

Sepsis, Diagnosis, Adult

Sepsis is a serious bodily reaction to an infection. The infection that triggers sepsis may be from a bacteria, virus, or fungus. Sepsis can result from an infection in any part of your body. Infections that commonly lead to sepsis include skin, lung, and urinary tract infections.

Sepsis is a medical emergency that must be treated right away in a hospital. In severe cases, it can lead to septic shock. Septic shock can weaken your heart and cause your blood pressure to drop. This can cause your central nervous system and your body's organs to stop working.

What are the causes?

This condition is caused by a severe reaction to infections from bacteria, viruses, or fungus. The germs that most often lead to sepsis include:

- *Escherichia coli* (*E. coli*) bacteria.
- *Staphylococcus aureus* (*staph*) bacteria.
- Some types of *Streptococcus* bacteria.

The most common infections affect these organs:

- The lung (*pneumonia*).
- The kidneys or bladder (*urinary tract infection*).
- The skin (*cellulitis*).
- The bowel, gallbladder, or pancreas.

What increases the risk?

You are more likely to develop this condition if:

- Your body's disease-fighting system (*immune system*) is weakened.
- You are age 65 or older.
- You are male.
- You had surgery or you have been hospitalized.
- You have these devices inserted into your body:
 - A small, thin tube (*catheter*).
 - IV line.
 - Breathing tube.
 - Drainage tube.
- You are not getting enough nutrients from food (*malnourished*).
- You have a long-term (*chronic*) disease, such as cancer, lung disease, kidney disease, or diabetes.
- You are African American.

What are the signs or symptoms?

Symptoms of this condition may include:

- Fever.
- Chills or feeling very cold.

- Confusion or anxiety.
- Fatigue.
- Muscle aches.
- Shortness of breath.
- Nausea and vomiting.
- Urinating much less than usual.
- Fast heart rate (*tachycardia*).
- Rapid breathing (*hyperventilation*).
- Changes in skin color. Your skin may look blotchy, pale, or blue.
- Cool, clammy, or sweaty skin.
- Skin rash.

Other symptoms depend on the source of your infection.

How is this diagnosed?

This condition is diagnosed based on:

- Your symptoms.
- Your medical history.
- A physical exam.

Other tests may also be done to find out the cause of the infection and how severe the sepsis is. These tests may include:

- Blood tests.
- Urine tests.
- Swabs from other areas of your body that may have an infection. These samples may be tested (*cultured*) to find out what type of bacteria is causing the infection.
- Chest X-ray to check for pneumonia. Other imaging tests, such as a CT scan, may also be done.
- Lumbar puncture. This removes a small amount of the fluid that surrounds your brain and spinal cord. The fluid is then examined for infection.



How is this treated?

This condition must be treated in a hospital. Based on the cause of your infection, you may be given an antibiotic, antiviral, or antifungal medicine.

You may also receive:

- Fluids through an IV.
- Oxygen and breathing assistance.
- Medicines to increase your blood pressure.
- Kidney dialysis. This process cleans your blood if your kidneys have failed.
- Surgery to remove infected tissue.
- Blood transfusion if needed.
- Medicine to prevent blood clots.
- Nutrients to correct imbalances in basic body function (*metabolism*). You may:
 - Receive important salts and minerals (*electrolytes*) through an IV.
 - Have your blood sugar level adjusted.

Follow these instructions at home:

Medicines

- Take over-the-counter and prescription medicines only as told by your health care provider.
- If you were prescribed an antibiotic, antiviral, or antifungal medicine, take it as told by your health care provider. **Do not** stop taking the medicine even if you start to feel better.



General instructions

- If you have a catheter or other indwelling device, ask to have it removed as soon as possible.
- Keep all follow-up visits as told by your health care provider. This is important.

Contact a health care provider if:

- You do not feel like you are getting better or regaining strength.
- You are having trouble coping with your recovery.
- You frequently feel tired.
- You feel worse or do not seem to get better after surgery.
- You think you may have an infection after surgery.

Get help right away if:

- You have any symptoms of sepsis.
- You have difficulty breathing.
- You have a rapid or skipping heartbeat.
- You become confused or disoriented.
- You have a high fever.
- Your skin becomes blotchy, pale, or blue.
- You have an infection that is getting worse or not getting better.

These symptoms may represent a serious problem that is an emergency. Do not wait to see if the symptoms will go away. Get medical help right away. Call your local emergency services (911 in the U.S.). Do not drive yourself to the hospital.

Summary

- Sepsis is a medical emergency that requires immediate treatment in a hospital.
- This condition is caused by a severe reaction to infections from bacteria, viruses, or fungus.
- Based on the cause of your infection, you may be given an antibiotic, antiviral, or antifungal medicine.
- Treatment may also include IV fluids, breathing assistance, and kidney dialysis.

This information is not intended to replace advice given to you by your health care provider. Make sure you discuss any questions you have with your health care provider.