger diabetes in people who do not already have diabetes. If this happens, you will need to keep having diabetes treatment to control and monitor your blood sugar level.

Immunotherapy drugs that affect your blood sugar include:

- aldesleukin (Proleukin®)
- interferon (IntronA®, Rogeron-A®)
- ipilimumab (YERVOY®)
- lenalidomide (Revlimid®)
- nivolumab (OPDIVO®)
- pembrolizumab (Keytruda®).

Your cancer doctor or specialist nurse can give you more information.

Controlling your blood sugar when having immunotherapy

Before treatment starts you may have a blood test to check your blood sugar level. The blood test will be done again during treatment. You may have more blood tests after treatment has ended. During treatment you will need to check your blood sugar level more often.

You may need to change your diabetes treatment. For example, you may have to:

- start using insulin as well as taking tablets
- change the dose of insulin you take
- start taking tablets if your diabetes is diet-controlled.

It is important to tell your doctors how well you are controlling your blood sugar level during your treatment.

Talk to your doctor if you do not have diabetes, but develop any of its symptoms while having targeted therapy or immunotherapy (see page 9).

An insulin pump



High-dose treatment and transplants

Some types of cancer are treated using a transplant of stem cells. Stem cells are blood cells at the earliest stage of development.

Treatment involves having high doses of chemotherapy (see pages 43 to 47) and sometimes radiotherapy (see pages 48 to 49). It will often include treatment with steroids (see pages 36 to 42). High-dose treatment is used to destroy any remaining cancer cells and increase the chances of curing the cancer. After the treatment, your own stem cells or stem cells from someone else (a donor) will be given back through a drip. These stem cells then grow and develop in the bone marrow to produce normal blood cells. You will usually go into hospital for a few weeks while you recover from the high-dose treatment.

How high-dose treatment can affect your diabetes

High-dose treatment can cause severe side effects (see pages 66 to 89). These depend on the type of treatment you have.

Your blood sugar level may go up or down because of the side effects of chemotherapy. And it may rise if you are taking steroids.

You may need help managing your diabetes while you are recovering from high-dose treatment. You will need to check your blood sugar more often. And you will probably need to start taking medicines or change the medicines you take. Your cancer doctor or specialist nurse will give you more information.

Research trials

Cancer research trials try to find new and better treatments for cancer. Trials carried out on patients are called clinical trials. There are benefits and risks to taking part in a clinical trial. The trials are made to be as low-risk as possible while making the benefits as great as possible for anyone who takes part. Our booklet **Understanding cancer research trials (clinical trials)** provides more information on clinical trials. See page 110 for details on how to order it.

All clinical trials have strict guidelines about who can take part. These are known as entry criteria or eligibility criteria. Anyone who wants to take part in a clinical trial must meet these criteria. All trials also have exclusion criteria. These explain who cannot take part. Exclusion criteria help to make sure the people who take part are safe. Exclusion criteria also make sure the results are as accurate as possible.

If you have diabetes, you may not be able to take part in some cancer research trials. Your cancer specialist can tell you if you are suitable for a specific trial.



COPING WITH SIDE EFFECTS WHEN YOU HAVE DIABETES

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Feeling sick and being sick

Cancer or its treatments can sometimes make you feel sick (nausea) or be sick (vomit). Chemotherapy, radiotherapy, hormonal therapy, targeted therapy and immunotherapy can all cause sickness (see pages 43 to 60). Physical changes caused by the cancer can cause these side effects too. For example, this might be because of damage to the liver or pressure on the brain. If you are feeling anxious about cancer and your treatment, this can also make you feel or be sick.

There are many different types of drugs that help treat sickness. These are called anti-emetics. They can be given as:

- tablets
- injections
- suppositories
- skin patches.

If you are having a cancer treatment that can cause sickness, you should start taking anti-emetics before your treatment starts. Your cancer doctor, specialist nurse or pharmacist will give you more information.

Being sick can be a problem when you have diabetes. Because you may not be able to eat or drink, you could become dehydrated. Your blood sugar level can get very high (hyperglycaemia – a hyper) if you are dehydrated. This can be more serious for people with diabetes.

Tell your cancer doctor or specialist nurse straight away if you are feeling sick and cannot eat or drink anything.

Controlling your blood sugar when feeling or being sick

You will need to take extra care of your diabetes if you are feeling or being sick. Your diabetes team can give you advice to help you manage your blood sugar. The advice is often called the 'sick day rules'.

You will need to check your blood sugar more often. This could be every 2 to 4 hours, including during the night.

You should also be aware of the symptoms of a very high blood sugar level. These symptoms include:

- passing a lot of urine, especially at night
- being very thirsty
- headaches
- being very tired.

If your blood sugar is very high and you use insulin to control your diabetes, you may need to check your blood or urine for ketones. Ketones are chemicals that can sometimes build up in the body when there is a severe lack of insulin. They are toxic to the body and large amounts can be very serious. If you have ketones in your blood or pee, you should contact your diabetes team for advice straight away.

Try to keep eating and drinking as normal. It is important to drink enough, so have plenty of unsweetened drinks. If you cannot eat much, try snacks or drinks with carbohydrates to give you energy.

If you cannot eat without being sick, it is okay to sip sugary drinks, such as fruit juice or non-diet cola or lemonade. You could also suck on glucose tablets or sweets like jelly beans. Contact your doctor as soon as possible if you are vomiting and cannot keep any fluids down.

Your diabetes medicines

Try to keep taking your diabetes medicines as normal.

If you use tablets to manage your diabetes, you may need to stop taking them while you are being sick. Your diabetes team can give you more advice.

If you use insulin, you will usually have this before eating. But if you are sick, you may not absorb enough food and your blood sugar may drop too low. If you are sick after eating, check your blood sugar and try to eat something to stop it getting too low.

It is a good idea to have a fast-acting carbohydrate nearby, such as glucose tablets, sweets or fruit juice. You should try to follow this with a snack containing slower-acting carbohydrates, such as a slice of toast or a couple of digestive biscuits. The fast acting carbohydrates will quickly increase your blood sugar level. The slow-acting carbohydrates will stop it dropping again.

If you cannot eat solid foods, you could have a milky drink. Your doctor can also prescribe special nourishing drinks containing carbohydrates.

If you are being sick, you may need to change the dose of your insulin or change the type of insulin you use. You should not stop taking it. Your diabetes specialist can give you advice.

Tips to help you cope with sickness

- Before you start any cancer treatment, talk to your cancer doctor or specialist nurse. Explain that you have diabetes and that you need to prevent sickness as much as possible.
- Ask your diabetes team for advice about managing sickness before it happens. They can tell you how to manage your diabetes when you are ill. These are known as the 'sick-day rules'. It is helpful for family or friends to know how to manage things too.
- Take your anti-sickness medicines as they are prescribed, even if you are not feeling sick. It is easier to prevent sickness before it starts than to stop it.
- Tell the doctor if the anti-sickness medicines are not working. They can give you different medicines that may work better.

You can keep a note of foods you can manage when you feel sick on pages 78 to 80.



Tips to help with eating

- Try to stick to what you usually eat. Try to eat the same amount of carbohydrates as normal. But if this is difficult, it is okay to eat foods you would not normally eat.
- You may need to eat little and often.
- Try eating dry foods and avoid greasy, fatty or fried foods.
- Ginger can help reduce sickness. Try drinking ginger tea or eating ginger biscuits.
- Eat cold foods, such as yogurt and ice cream. Or try foods at room temperature, such as tinned fruit, dry toast and plain biscuits.
- If the smell of cooking makes you feel sick, eat cold meals or food from the freezer that only needs heating up.
- If feeling sick is putting you off food or you cannot eat without being sick, replace meals with snacks or drinks that contain carbohydrates. These could include glucose tablets, fruit juice or non-diet fizzy drinks. Fizzy drinks that have gone flat may be easier to drink.
- Try to keep drinking even if you cannot eat. Aim to drink a cup of fluid every hour.

If you cannot drink without being sick, contact the hospital as soon as possible. It is important to prevent dehydration.

You should talk to your diabetes team if you are worried about coping with sickness. They will be able to give you more advice.

Diarrhoea

Diarrhoea means that you need to go to the toilet more often than is normal for you, and the stools (poo) you pass are looser than normal. It can be caused by chemotherapy, radiotherapy, targeted therapy, immunotherapy and surgery. Sometimes other medicines, such as antibiotics, or an infection can also cause diarrhoea. We have more information on diarrhoea on our website.

Some people with diabetes may already have diarrhoea. It can happen because the nerves that control bowel movements are damaged by high blood sugar levels (gastroparesis), but this is rare. If you already have diarrhoea, your symptoms could get worse during cancer treatment.

Your cancer doctor or specialist nurse can tell you if you are likely to get diarrhoea because of your cancer treatment. They will tell you what you need to do if this happens and when you should contact them for advice.

Most diarrhoea caused by treatment is mild. But for some people, it can be severe and may lead to dehydration. It is important to avoid dehydration.

If you have diarrhoea or if it is getting worse, contact the hospital on the number they have given you and speak to a doctor or nurse. They can find out what might be causing it and may give you anti-diarrhoea medicines. Check it is safe to keep taking the medicines you have been prescribed. Some may need to be stopped for a while if you are very dehydrated.

Tips to help you cope with diarrhoea

- Drink plenty of liquid to replace the fluid lost with the diarrhoea. Try to drink at least 2 litres (3 ½ pints) a day.
- Fluids can be fruit teas, tea, fruit juice, milk, milkshakes, soup and water. Avoid drinking alcohol and coffee.
- Eat often and try to have small meals made from light foods. These could include white fish, chicken, well-cooked eggs, white bread, pasta or rice.
- Eat your meals slowly.
- Avoid greasy, fatty foods such as chips and beef burgers, and spicy foods like chilli peppers.

If your diarrhoea is caused by radiotherapy or chemotherapy, changing your diet may not help. It is important to take the anti-diarrhoea medicines your doctor gives you. Your doctor can refer you to a dietitian for more advice.

If you have diarrhoea after surgery for bowel cancer, tell your cancer doctor, specialist nurse or a dietitian. They can talk to you about what may help.

Eating problems

Loss of appetite

During cancer treatment, you may lose your appetite. This could be because you feel sick, you are too tired to eat, or foods taste different. This usually does not last long. Our booklet **Eating problems and cancer** has more information on changes to your appetite that may happen during cancer treatment. See page 110 for details on how to order it.

If you have diabetes and cannot eat enough, your blood sugar may drop too low. This can lead to hypoglycaemia (a hypo). It is important to know the early signs of a hypo, so you can treat it quickly. Make sure your family and friends also know the symptoms, so they can help you.

Symptoms of a hypo include:

- sweating
- feeling anxious and irritable
- feeling extremely tired (fatigue)
- feeling weak and shaky
- looking pale
- being hungry
- having a faster heart rate than normal.

A good way to prevent a hypo is to eat regularly. If you cannot eat solid food, you could sip sugary drinks.

While you are not eating your normal diet, you will need to check your blood sugar more often than normal. If your blood sugar level starts to get lower or you develop symptoms of a hypo, try eating or drinking a fast-acting carbohydrate. This could be glucose tablets, sweets or fruit juice. Try to follow this with a snack containing slower-acting carbohydrates, such as a slice of toast or a couple of digestive biscuits. The fast-acting carbohydrates will increase your blood sugar level. And the slow-acting carbohydrates will stop them dropping again.

While you have a poor appetite, you may need to change your dose of insulin or tablets to help prevent hypos.

Your diabetes team can give you advice about preventing hypos and how to manage them if they happen.

Tips to help improve your appetite

- Eat small amounts as often as possible. If you find your appetite is better at certain times of the day, try to plan your meals for then. You may need to change when you take your diabetes medicines.
- Keep snacks with you. Bags of nuts, crisps or dried fruit, or a bowl of grated cheese, are light and tasty. If these are hard to swallow, try yoghurt or fromage frais. If you have recently had surgery or radiotherapy for bowel cancer, you may need advice about the best foods for you. Talk about this with your specialist nurse or cancer doctor, or a dietitian.
- Try sweet or savoury nourishing drinks. These can replace small meals and can be sipped slowly through the day.
- Eat your meals slowly. Chew the food well and relax for a bit after each meal.

You can keep a note of times when your appetite is best on pages 78 to 80.

Bigger appetite than normal

Some medicines, such as steroids, may make you want to eat much more than usual. It is important to try to eat healthy foods as much as possible. Try to avoid foods that are high in carbohydrates and sugar, such as biscuits and sweets.

A balanced and healthy diet will help you avoid putting on too much weight. Having a healthy weight is important for managing your blood sugar levels.

We have more information to help you cope with eating problems in our booklet **Healthy eating and cancer**. See page 110 for ways to order this.

Diabetes UK has more information and recipes to help you try to maintain a healthy weight. Visit **diabetes.org.uk/enjoy-food** for more information.

Lack of activity

Being active is an important part of a healthy lifestyle. It can help to:

- reduce tiredness and some side effects of cancer treatment
- reduce anxiety and depression
- improve your mood and quality of life
- strengthen your muscles, joints and bones
- look after your heart and reduce the risk of other health problems.

Being active can also help with your diabetes by:

- helping the body use insulin more effectively
- increasing the amount of sugar used by the body
- improving how you manage your diabetes
- helping you manage your weight.

During cancer treatment, there may be times when you do not feel like being active and that is okay. You may feel very tired (fatigued) or not have much energy – see page 9. You may also have side effects, such as sickness (see pages 66 to 69) or pain (see page 44), that stop you being active.

If you have diabetes, not being active can change your blood sugar level. This will depend on your situation. But you may need to test your blood sugar more often if you are not active.

Your diabetes team can give you advice about managing your blood sugar while you are less active. You can make a list of physical activities you can manage on page 81.

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Foods I can manage when I feel sick

Recipe name

Ingredients

Method

Recipe name

Ingredients

Method

Recipe name

Ingredients

Foods to avoid when I feel sick

Times when my appetite is best

For example: 'Mid-morning, after I go for a walk'

Physical activities I can manage

Activity

Date and time

Time spent

How I feel

Activity

Date and time

Time spent

How I feel

Activity

Date and time

Time spent

How I feel

Ways you can be active

Choose activities you enjoy and try to do a mix of activities. You could try:

- Aerobic exercises, such as walking, dancing, running, cycling or swimming. These are good for your heart.
- Resistance exercises, such as lifting small weights or 'sit to stand' exercises that you can do at home. These help to strengthen muscles.
- Flexibility exercises, such as stretches, yoga, Tai Chi and Qigong. These can help you stay supple.
- Balance exercises, such as yoga, Tai Chi, Pilates and Qigong. These can help with balance and strength.

During cancer treatment, it is a good idea talk to your specialist nurse, cancer doctor or a physiotherapist before starting any new physical activity.

Doing yoga



Tips to help you get more active

- Join an activity group.
- Walk or cycle to the shops.
- Keep a record of how active you have been.
- Set goals you can achieve.
- Do activities you enjoy.
- Tell your friends about it. They may want to join you.

We have more information and a range of tools to help you get more active. Our **Move More** pack includes lots of tips of how to get more active in ways that are safe for you. See page 110 for ways to order this. You can keep a record of the activity you can manage on page 81.

'I had always enjoyed walking and being outdoors ever since my days as a Boy Scout. Throughout my life, walking has helped me through type 2 diabetes.'

Alfred, diagnosed with bowel cancer

Risk of infection

The immune system protects the body from harmful bacteria and other organisms. Some types of cancer and its treatment can weaken your immune system and increase your risk of infection:

- Chemotherapy, radiotherapy, targeted therapy, immunotherapy and some types of cancer can reduce the number of white blood cells your body produces. White blood cells fight infection.
- Surgery may make you more at risk of infection. This is because it makes a break in the skin, which helps protect the body from infection.

People with diabetes may be more at risk of an infection or a weaker immune system. This is usually if their blood sugar level is often too high. Your diabetes team can give you advice if you have problems keeping your blood sugar level under control.

The body tries to fight infection by releasing extra sugar into the blood. If you do not have diabetes, the pancreas will make more insulin to cope with the extra sugar (see page 6). But if you have diabetes, the extra sugar will cause high blood sugar levels (a hyper). This can make you feel more thirsty and pass more urine (pee), which can lead to dehydration.

Symptoms of an infection include:

- a high temperature
- suddenly feeling unwell, even with a normal temperature
- a painful, swollen or hot wound
- feeling shaky or shivering
- a sore throat
- a cough, especially if there is yellow or green phlegm
- diarrhoea
- needing to pee a lot, or pain when you pass urine.

If you develop any of these symptoms, it is important to talk to your doctors as soon as possible. They can give you antibiotics to fight the infection. They can also help you to control your blood sugar level.

If you have an infection, you will need to check your blood sugar level more often. If you usually control your diabetes with diet, you may need to start taking medicines. If you already take medicines, you may need to change the dose. Talk to your diabetes team if you have an infection and your blood sugar level is high.

Tips to help you avoid infection

- Have good personal hygiene. Wash your hands regularly with soap and hot water, especially after going to the toilet or before preparing a meal.
- Have a shower or bath every day, and do not share towels.
- Avoid people with sore throats, colds, flu, diarrhoea or vomiting, or infections such as chickenpox. If you have been around someone who has an obvious infection, ask your cancer doctor or specialist nurse for advice.
- Stay away from crowded places as much as possible.
- Avoid using public swimming pools, jacuzzis and changing rooms. If you are doing sports or social activities, try to go when it is quiet.
- Be careful if you have pets or work with animals. If you can, try not to handle any animal waste, such as litter trays or manure.

Our website has more information about avoiding infection. Visit **macmillan.org.uk** and search for 'avoiding infection'.

Slow wound healing

After an operation, your wound will be closed using stitches or clips. These are usually removed after about 7 to 10 days. Some stitches are designed to slowly dissolve as the wound heals and will not need removing.

How long the wound takes to heal depends on the operation you have had. If you have only had a small area of tissue removed, your wound will usually heal quickly. If you have had a bigger operation, it may take a few weeks to heal properly.

Wound healing can be slower if you:

- are older
- do not eat a varied diet or are not eating enough
- smoke or use nicotine replacements
- are having cancer treatment, such as chemotherapy or radiotherapy.

If you have diabetes and your blood sugar level is high, your wound can take longer to heal. Wound healing may also be slower in people who have had diabetes for many years. Over time, high levels of blood sugar can affect the nerves and lead to poor blood circulation and nerve damage. Wounds need a good blood supply to heal.

The longer a wound takes to heal, the more risk there is that it will become infected.

It is important to keep the wound clean and dry, to help it heal and prevent infection. After an operation, the wound will be covered with a dressing for a day or two. The ward nurses will change the dressing before you go home. They will tell you how to look after the wound when you are at home. The ward nurses can make you an appointment with your practice nurse. Or they can arrange for a district nurse to visit you at home if you need it.

Contact the hospital doctor if you develop any symptoms of a wound infection. Symptoms to look out for include:

- your wound becoming hot or painful
- your wound starting to bleed or leak any fluids.

Tips to help with wound healing

- Keep your blood sugar levels under control. Ask your diabetes team for help if you are having problems.
- Get plenty of rest and sleep.
- Do not smoke.

It is important to eat a well-balanced diet. This includes foods that contain lots of:

- protein – meats, beans, eggs and dairy products
- vitamin A – dark green leafy vegetables, orange and yellow vegetables, liver and cereals
- vitamin C – citrus fruits, broccoli, spinach, tomatoes and baked potatoes
- zinc – seafood, red meats, nuts, lentils and beans.

Our booklet **Healthy eating and cancer** has more information. See page 110 for ways to order this.



ADVANCED CANCER AND DIABETES

Controlling the symptoms of cancer

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Controlling the symptoms of cancer

Some people have advanced cancer when they are first diagnosed. For others, the cancer may have spread or come back after treatment.

It is rare for advanced cancer to be cured. But people may live with it for a long time, sometimes for years. This may mean having different treatments when they are needed. It can also mean having ongoing treatment to control the cancer. During this time, many people carry on with their normal lives and keep doing things that are important to them.

Sometimes it may not be possible to control the cancer any longer. Or a person may not be well enough to have treatment. If this happens, doctors use treatment to control the symptoms of cancer. You may start seeing a team of healthcare professionals that specialises in controlling symptoms. This is called a palliative care team.

Trying to manage diabetes effectively can be more difficult if you have advanced cancer. This is because you may have symptoms that can make it hard to control your blood sugar level.

These include:

- loss of appetite
- feeling sick
- extreme tiredness (fatigue)
- constipation or diarrhoea.

People with advanced cancer are often less active than normal. This means their bodies use up less sugar. Advanced cancer can also change the way the body uses food, which can affect your blood sugar level.

Some medicines used to help control symptoms, such as steroids (see pages 36 to 42) and some painkillers, can affect blood sugar levels. They can also affect the way that food is absorbed in the body.

Controlling your blood sugar

When you are first diagnosed with advanced cancer, you may still be active and have a good appetite. At this time, your diabetes can usually be controlled normally. Treatments given to help control advanced cancer may have fewer side effects than treatments given to cure cancer. But the treatments may still affect your diabetes.

One of the main aims of controlling diabetes is to prevent long-term complications. When you are having palliative treatment, this becomes less important. As you become more unwell, you do not have to be quite as strict with controlling your blood sugar level. But having very low or very high blood sugar levels can cause upsetting symptoms. So try to keep your blood sugar within a good range if you can.

You should always be involved as much as possible in any decisions about how your diabetes is managed. Over time, your healthcare team can make changes to the doses of your diabetes medicines. These can be changed as your health changes. Your diabetes, cancer and palliative care teams can offer your advice. They can arrange more help if needed.

If you use insulin to control your diabetes, you can keep monitoring your blood sugar and change your dose if you need to. If you control your diabetes with tablets, the type of tablet may be changed. Your doctor may suggest you start using insulin.

Towards the end of your life, it is normal to start to lose energy. You may need to rest a lot during the day and may sleep most of the time. You may only be taking sips of fluid and not eating very much. At this time, there should be no restriction on what you eat. You also will not need to monitor your blood sugar level as often. If you are using insulin, the dose can be reduced. If you have been taking diabetes tablets, they may be stopped. Your diabetes team will be able to help you with this.

We have more information about coping with advanced cancer in our booklet **Coping with advanced cancer**. See page 110 for ways to order this. If you need more support, you can call our cancer support specialists for free on **0808 808 00 00**.



COPING WITH YOUR EMOTIONS

Your feelings

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Your feelings

When you are told you have cancer, you might be overwhelmed by different feelings. It can be very difficult if you are already coping with another condition, such as diabetes. There may be times when you struggle to manage your diabetes. This might be if you are feeling ill because of cancer treatment.

Being diagnosed with cancer is a life-changing experience for most people. It can have a huge effect on your emotions, as well as on the practical parts of your life. You may be frightened, or feel angry, sad or depressed. You may have these feelings when you are diagnosed, during treatment, or when you are recovering and adjusting to life after treatment.

These feelings can be very difficult to cope with and sometimes people need more help. This happens to lots of people and does not mean you are not coping.

Talk to your doctor or nurse if you:

- feel anxious, panicky or sad a lot of the time
- think you may be depressed.

They can refer you to a doctor or counsellor who can help. They may also prescribe medicine to help with anxiety or an anti-depressant drug if you need it.

In our booklet titled **Your feelings and cancer**, we have more information about feeling lots of different emotions and suggestions for coping with them. See page 110 for information on ways to order it.

'I've had to learn to live with it and find a coping mechanism. And being able to find that coping mechanism is my own path. Everyone has their own way of how they deal with things; some people have family that can support them through this. Some people have friends that are much closer. Some people have other ways to get through things.'

Dave, diagnosed with leukaemia

Feeling alone

Some people feel alone because they do not have enough support. Family and friends may live far away or have other commitments. Some friends or family members may feel uncomfortable because of their own fears about cancer. Try to let your family and friends know how you feel and how they could support you more.

If you need more support, you can call the Macmillan Support Line for free on **0808 808 00 00** and talk to one of our cancer support specialists. You can also join a local support group, or chat to people on our Online Community and share experiences.

You can also call the Diabetes UK Helpline and talk to trained counsellors. Or you can join a Diabetes UK local group. Visit **www.diabetes.org.uk/how_we_help** for more information.

It is normal to have times when you want to be left alone to think about your feelings. But if you find you are staying away from people a lot, try to talk to your doctor or nurse.

‘From the time you’re diagnosed to going into remission, you always need that support. It’s really good to get talking – without that I think you’d go mad. It’s always on your mind’

Clare, diagnosed with womb cancer





FURTHER INFORMATION

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How Diabetes UK can help you

We are the UK's leading diabetes charity. Our vision is of a world where diabetes can do no harm. We provide information, advice and peer support, so people with diabetes can manage their condition effectively.

Diabetes UK Helpline

The Diabetes UK Helpline is a dedicated helpline for anyone with diabetes, and their family and friends. The confidential helpline is staffed by trained counsellors who can help you with any questions you have about your diabetes.

They can give you information about the condition, take time to talk things through, and help you with any emotional, social, psychological or practical worries you may have.

If you live in England, Wales or Northern Ireland, you can call **0345 123 2399**, Monday to Friday, 9am to 6pm.

If you live in Scotland, you can call **0141 212 8710**, Monday to Friday, 9am to 6pm.

Alternatively, you can email **helpline@diabetes.org.uk**

Information and support

We have lots of free information booklets and leaflets to help you manage your diabetes. You can order these from **shop.diabetes.org.uk** or by calling **0800 585 088**.

We also have an advocacy service that gives people with diabetes information to help them understand their legal rights and entitlements.

Support groups

A good way of finding support is to join a Diabetes UK local group.

These groups offer people living with diabetes a chance to meet and share experiences with others. They are all run by volunteers and usually meet once a month, often with a speaker on a topic like diet or exercise.

To find your local group visit **diabetes.org.uk/how_we_help/local_support_groups**

How Macmillan Cancer Support can help you

At Macmillan, we know how a cancer diagnosis can affect everything, and we're here to support you.

Talk to us

If you or someone you know is affected by cancer, talking about how you feel and sharing your concerns can really help.

Macmillan Support Line

Our free, confidential phone line is open 7 days a week, 8am to 8pm. Our cancer support specialists can:

- help with any medical questions you have about cancer or your treatment
- help you access benefits and give you financial guidance
- be there to listen if you need someone to talk to
- tell you about services that can help you in your area.

Call us on **0808 808 00 00** or email us via our website, **macmillan.org.uk/talktous**

Information centres

Our information and support centres are based in hospitals, libraries and mobile centres. There, you can speak with someone face to face.

Visit one to get the information you need, or if you'd like a private chat, most centres have a room where you can speak with someone alone and in confidence.

Find your nearest centre at **macmillan.org.uk/informationcentres** or call us on **0808 808 00 00**.

Talk to others

No one knows more about the impact cancer can have on your life than those who have been through it themselves. That's why we help to bring people together in their communities and online.

Support groups

Whether you are someone living with cancer or a carer, we can help you find support in your local area, so you can speak face to face with people who understand. Find out about support groups in your area by calling us or by visiting **macmillan.org.uk/selfhelpandsupport**

Online Community

Thousands of people use our Online Community to make friends, blog about their experiences and join groups to meet other people going through the same things. You can access it any time of day or night. Share your experiences, ask questions, or just read through people's posts at **macmillan.org.uk/community**

The Macmillan healthcare team

Our nurses, doctors and other health and social care professionals give expert care and support to individuals and their families. Call us or ask your GP, consultant, district nurse or hospital ward sister if there are any Macmillan professionals near you.

Help with money worries

Having cancer can bring extra costs such as hospital parking, travel fares and higher heating bills. If you've been affected in this way, we can help.

Financial guidance

Our financial team can give you guidance on mortgages, pensions, insurance, borrowing and savings.

Help accessing benefits

Our benefits advisers can offer advice and information on benefits, tax credits, grants and loans. They can help you work out what financial help you could be entitled to. They can also help you complete your forms and apply for benefits.

Macmillan Grants

Macmillan offers one-off payments to people with cancer. A grant can be for anything from heating bills or extra clothing to a much-needed break.

Call us on **0808 808 00 00** to speak to a financial guide or benefits adviser, or to find out more about Macmillan Grants. We can also tell you about benefits advisers in your area. Visit **[macmillan.org.uk/financialsupport](https://www.macmillan.org.uk/financialsupport)** to find out more about how we can help you with your finances.

Help with work and cancer

Whether you're an employee, a carer, an employer or are self-employed, we can provide support and information to help you manage cancer at work. Visit **[macmillan.org.uk/work](https://www.macmillan.org.uk/work)**

'Everyone is so supportive on the Online Community, they know exactly what you're going through. It can be fun too. It's not all just chats about cancer.'

Mal

Work support

Our dedicated team of work support advisers can help you understand your rights at work. Call us on **0808 808 00 00** to speak to a work support adviser (Monday to Friday, 8am to 6pm).

About our information

We provide expert, up-to-date information about cancer. And all our information is free for everyone.

Order what you need

You may want to order more booklets or leaflets like this one. Visit **be.macmillan.org.uk** or call us on **0808 808 00 00**.

We have booklets about different cancer types, treatments and side effects. We also have information about work, financial issues, diet, life after cancer treatment and information for carers, family and friends.

Online information

All our information is also available online at **macmillan.org.uk/information-and-support**. You can also find videos featuring stories from people affected by cancer, and information from health and social care professionals.

Other formats

We also provide information in different languages and formats, including:

- audiobooks
- Braille
- British Sign Language
- easy read booklets
- eBooks
- large print
- translations.

Find out more at **macmillan.org.uk/otherformats**

If you would like us to produce information in a different format for you, email us at **cancerinformationteam@macmillan.org.uk** or call us on **0808 808 00 00**.

Other useful organisations

There are lots of other organisations that can give you information or support.

General cancer support organisations

Cancer Black Care

Tel 020 8961 4151

www.cancerblackcare.org.uk

Offers UK-wide information and support for people with cancer, as well as their friends, carers and families, with a focus on those from BME communities.

Cancer Focus Northern Ireland

Helpline 0800 783 3339

(Mon to Fri, 9am to 1pm)

Email nurseline@cancerfocusni.org

cancerfocusni.org

www.cancerfocusni.org

Offers a variety of services to people affected by cancer in Northern Ireland, including a free helpline, counselling and links to local support groups.

Cancer Support Scotland

Tel 0800 652 4531

(Mon to Fri, 9am to 5pm)

Email info@cancersupportscotland.org

cancersupportscotland.org

www.cancersupportscotland.org

Runs cancer support groups throughout Scotland. Also offers free complementary therapies and counselling to anyone affected by cancer.

Maggie's Centres

Tel 0300 123 1801

Email enquiries@maggiescentres.org

maggiescentres.org

www.maggiescentres.org

Has a network of centres in various locations throughout the UK. Provides free information about cancer and financial benefits. Also offers emotional and social support to people with cancer, their family, and friends.

Penny Brohn UK

Helpline 0303 3000 118

(Mon to Fri, 9.30am to 5pm)

Email helpline@pennybrohn.org.uk

www.pennybrohn.org.uk

Offers a combination of physical, emotional and spiritual support across the UK, using complementary therapies and self-help techniques.

Tenovus

Helpline 0808 808 1010

(Daily, 8am to 8pm)

Email info@tenovuscancercare.org.uk

www.tenovuscancercare.org.uk

Aims to help everyone in the UK get equal access to cancer treatment and support.

Funds research and provides support such as mobile cancer support units, a free helpline, benefits advice and an online 'Ask the nurse' service.

Support for young people

CLIC Sargent

Helpline 0300 330 0803

(Mon to Fri, 8am to 6pm)

www.clicsargent.org.uk

Provides clinical, practical, financial and emotional support to children with cancer.

Teenage Cancer Trust

Tel 020 7612 0370

Email [hello@](mailto:hello@teenagecancertrust.org)

teenagecancertrust.org

www.teenagecancertrust.org

Devoted to improving the lives of teenagers and young adults with cancer. Runs a support network for young people with cancer, their friends and family.

Youth Access

Tel 020 8772 9900

Email admin@youthaccess.org.uk

www.youthaccess.org.uk

A national organisation providing counselling and information for young people.

Support for older people

Age UK

Helpline 0800 055 6112

(Daily, 8am to 7pm)

www.ageuk.org.uk

Provides information and advice for older people across the UK via the website and advice line. Also publishes impartial and informative fact sheets and advice guides.

LGBT-specific support

LGBT Foundation

Tel 0345 330 3030

(Mon to Fri, 10am to 6pm)

Email helpline@lgbt.foundation

www.lgbt.foundation

Provides a range of services to the LGBT community, including a helpline, email advice and counselling. The website has information on various topics including sexual health, relationships, mental health, community groups and events.

Support for carers

Carers Trust

Tel 0300 772 9600

(Mon to Fri, 9am to 5pm)

Email info@carers.org

www.carers.org

Provides support, information, advice and services for people caring at home for a family member or friend. You can find details for UK offices and search for local support on the website.

Carers UK

Helpline (England, Scotland, Wales) 0808 808 7777

(Mon and Tues, 10am to 4pm)

Helpline (Northern Ireland)

028 9043 9843

www.carersuk.org

Offers information and support to carers across the UK. Has an online forum and can put people in contact with support groups for carers in their area. Advanced cancer and end-of-life care

Marie Curie

Helpline 0800 090 2309

(Mon to Fri, 8am to 6pm and Sat, 11am to 5pm)

www.mariecurie.org.uk

Marie Curie nurses provide free end-of-life care across the UK. They care for people in their homes or in Marie Curie hospices, 24 hours a day, 365 days a year.

Counselling

**British Association
for Counselling and
Psychotherapy (BACP)**

Tel 01455 883 300

Email bacp@bacp.co.uk

www.bacp.co.uk

Promotes awareness of counselling and signposts people to appropriate services across the UK. You can search for a qualified counsellor on the website

**UK Council for
Psychotherapy (UKCP)**

Tel 020 7014 9955

Email info@ukcp.org.uk

www.psychotherapy.org.uk

Holds the national register of psychotherapists and psychotherapeutic counsellors, listing practitioners who meet exacting standards and training requirements.

Emotional and mental health support

Mind

Helpline 0300 123 3393

(Mon to Fri, 9am to 6pm)

Text 86463

Email info@mind.org.uk

www.mind.org.uk

Provides information, advice and support to anyone with a mental health problem through its helpline and website.

Samaritans**Helpline** 116 123**Email** jo@samaritans.org**www.samaritans.org**

Samaritans branches are located across England, Ireland, Scotland and Wales.

Provides confidential and non-judgemental emotional support, 24 hours a day, 365 days a year, for people experiencing feelings of distress or despair.

Cancer registries**The cancer registry**

A national database that collects information on cancer diagnoses and treatment. This information helps the NHS and other organisations plan and improve health and care services. There is one in each country in the UK:

National Cancer Registration and Analysis Service**Tel** 020 7654 8000**Email** enquiries@phe.gov.uk**www.ncras.nhs.uk****Tel** (Ireland) 021 4318 014**www.ncri.ie****Scottish Cancer Registry****Tel** 013 1275 7050**Email** nss.csd@nhs.net**www.isdscotland.org/health-topics/cancer/scottish-cancer-registry****Welsh Cancer Intelligence and Surveillance Unit (WCISU)****Tel** 029 2037 3500**Email** general.enquiries@wales.nhs.uk**www.wcisuwales.nhs.uk****Northern Ireland Cancer Registry****Tel** 028 9097 6028**Email** nicr@qub.ac.uk**www.qub.ac.uk/nicr**

YOUR NOTES AND QUESTIONS

A series of horizontal green lines for writing notes and questions. The lines are evenly spaced and extend across the width of the page, providing a structured area for student input.

Disclaimer

We make every effort to ensure that the information we provide is accurate and up to date but it should not be relied upon as a substitute for specialist professional advice tailored to your situation. So far as is permitted by law, Macmillan does not accept liability in relation to the use of any information contained in this publication, or third-party information or websites included or referred to in it.

Thanks

This booklet has been written, revised and edited by Macmillan Cancer Support's Cancer Information Development team. It has been approved by our Chief Medical Editor, Prof Tim Iveson, Macmillan Consultant Medical Oncologist, and by Diabetes UK.

With thanks to: Dan Howarth, Head of Care at Diabetes UK; the Diabetes UK Clinical Advisors; and the Diabetes UK Council of Health Care Professionals.

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Thanks also to the people affected by cancer who reviewed this edition, and those who shared their stories.

We welcome feedback on our information. If you have any, please contact **cancerinformationteam@macmillan.org.uk**

Sources

We have listed a sample of the sources used in the booklet below. If you would like further information about the sources we use, please contact us at **cancerinformationteam@macmillan.org.uk**

Bohannon. Treating Diabetes in Cancer Patients. *OncoLog*. 2013. 58:7.

Joint British Diabetes Societies for Inpatient Care (JBDS-IP). Management of adults with diabetes undergoing surgery and elective procedures: Improving standards. 2016.

Joint British Diabetes Societies for Inpatient Care (JBDS-IP). Management of hyperglycaemia and steroid (glucocorticoid) therapy. 2014.

Stamatouli et al. Collateral damage: insulin-dependent diabetes induced with checkpoint inhibitors. *Diabetes* 2018. 67.

Can you do something to help?

We hope this booklet has been useful to you. It's just one of our many publications that are available free to anyone affected by cancer. They're produced by our cancer information specialists who, along with our nurses, benefits advisers, campaigners and volunteers, are part of the Macmillan team. When people are facing the toughest fight of their lives, we're there to support them every step of the way.

We want to make sure no one has to go through cancer alone, so we need more people to help us. When the time is right for you, here are some ways in which you can become a part of our team.



Share your cancer experience

Support people living with cancer by telling your story, online, in the media or face to face.

Campaign for change

We need your help to make sure everyone gets the right support. Take an action, big or small, for better cancer care.

Help someone in your community

A lift to an appointment. Help with the shopping. Or just a cup of tea and a chat. Could you lend a hand?

Raise money

Whatever you like doing you can raise money to help. Take part in one of our events or create your own.

Give money

Big or small, every penny helps. To make a one-off donation see over.

Call us to find out more

0300 1000 200

macmillan.org.uk/getinvolved

Please fill in your personal details

Mr/Mrs/Miss/Other

Name

Surname

Address

Postcode

Phone

Email

Please accept my gift of £

(Please delete as appropriate)

I enclose a cheque / postal order /
Charity Voucher made payable to
Macmillan Cancer Support

OR debit my:

Visa / MasterCard / CAF Charity
Card / Switch / Maestro

Card number

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Signature

Date / /

Don't let the taxman keep your money

Do you pay tax? If so, your gift will be worth 25% more to us – at no extra cost to you. All you have to do is tick the box below, and the tax office will give 25p for every pound you give.

- ☐ I am a UK tax payer and I would like Macmillan Cancer Support to treat all donations I make or have made to Macmillan Cancer Support in the last 4 years as Gift Aid donations, until I notify you otherwise.

I understand that if I pay less Income Tax and/or Capital Gains Tax than the amount of Gift Aid claimed on all my donations in that tax year it is my responsibility to pay any difference. I understand Macmillan Cancer Support will reclaim 25p of tax on every £1 that I give.

Macmillan Cancer Support and our trading companies would like to hold your details in order to contact you about our fundraising, campaigning and services for people affected by cancer. If you would prefer us not to use your details in this way please tick this box. ☐

In order to carry out our work we may need to pass your details to agents or partners who act on our behalf.



If you'd rather donate online go to macmillan.org.uk/donate

Please cut out this form and return it in an envelope (no stamp required) to:
Supporter Donations, Macmillan Cancer Support, FREEPOST LON15851,
89 Albert Embankment, London SE1 7UQ

This booklet is for anyone who has cancer and also has diabetes. You may also want to read it if you have been told your cancer treatment may increase your risk of developing diabetes.

It explains how some tests and cancer treatments can affect your diabetes and make it difficult to control your blood sugar. It also has some tips to help you cope with the side effects of cancer treatment if you have diabetes.

We're here to help everyone with cancer live life as fully as they can, providing physical, financial and emotional support. So whatever cancer throws your way, we're right there with you. For information, support or just someone to talk to, call 0808 808 00 00 (7 days a week, 8am to 8pm) or visit macmillan.org.uk

Would you prefer to speak to us in another language? Interpreters are available. Please tell us in English the language you would like to use. Are you deaf or hard of hearing? Call us using NGT (Text Relay) on 18001 0808 808 00 00, or use the NGT Lite app.

Need information in different languages or formats? We produce information in audio, eBooks, easy read, Braille, large print and translations. To order these, visit macmillan.org.uk/otherformats or call our support line.

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