

Fever

Reviewed by SickKids Staff | Last updated: February 13th 2019

A fever can be a sign that the body is fighting an infection. Learn how to properly care for a baby, toddler or child with a fever.

Key points

- Fever is usually a sign that the body is fighting an infection.
- A temperature of 38°C (100.4°F) or higher means a fever.
- See your doctor if your child has a temperature that lasts for more than three days or if your child has a fever and is less than three months old.
- Pay attention to how your child looks and acts. Keep a record of the number of days of fever.
- To keep your child comfortable, dress your child lightly. Give your child lots of fluids to drink, and give acetaminophen or ibuprofen if it seems to make your child feel better.

A fever can be a sign that the body is fighting an infection. When the body's defense (immune) system is activated by a bacteria or a virus, many reactions occur in the body. Fever is one sign of these reactions. Fever is not a disease or illness itself but a signal that something is going on in the body. How your child looks and acts are more important than how high the fever is.



What to expect when your child has a fever

Fevers can go up and down on their own without medication. Fevers can make children feel uncomfortable.

- When symptoms are mild, your child may be slightly cranky or have aches and pains. Some children are less active and sleepier. They may not be interested in eating or

drinking.

- Some fevers may be associated with shaking (chills or rigors) as the body temperature is changing. This type of shaking is one way for the body to try to regulate the temperature. It is not a seizure or convulsion, and is not associated with changes in the child's level of consciousness.
- Approximately 5% of children between the ages of six months and six years may have [febrile seizures](#). They are episodes called a seizure or convulsion associated with a fever. Your child should see a doctor after a febrile seizure, but febrile seizures are generally not dangerous.

The type of infection causing the fever usually determines how often the fever recurs and how long the fever lasts. Fevers due to viruses can last for as little as two to three days and sometime as long as two weeks. A fever caused by a bacterial infection may continue until the child is treated with an antibiotic.

What causes fever?

Many different infections can cause a fever. To find out what is causing your child's fever, the doctor will look at other signs or symptoms of the illness, not the fever itself. How high a fever is does not help the doctor to decide whether an infection is mild or severe, or whether an infection is from a bacteria or a virus.

It is important to know how many days of fever your child has had. You should keep a record of your child's fevers so that you can accurately tell the doctor how long the fever has been present.

Fever may also be caused by other conditions

- A mild increase in body temperature can occur with exercise or too much clothing, after a hot bath or shower, or in hot weather.
- Rarely, [heat stroke](#) or exposure to certain medications or drugs can cause a severe and possibly dangerous increase in body temperature.
- [Vaccinations](#) can cause fever.
- Some non-infectious illnesses and inflammatory conditions can cause recurrent or persistent fevers.

Teething does not cause fever

Many people believe that [teething](#) causes fever. Research shows us that teething does not cause real fever. If your baby has a fever, do not assume it is due to teething.

Does my child have a fever?

A temperature of 38°C (100.4°F) or higher is a fever

Children often feel warm to the touch when they have a fever. To confirm that your child has a fever, use a thermometer to measure your child's body temperature. A temperature of 38°C (100.4°F) or higher means that your child has a fever.

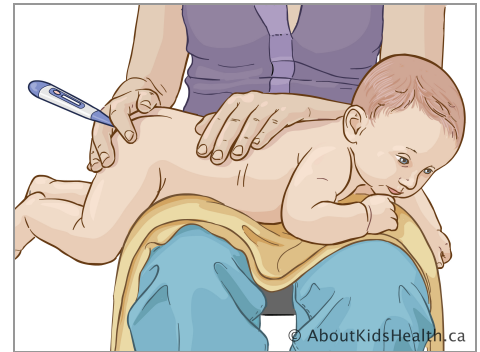
Measuring your child's temperature

Do NOT use a glass thermometer which contains mercury.

The [most accurate way to measure temperature](#) is with a thermometer:

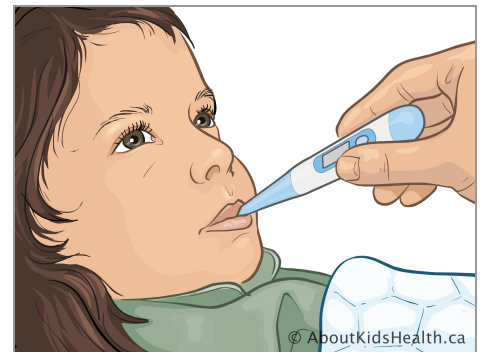
Inserted into the anus or rectum (rectal temperature) in babies and children under three years of age

How to measure a rectal temperature



Placed in the mouth (oral temperature) in older children able to hold the thermometer in their mouth long enough

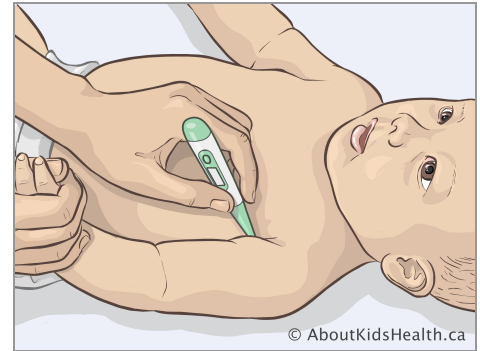
How to measure an oral temperature



Other methods of measuring temperature may sometimes be useful but less accurate. These methods include:

Using a thermometer in the armpit (axillary temperature)

How to measure an armpit (axillary) temperature



Using an ear thermometer (tympanic temperature)

How to measure an ear (tympanic) temperature



You should avoid using a thermometer on the forehead or pacifier thermometer to check a temperature because they are inaccurate.

Fever in babies younger than three months

If your baby is less than three months old and has a fever, you need to see a doctor immediately.

For babies less than one month of age, fever may be a sign of a serious infection. If this happens on the weekend, do not wait to see your doctor; go to the nearest Emergency Department right away to have your baby assessed by a doctor. Do not give any fever medication to your baby unless a doctor says so.

Taking care of your child with a fever

Clothing

Keep your child lightly dressed. Most body heat is lost through the skin, so overdressing or bundling your child may result in a higher fever and can make your child more uncomfortable. If

your child is having chills or shivers, give them a light blanket. Keep the room temperature at a level that is comfortable for you, when lightly dressed.

Extra fluids

Fever will make your child's body lose some fluid (liquid), so encourage your child to drink extra fluids to avoid [dehydration](#). Whether you give your child cold or warm drinks does not matter. However, cool water or drinks may help your child feel more comfortable.

Sponging

Sponging is unnecessary to help lower body temperature and may make your child more uncomfortable. Sponging may just cool the outside of your child's body and cause them to shiver without really affecting the internal body temperature. Only use sponging in an emergency, such as heat stroke.

Medication

You should use medication to keep your child comfortable. You should not base your judgment on how high the fever but rather on how your child is feeling. Medication may only reduce the fever by 1°C to 2°C (2°F to 3°F) and may not bring the temperature down to normal.

Fevers may also cycle up and down on their own, so it is difficult to tell whether a fever is reduced because of medication or because of the natural fever pattern. If your child is sleeping comfortably, it is not necessary to wake them up to give medications.

Two types of medication are usually recommended for managing fever

They are:

- [acetaminophen](#)
- [ibuprofen](#)

Both drugs are available in tablets, capsules and liquid formulations of various strengths. Acetaminophen is also available as a rectal suppository. Do not put a tablet intended for the mouth into a child's rectum.

Your doctor or pharmacist can help you decide on the most appropriate formulation and dose for your child. The correct dose for a child is based on body weight. An estimated dose is usually provided on the medication package. Note that acetaminophen and ibuprofen have different doses and different lengths of time between doses.

These drugs can make your child more comfortable, but they do not treat the underlying cause of the fever. Acetaminophen and ibuprofen do not interact with each other. They may be equally effective in lowering a temperature. Keep track of when you have given any medication. You should not routinely alternate between acetaminophen and ibuprofen.

If your child has a pre-existing medical condition or is already taking other medicines, talk to your child's doctor to make sure that acetaminophen or ibuprofen is safe for your child.

Do not use ASA (Aspirin) to treat your child's fever

Although rare, [ASA \(acetylsalicylic acid or Aspirin\)](#) has been linked to a severe condition called Reye's syndrome. Do not give ASA to a child to manage a fever unless your doctor has specifically told you to do so. You may need to check the label of other medication or ask your pharmacist to make sure that they do not contain ASA.

When to see a doctor

See your child's regular doctor or go to the nearest Emergency Department right away if your child has a fever and:

- Your child is less than three months old.
- You have recently returned from travelling abroad.
- Your child develops a rash that looks like small purple dots that do not go away when you apply pressure with your fingers (blanching).
- Your child is not able to keep down any fluids, is not peeing and appears dehydrated.
- Your child's skin looks very pale or grey, or is cool or mottled.
- Your child is in constant pain.
- Your child is lethargic (very weak) or difficult to wake up.
- Your child has a stiff neck.
- Your child has a seizure associated with fever for the first time or a long seizure associated with fever.
- Your child is looking or acting very sick.
- Your child seems confused or delirious.
- Your child does not use their arm or leg normally or refuses to stand up.
- Your child has problems breathing.
- Your child cries constantly and cannot be settled.

See a doctor within one to two days if your child has a fever and:

- Your child is between three and six months old.

- Your child has specific pain, such as ear or throat pain that may require evaluation.
- Your child has had a fever for more than three days.
- The fever went away for over 24 hours and then came back.
- Your child has a bacterial infection that is being treated with an antibiotic, but the fever is not going away after two to three days of starting the antibiotic.
- Your child cries when going to the bathroom.
- You have other concerns or questions.

If you are unsure, call Telehealth Ontario at 1-866-797-0000 (toll-free number) if you live in Ontario.

Myths about fever

There are many myths about fever, and some of these myths may make you worry unnecessarily. If your child has a fever, the most important thing is how your child looks and acts.

Myth: Fever needs to be treated with medication

This is wrong! The fever itself is not dangerous and does not need to be treated. Medication should be used to make your child more comfortable when they have a fever. If your child is comfortable with a fever (either awake or sleeping) you do not need to give them fever medication.

Myth: The exact number of the temperature is useful

That is wrong! The most important part of assessing a child with fever is how the child looks and acts, especially after treating the fever with medication. For example a child who appears well but has a high temperature is less concerning than a child who only has a mild fever, but who appears quite unwell or unresponsive. Some minor viral illnesses may trigger high fevers; some serious bacterial infections may be associated with an abnormally low body temperature. In any case, you should measure your child's temperature so you can keep a record of the number of days of fever.

Myth: Fevers cause brain damage

That is wrong! Most fevers associated with infections are less than 42°C (107.6°F). These fevers do not cause brain damage. Only a persistent body temperature greater than 44°C (111.2°F) can cause brain damage. These body temperatures are more likely to occur with heat stroke or after exposure to certain street drugs or medications, such as anaesthetic or some psychiatric medicines. They do not occur with the usual infections that children can have.

Myth: Fevers are bad for children

That is wrong! A fever is just a sign that the body's immune system has been activated. Fevers help to fight infections because many germs do not survive as well at slightly higher body temperatures. Thus most fevers have a beneficial effect despite your child's discomfort. The main reason to use medication is to make the child feel better.

Myth: Fevers should always respond to ibuprofen or acetaminophen

That is wrong! These medications help make children feel more comfortable but may only reduce the fever by 1°C to 2°C (2°F to 3°F) and may not bring the temperature down to normal. Sometimes a fever continues even after giving ibuprofen or acetaminophen.

Myth: Fevers should respond quickly to antibiotics

That is wrong! Antibiotics are only useful in treating bacterial infections. The antibiotic will start working to fight the bacteria as soon as your child takes it, but it may take two to three days before the fever goes away. Antibiotics have no effect on viral infections. Since most infections in children are caused by viruses, an antibiotic will be of no use in these cases.

Myth: Treating the fever will prevent febrile seizures

This is wrong! Treating the fever will not prevent febrile seizures and you should not use medications for this purpose. Febrile seizures usually run in families and are more likely to happen at the beginning of your child's infection.

References

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