

Sepsis

What is sepsis?

Sepsis is a serious, whole-body response to an infection. It causes inflammation and may cause organ dysfunction in the brain, lungs, kidneys, and blood clotting system.

Sepsis can progress to septic shock. A person with septic shock will have low blood pressure, which requires treatment with special drugs to raise it. Both sepsis and septic shock are serious and require aggressive medical treatment in a hospital.

What causes sepsis?

Sepsis is caused by germs (bacteria, fungi, or viruses) growing inside you at high levels. The infection might be only in one area of the body, like in a tooth or lungs, or can be widely spread throughout the body in the blood. A doctor will order tests to locate the infection, but even with this testing, the cause of sepsis often remains unknown.

Although anyone can develop sepsis, it's more likely to affect the following:

- **The very old or the very young** (for example, premature babies)
- **People whose immune systems are already weakened** because of illness, injury, or medicines they are taking
- **Patients who are undergoing certain medical treatments** (such as chemotherapy for cancer)
- **Patients who have tubes or lines in their body to deliver or drain fluids** such as catheters or IV's



Septic shock usually requires medical treatment in a hospital intensive care unit (ICU).

What are the signs and symptoms?

To diagnose sepsis, doctors check symptoms and laboratory test results. Common signs and symptoms include an infection with the following:

- **Temperature higher or lower than normal**
- **Fast heartbeat**
- **Fast breathing**
- **Very high or very low number of white blood cells** (white blood cells are the parts of your blood that find and fight infection in the body)
- **Severe shivering**, also known as “shaking chills”
- **Change in mental status** (for example, confusion, memory loss, problems with thinking)

If the condition gets worse, blood pressure drops and vital organs (such as the kidneys or liver) may begin to fail.

How is sepsis treated?

Sepsis, which is caused by bacteria, is treated with antibiotics that are given intravenously (IV - a tiny tube inserted into a vein). Fluids and other medicines often are given to help increase blood pressure and maintain blood flow. A patient with sepsis might also need other treatments to support failing organs, such as dialysis to support the kidneys or a ventilator to help with breathing.

What can we expect from treatment?

If your loved one is being treated for sepsis in the ICU, it may help to know what to expect.

- **Many tubes and lines.** These help check the patient's condition, give medicine and fluids, and draw blood or drain fluids. For example, a large IV line in the neck is common. So is a line in the wrist to measure arterial blood pressure and obtain blood samples.
- **Swollen face or body.** Swelling is due to the extra fluid given to boost blood pressure.
- **Many machines.** Some of these machines simply monitor the patient's condition. Others, such as ventilators or dialysis machines, may support failing organs.
- **Confusion.** Some medicines used to treat sepsis can affect the patient's thinking and cause confusion. Chemicals released by the body to help fight the infection also affect thinking. This can make it hard for the patient to communicate.

How will our loved one respond to treatment?

Sepsis is a serious condition, and its outcome can be difficult to predict. **Your loved one's doctor is the best source of information about what the future may hold.** A number of things affect how a patient responds to treatment:

- **When sepsis was detected and when treatment began.** In general, early diagnosis and treatment improve a patient's chance of recovery.
- **Whether the underlying infection can be identified and treated with medicine.** Some infections are resistant to antibiotics.
- **The patient's overall condition.** The patient's basic health and strength before sepsis are also important.

What can we expect from recovery?

Sepsis can come on quickly, but recovery is slow and gradual. It can require weeks or months. As your loved one's health improves, the number of lines, tubes, and machines used for daily care will gradually decrease. Some medicines may no longer be needed. If your loved one has been in the ICU, they will be transferred to another unit in the hospital as their health improves.

Beyond the ICU, the focus of care will shift to building strength. (Fighting an infection and long amounts of time in bed weaken the body.) When your loved one's health and strength have improved enough, the medical team will arrange a release from the hospital. Some patients may transfer to an extended care facility or rehabilitation center before going home.

