
Sepsis (Baby)

Sepsis is a severe response the body has to an infection. It's a medical emergency. Sepsis needs to be treated right away and can only be treated in the hospital.

Sepsis is most often caused by bacteria. It's also known as septicemia, or systemic inflammatory response syndrome. In newborns, it's also called sepsis neonatorum or neonatal septicemia.

What is sepsis?

Sepsis is when the body reacts to an infection with a severe inflammatory response. It can be caused by bacteria, fungus, or a virus. This can cause many kinds of problems in the body. It can lead to severe low blood pressure (shock) and organ failure. Sepsis can be rapidly fatal. Even if treated, the mortality rate is high. It's critical to recognize sepsis early and start treatment as soon as possible.

What causes sepsis?

A baby can be infected with bacteria, fungus, or a virus before birth, during delivery, or after birth from contact with others. A baby in the newborn intensive care unit (NICU) is more at risk of getting an infection. Sepsis in a newborn is more likely when the birth parent has had certain complications, such as:

- Fever.
- Bleeding problems.
- A difficult delivery.
- Infection in the vagina, uterus, or placenta from causes such as group B strep or listeria.
- Premature rupture of the membranes (amniotic sac), or membrane rupture for a longer period of time.

Symptoms of sepsis

Newborn babies often don't show symptoms in the same way as older babies and children. And each child may have different symptoms. The symptoms in children can include:

- Stopping breathing or trouble breathing.
- Fast heart rate.
- Weak sucking.
- Pale or blotchy skin.
- Yellow coloring of the skin and eyes (jaundice).
- Drop in amount of pee or not peeing at all.
- Fever (see "Fever and children" below).

- Low blood pressure.
- Confusion, disorientation, or severe tiredness (fatigue).

Diagnosing sepsis

If the health care provider thinks your child may have sepsis, your child will be given tests. These may include:

- **Blood and urine tests.** These are done to look for bacteria, viruses, or fungi.
- **Spinal tap (lumbar puncture).** This uses a special needle that is placed in the lower back. The provider takes a small amount of cerebral spinal fluid (CSF). The fluid is tested to look for signs of infection.
- **X-rays or other imaging tests.** These may be done to look at your child's organs to see where the infection is.

Treating sepsis

If your child has sepsis, they'll be given antibiotics through an IV (intravenous) line. Your child will also be given fluids through the IV. Nutrition or other medicines may also be given through the IV. The health care provider will talk with you about other treatments your child may need. These may include using an oxygen mask or a ventilator to help with breathing. Treatment may last at least 7 to 10 days. A baby with sepsis will stay in the NICU for extra care until there is significant improvement.

Fever and children

Use a digital thermometer to check your child's temperature. Don't use a mercury thermometer. There are different kinds and uses of digital thermometers. They include:

- **Rectal.** For children younger than 3 years, a rectal temperature is the most accurate.
- **Forehead (temporal).** This works for children age 3 months and older. If a child under 3 months old has signs of illness, this can be used for a first pass. The health care provider may want to confirm with a rectal temperature.
- **Ear (tympanic).** Ear temperatures are accurate after 6 months of age, but not before.
- **Armpit (axillary).** This is the least reliable but may be used for a first pass to check a child of any age with signs of illness. The provider may want to confirm with a rectal temperature.
- **Mouth (oral).** Don't use a thermometer in your child's mouth until they are at least 4 years old.

Use a rectal thermometer with care. Follow the product maker's directions for correct use. Insert it gently. Label it and make sure it's not used in the mouth. It may pass on germs from the stool. If you don't feel okay using a rectal thermometer, ask the provider what type to use instead. When you talk with any provider about your child's fever, tell them which type you used.

Below is when to contact the provider if your child has a fever. Your child's provider may give you different numbers. Follow their instructions.

When to contact a health care provider about your child's fever

For a baby under 3 months old:

- First, ask your child's health care provider how you should take the temperature.
- Rectal or forehead: 100.4°F (38°C) or higher
- Armpit: 99°F (37.2°C) or higher
- A fever of _____ as advised by the provider

For a child age 3 months to 36 months (3 years):

- Rectal or forehead: 102°F (38.9°C) or higher
- Ear (only for use over age 6 months): 102°F (38.9°C) or higher
- A fever of _____ as advised by the provider

In these cases:

- Armpit temperature of 103°F (39.4°C) or higher in a child of any age
- Temperature of 104°F (40°C) or higher in a child of any age
- A fever of _____ as advised by the provider