

Sepsis and cancer

Cancer and some cancer treatments can increase your risk of sepsis. This leaflet explains:

- what sepsis is
- when you need to contact your hospital team
- what you can do to protect yourself.

Any words that are underlined are explained in the word list at the end. The word list also includes the pronunciation of the words in English.

If you have any questions about this information, ask your doctor or nurse at the hospital where you are having treatment.

This information is about:

- What is sepsis?
- Why might I get sepsis?
- When might sepsis happen?
- What is my risk of getting sepsis?
- Can I prevent sepsis?
- How can I help myself?
- Looking after yourself before cancer treatment
- Looking after yourself during cancer treatment
- Symptoms of an infection that may lead to sepsis
- Later symptoms of sepsis – call 999
- What will happen when I call my hospital team?
- How Macmillan can help you
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What is sepsis?

Sepsis is sometimes called blood poisoning. It happens when your body reacts to an infection by attacking itself instead of fighting the infection.

Sepsis needs to be treated in hospital quickly. People can die from sepsis if it is not treated quickly.

When sepsis is treated quickly, most people make a full recovery

Why might I get sepsis?

Cancer and some cancer treatments can make your body unable to fight infections.

Our bodies are made up of tiny building blocks called cells. Our blood is made of cells, including red blood cells and white blood cells.

A type of white blood cell helps our bodies to fight infection. Some cancer treatments reduce the number of these white blood cells in our bodies. This is most common if you have chemotherapy, but it can happen with other cancer treatments too.

If you have a low number of these white blood cells, a minor infection can become very serious. It can cause death within a few hours.

When might sepsis happen?

An infection or sepsis can happen at any time. Your risk is usually highest when you have the lowest number of the white blood cells that fight infection. The exact time can vary, so ask your hospital team when you are most at risk.

What is my risk of getting sepsis?

Your risk of infection and sepsis depends on the type of cancer drugs you are having. It also depends on:

- the type of cancer you have
- the size of the cancer
- whether the cancer has spread from where it started to another part of your body
- your age
- your general health.

Can I prevent sepsis?

You cannot stop the number of white blood cells that fight infection from getting lower. This means you cannot prevent sepsis.

The most important thing you can do is call your hospital team's 24-hour helpline straight away if you have any concerns. This reduces your risk of developing a serious problem from an infection and can save your life.

How can I help myself?

You should keep your hospital team's 24-hour helpline number with you at all times. Your hospital team will be either a cancer team or a haematology team, depending on the type of cancer you have.

If someone else might need to phone the hospital for you, they should have the 24-hour helpline number too. People who might need the number are:

- members of your family
- your friends
- your work colleagues.

Do not delay – always call the hospital sooner rather than later. Sepsis is easy to treat if the treatment starts early.

These are also other ways you can help yourself:

- Tell your family, friends and work colleagues about your risk of sepsis.
- Plan how you would get to hospital quickly, for example who would look after your children or help you to get to hospital.
- Check for the symptoms of an infection when it is in its early stages (early infection). We describe these in this information.
- Check for the symptoms of sepsis. We describe these in this information.
- Call your cancer team urgently if you have any symptoms of infection.

It can be difficult to know if the symptoms you have are of an infection or another treatment side effect. Do not delay contacting your hospital team. Neither you or your doctor can tell which infections might lead to sepsis. This is why all infections people get during cancer treatment are treated urgently.

Infections do not get better on their own. Early infections can be treated easily with antibiotics. But delaying treatment for an infection can be dangerous.

Looking after yourself before cancer treatment

You can look after yourself before treatment by doing the following:

- Talk to your doctor or nurse about getting the flu (influenza) vaccine.
- Buy a thermometer, so you can check your temperature.
- Have a dental check before you start cancer treatment.

Looking after yourself during cancer treatment

Do not be afraid to live your life as normal. You do not need to avoid crowded places or stop seeing family and friends unless your hospital team has told you to.

Infections during chemotherapy are usually caused by bacteria that are naturally present in your own body.

You can help yourself during treatment by doing the following:

- Clean any cuts or grazes straight away and cover them with a plaster.
- Clean your teeth at least twice a day.
- Avoid people who are ill, for example people with chicken pox, diarrhoea or a fever.
- Call your hospital team's helpline if you have been in the same place as people with chicken pox.
- Wash your hands before and after you eat and wash your hands after using the toilet.
- Wash your hands straight away after touching or removing animal waste.
- Use clean gloves for gardening and any other activities where you might cut yourself.
- Cook food at the correct temperature and store food at the correct temperature.
- Follow any advice you are given about your diet. Not all patients need to make changes to their diet. If you need to change your diet, you will be told about this at the start of your treatment.

Symptoms of an infection that may lead to sepsis

Contact your hospital team urgently if you have any of the following symptoms of infection:

- You feel less well than normal or unable to get out of bed.
- Your temperature goes over 37.5°C (99.5°F).
- Your temperature goes below 36°C (96.8°F).
- You feel shivery, freezing cold and unable to get warm, like when you have 'flu (influenza).
- You have diarrhoea. This means having 4 or more loose, watery bowel movements in 24 hours.

There are some types of infection that have other symptoms. You should contact your hospital team urgently if you have any of these symptoms:

Symptoms of a urine infection

- pain or discomfort when you pee (pass urine)
- peeing more often than usual
- feeling that your bladder is not fully emptying
- being unable to wait to empty your bladder
- leaking urine (incontinence)
- pain low down in your tummy area (abdomen)
- urine that is cloudy or foul smelling, or that contains blood.

Symptoms of a chest infection

- breathlessness
- a sore chest
- coughing up green phlegm.

Symptoms of a skin infection.

- redness, heat, swelling or pain (especially around a PICC line, central line, cut or wound).

Symptoms of a tooth infection

- throbbing pain in your tooth or gum that may come on suddenly and slowly gets worse
- pain that spreads to your ear, jaw and neck on the same side as the painful tooth or gum
- redness or swelling in your face.

Later symptoms of sepsis – call 999

If you have the later symptoms of sepsis, you need medical help straightaway. You need medical help to save your life and prevent serious damage to your body.

If you have any of these symptoms, call 999:

- slurred speech or confusion
- extreme shivering or muscle pain
- passing no urine in a day
- severe breathlessness
- skin that is mottled or discoloured
- feeling generally very unwell – it may be the worst you have ever felt.

What will happen when I call my hospital team?

Telephone assessment

Your hospital team will ask about your symptoms and your temperature. They might ask you to go to hospital urgently and you might have to stay in. It is important to go to the hospital as soon as possible, so you can be seen and given treatment if needed.

Hospital assessment

The hospital team will treat you as an emergency, but you will not usually need to be isolated in a separate room. The hospital team are likely to:

- offer you antibiotics by injection or through a drip into your bloodstream (intravenously) within 1 hour of your arrival
- examine you
- take some blood, including a sample to find out the number of white blood cells that fight infection in your blood
- arrange other tests, depending on the signs and symptoms you have

- decide whether you have too low a number of the white blood cells that fight infection and whether you have an infection or signs of sepsis.

Treatment options

Most people with sepsis need to stay in hospital for antibiotic treatment into their bloodstream.

If you are unlikely to have any problems from your infection, the hospital team might give you antibiotic tablets to take at home instead. They will tell you how important it is to go back to hospital quickly if you have any problems.

If you need to stay in hospital, your hospital team will talk to you about what antibiotic treatment you need and for how long. They will also talk to you about how long you might need to stay in hospital for.

How Macmillan can help you

Macmillan is here to help you and your family. You can get support from:

- **The Macmillan Support Line (0808 808 00 00).** We have interpreters, so you can speak to us in your language. Just tell us, in English, the language you want to use. We can answer medical questions, give you information about financial support, or talk to you about your feelings. The phone line is open 7 days a week, 8am to 8pm.
- **The Macmillan website (macmillan.org.uk).** Our site has lots of English information about cancer and living with cancer. There is more information in other languages at macmillan.org.uk/translations
- **Information and support services.** At an information and support service, you can talk to a cancer support specialist and get written information. Find your nearest centre at macmillan.org.uk/informationcentres or call us. Your hospital might have a centre.
- **Local support groups** – At a support group you can talk to other people affected by cancer. Find a group near you at macmillan.org.uk/supportgroups or call us.
- **Macmillan Online Community** – You can also talk to other people affected by cancer online at macmillan.org.uk/community

Word list

Word (target language)	In English	How to say in English (transliteration of English word)	Meaning
	Antibiotics		Medicine that treats an <u>infection</u> .
	Bladder		The organ in your body that stores urine until you go to the toilet.
	Cells		The tiny building blocks that make up the organs and tissues of our bodies.
	Central line		A thin tube that goes into a vein in your chest. It is used to give <u>chemotherapy</u> . One end stays outside the body.
	Chemotherapy		A cancer treatment that uses drugs to kill cancer cells.
	Chicken pox		An <u>infection</u> that causes a <u>fever</u> , skin rash and itchy skin. People usually get this when they are a child.
	Diarrhoea		Having 4 or more loose, watery bowel movements in 24 hours.
	Fever		When your body temperature gets hotter than usual to fight an <u>infection</u> . This can also make you sweat and feel weak and dizzy.
	Flu (influenza)		An infection of the lungs and airways (the passages we breathe through in our bodies). This can also cause <u>fever</u> and aches in your body.
	Flu vaccine		A <u>vaccine</u> that protects you from getting the <u>flu</u> (<u>influenza</u>).

	Hospital team		The team of doctors, nurses and other professionals who will look after you in hospital.
	Infection		When bacteria gets into your body and causes an illness.
	PICC line		A thin tube that goes into a vein in your arm. It is used to give <u>chemotherapy</u> . One end stays outside the body.
	Red blood cells		<u>Cells</u> in our blood that carry oxygen around the body.
	Side effects		Unwanted effects of cancer treatment, for example hair loss, feeling sick or tiredness.
	Vaccine		A treatment that aims to give your body protection (immunity) from a particular <u>infection</u> . It is often given by injection.
	White blood cells		<u>Cells</u> in our blood that fight <u>infection</u> .

More information in [language]

We have information in [language] about these topics:

<p>Types of cancer</p> <ul style="list-style-type: none">• Breast cancer• Large bowel cancer• Lung cancer• Prostate cancer <p>Treatments</p> <ul style="list-style-type: none">• Chemotherapy• Radiotherapy• Surgery	<p>Coping with cancer</p> <ul style="list-style-type: none">• If you are diagnosed with cancer – a quick guide• Eating problems and cancer• End of life• Financial support – benefits• Financial support – help with costs• Healthy eating• Tiredness (fatigue) and cancer• Side effects of cancer treatment• What you can do to help yourself
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To see this information, go to [macmillan.org.uk/translations](https://www.macmillan.org.uk/translations)

Speak to us in [language]

You can call Macmillan free on **0808 808 00 00** and speak to us in [language] through an interpreter. You can talk to us about your worries and medical questions. Just say [language] in English when you call (say “xxxxx”).

We are open 7 days a week, 8am to 8pm.

References and thanks

This information has been written and edited by Macmillan Cancer Support's Cancer Information Development team. It has been translated into [language] by a translation company.

The information included is based on the Macmillan booklet **Cancer treatments and sepsis**. We can send you a copy, but the full booklet is only available in English.

The information in this booklet has been reviewed by relevant experts and approved by our Chief Medical Editor, Professor Tim Iveson, Consultant Medical Oncologist and Macmillan Chief Medical Editor.

Thanks also to the people affected by cancer who reviewed this information.

All our information is based on the best evidence available. For more information about the sources we use, please contact us at **cancerinformationteam@macmillan.org.uk**

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