



SEPSIS: Information About Post-Operative Sepsis for Patients and Relatives



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WHAT IS SEPSIS?

Sepsis is a life threatening condition that arises when the body's response to an infection injures its own tissues and organs. It was previously known as blood poisoning or septicaemia. It is usually triggered by a bacterial infection, but sometimes can be caused by fungi (yeasts).

WHAT IS POST-OPERATIVE SEPSIS?

This is the term used to describe a rare complication of surgery; when sepsis has occurred shortly after an operation which affects one or more organs of the body. In severe cases it can cause life-threatening multi-organ failure, which requires admission to an Intensive Care Unit.

HOW MANY PATIENTS SUFFER FROM POST-OPERATIVE SEPSIS?

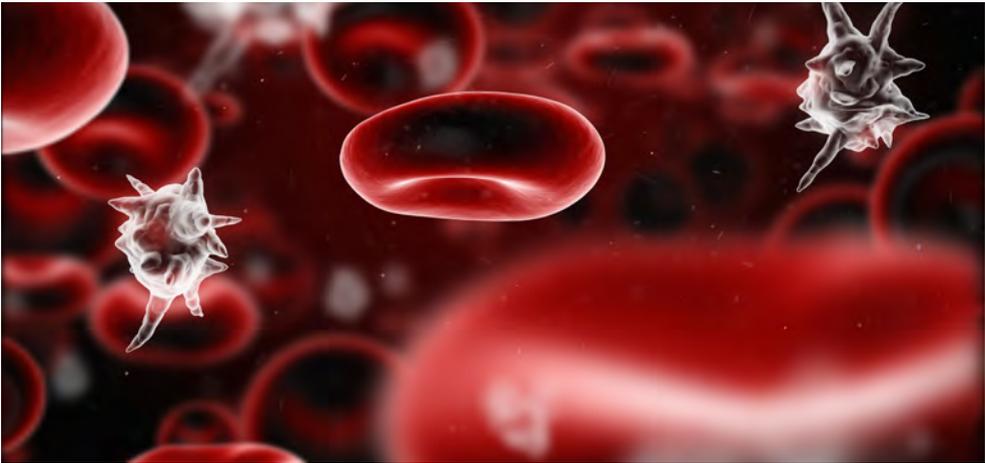
This is a very rare condition which only affects up to 1% of patients who have a routine operation.

Patients who need emergency surgery or have major bowel surgery for example, to treat peritonitis, have a slightly increased risk of 5-10%.

It is important to note that not every patient who suffers post-operative sepsis as a complication will progress to multi-organ failure.



WHAT CAUSES POST-OPERATIVE SEPSIS?



There are several causes of this condition:

- In conditions which cause peritonitis (a hole in the bowel) the normally 'friendly' bacteria in your gut can spill out into the abdominal cavity and become harmful when they leak into the wrong place. Despite the surgeon washing the area with sterile fluid, the bacteria can still multiply and cause a severe infection which can trigger the body's response, causing sepsis.
- The body produces fluid in response to surgery which can collect in areas like the abdominal or pelvic cavities (areas which contain the stomach, gut, kidneys, bladder, womb etc) or in the chest. If this occurs, the warm fluid provides an ideal environment for an infection to develop and spread.
- A patient can develop an infection in another organ during the post-operative period, unrelated to the original surgery. For example, when a patient is unable to move sufficiently or take deep breaths after surgery their chest may become infected, leading to pneumonia and sepsis.
- If a patient has been ill for some time prior to having surgery, their general health and in particular their nutritional state, may be poor (people rarely eat sufficient calories or choose healthy food if they are feeling unwell). This means their body is less likely to heal well after surgery. Consequently, their wound may not close properly and they may be vulnerable to infections entering through their skin.

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- Some patients can be admitted for emergency surgery with harmful bacteria such as MRSA already present within their bodies from a previous illness or due to their environment (for example, if they have come into hospital from a care home or following a recent hospital stay). A small percentage of the population carry MRSA, and it is only when they become ill that it causes them any harm. Prior to or at admission for routine surgery, blood tests and swabs for MRSA are sent to highlight any risks.
 - Major operations mean the patient needs to have monitoring lines, special drips and drainage tubes placed into their body. These are inserted in very clean environments, using sterile equipment but the fact these lines break the skin or are sited inside the patient means the longer they are present, the greater the risk of developing an infection because the body's protective barriers have been broken.
 - Any patient who has a problem with their immune system ('immuno-compromised') is at increased risk of sepsis. Some patients will come into hospital for an operation who have either been born with problems with their immune systems (congenital) or who have acquired problems (for example, due to HIV infection). Others will be on drugs, such as steroid tablets or chemotherapy, which will impair their immune system. These problems will usually be known about before the operation is commenced so that appropriate precautions can be taken. If a patient is at particular risk of sepsis following their operation, their team may decide to admit them to the High Dependency Unit afterwards to keep a close eye on things.



HOW WILL THEY RECOGNISE IF YOU HAVE POST-OPERATIVE SEPSIS?

- In the early stages, it's often difficult to distinguish sepsis from 'flu. If you have a fever, and develop any of the following symptoms, don't delay tell a member of the team:
 - Slurred speech or confusion
 - Extreme shivering or muscle pain
 - Passing no urine (in 18 hours or a day)
 - Severe breathlessness
 - 'I know something's badly wrong with me'
 - Skin that's mottled, bluish or very pale'
- Your surgical and nursing team should be alert to the risks of sepsis and will be monitoring your vital signs regularly. However, if you or your relatives are concerned something is wrong, it's important that you make your concerns known to the team. Occasionally, patients don't realise their condition is deteriorating and will rely on others to notice any important changes.
- As with any acute illness, early recognition and treatment is essential. Constant monitoring of your pulse, blood pressure, breathing rate, temperature, urine output, signs of pain and conscious level will help to highlight any signs of deterioration.



TREATMENT FOR SEPSIS

- Once sepsis is present, treatment is a medical emergency. The team will respond and deliver basic life-saving care including intravenous antibiotics and fluids within the first few hours. Then they will plan any further steps you may need, such as specialist scans or X-rays and possibly further surgery, to help control the sepsis.
- If you have a low blood pressure or other signs that the blood supply to your organs is failing, extra fluids will be given to improve your blood pressure and to keep your kidneys and other organs working. Sometimes, very strong drugs need to be administered in a Critical Care (Intensive Care or High Dependency) environment to help keep your blood pressure at an adequate level.
- Routine samples of your urine, blood, phlegm, and other body fluids might be sent for analysis after surgery to show any early signs of infection.
- The team will put you on the appropriate 'strong' antibiotics. This is often a 'best guess' in the first instance. Subsequently, the team may change antibiotics if you don't respond quickly or if you are found to have sepsis due to a bug which doesn't need such strong antibiotics.
- Should your organs begin to fail, they might need to be supported by machines like a breathing machine or dialysis machine for your kidneys until your condition has improved.
- Should the cause of your sepsis be from a wound which isn't healing properly, the surgeon may need to take you back to theatre to remove the infected area of tissue.
- You will be kept pain free using appropriate analgesia and should you become distressed, you might be given a sedative in Critical Care to ease you through the process.
- If you are unable to eat normally shortly after your operation, you will be fed via a feeding tube or special drip until your condition has improved.



Sepsis is a life-threatening condition, but early treatment can greatly improve a patient's chance of survival. If you have any concerns about sepsis, ask the team looking after the patient.



This leaflet was produced by the UK Sepsis Trust to help patients and their families understand Post-operative Sepsis. It is intended as a basic guide of how this critical illness is recognised and treated. If you would like more information about sepsis you can download our booklet 'Sepsis: a guide for patients and relatives' from our website.

The UK Sepsis Trust now have support groups in various areas. Details are available from our website.

Contact details:

The UK Sepsis Trust. www.sepsistrust.org Tel: 0800 389 6255

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