



Positive outcomes of sepsis or septic shock are related to early diagnosis and treatment. Some individuals are diagnosed with sepsis that is mild. Recovery for these individuals can be complete without any residual deficits. However, sepsis and septic shock can result in complications that are very severe. Complications from sepsis and septic shock can be as blood flow becomes impaired. Clots can form leading to lack of blood flow to body organs or to the extremities causing tissue death. Organ damage can lead to failure of brain, heart, lung, kidney, liver or any body function. Damage to the extremities can lead to gangrene and thereby require amputation.

**To the Health Care Provider or First Responder**

# SEPSIS



**WHAT IT IS**

Sepsis is a life threatening condition that arises when the body's response to an infection injures its own tissues and organs. Sepsis leads to shock, multiple organ failure and death—especially if not recognized early and treated promptly. In individuals with paralysis/spinal cord injury, an infection might begin as a urinary tract (bladder) infection, pneumonia, or as a wound, pressure ulcer or other infection. If the infection is not controlled locally, it can spread throughout the body. Sepsis is then diagnosed. Septic shock is severe sepsis with a drop in blood pressure leading to organ failure. Both sepsis and septic shock are life threatening. Sometimes sepsis is called blood poisoning or systemic inflammatory response syndrome (SIRS).

Sepsis can occur due to a spreading infection in the body, after surgery or invasive procedure, or from a simple cut or scratch.

**Sepsis is a medical emergency that must be treated immediately.**

**Anyone with an infection must be aware of the risk of development of sepsis.**

**Treatment is most successful within the first hour of onset.**



- Some or all of the following symptoms may be present:
- Presence of infection or possible infection
  - Elevated temperature, greater than 38.3°C or 101.3°F
  - Fast heart rate, greater than 90 beats per minute
  - Fast respiratory rate, greater than 20 breaths per minute
  - Other symptoms that may be present: Confusion or coma
  - Edema especially in the extremities, neck, face
  - Elevated blood sugar without diabetes
  - Lower temperature below 36°C or 97°F
- Diagnosis might also include components of these variables:
- Inflammation at the site of the initial infection or anywhere in the body
  - Inability to maintain internal blood pressure to ensure that enough oxygen-carrying blood reaches all vital organs
  - Organ dysfunction, failure of any internal organs
  - Tissue perfusion, lack of oxygen to any part of the body, most readily seen in the fingers/arms, toes/legs
- Sepsis is diagnosed when there is an infection somewhere in the body AND one of the following:
- organ dysfunction (organ failure)
  - hypoxemia (inability to circulate oxygen to your tissues)
  - oliguria (decreased urine output)
  - lactic acidosis (drop in blood oxygen)
  - elevated liver enzymes (liver dysfunction)
  - altered cerebral function (confusion/coma)

**GENERAL SYMPTOMS OF SEPSIS**

**WHAT TO DO**

Prevention is the best course of action for avoiding the development of sepsis. Individuals should check with their health care provider for any infection that is not improving or seems to be increasing in symptoms such as redness, swelling, discomfort, pain, localized heat over the affected area or fever/chills. If you have an infection and experience any symptoms of increasing infection or body reactions, call or visit your healthcare provider immediately.

**TESTS**

Typical laboratory tests for infection are:

- Urine test for bacteria
- Wound cultures for bacteria
- Nasal or oral secretions for bacteria
- Blood tests for bacteria, clotting factors, cardiac, liver and kidney function, oxygenation or electrolytes

**IMAGING STUDIES**

Body scans might be done to assess internal organ function. These scans might include:

- X rays
- CT scans (Computerized tomography)
- Ultrasound
- MRI (Magnetic resonance imaging)



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**TREATMENTS**

Treatment is provided by experts in a hospital setting. Treatment includes support of life sustaining bodily functions along with antibiotics to control the spreading infection.

- Antibiotics are provided to control the infection.
- Typically, individuals with sepsis or septic shock will receive IV fluid therapy and oxygen.
- Medications are provided according to the individual's symptoms such as: medication to control blood pressure, insulin for high blood glucose, corticosteroids to decrease inflammation, and medicine to control pain.
- Surgery is decided on a case-by-case basis as needed to control infection or complications.
- Therapy is indicated for supportive care to maintain and restore function.
- If the respiratory system is affected, mechanical ventilation may be required.
- If kidney failure is present, dialysis may be required.

**RECOVERY**

Recovery from sepsis can occur. Many individuals recover without any residual dysfunction. Some sepsis survivors will have long-term recovery needs based on organ or tissue damage from the septic event. If there is severe trauma to the extremities, amputation may be performed. Some patients have post-traumatic stress syndrome, a mental health condition, as a result of the trauma of the sepsis event.

**MY INFORMATION**

Name: \_\_\_\_\_

**MEDICAL HISTORY**

Baseline Blood Pressure: \_\_\_\_\_

Baseline Body Temperature: \_\_\_\_\_

Neurological Location of Injury: \_\_\_\_\_

Primary Health Care Provider: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Allergies: \_\_\_\_\_

**EMERGENCY CONTACT**

In Case of Emergency Call: \_\_\_\_\_

Relationship: \_\_\_\_\_

Phone Number: \_\_\_\_\_

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