

# Fever in babies and children

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A fever can be a sign that the body is fighting an infection. Learn how to properly care for your 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 a health-care provider if your child has a fever that lasts for more than five 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 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 the number on the thermometer or 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 cranky, fussy 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.
- Children can look sick when their temperature is high. They might be pale or flushed, they might have a faster heartbeat or breathing. Some young children will grunt or pant when they have a fever, as if they just finished running a race.
- Approximately 5% of children between the ages of six months and six years may have [febrile seizures](#). These are episodes of seizure or convulsion associated with a fever. Your child should see a health-care provider after a febrile seizure. Febrile seizures are generally not dangerous and will not cause damage to your child's brain.

The type of infection causing the fever usually determines how often the fever recurs and how long the fever lasts. It is normal for the fever to come and go throughout the day and night. Fevers due to viruses can last for as little as two to three days and sometime as long as two weeks, and cannot be treated with antibiotics. A fever caused by a bacterial infection may continue until the child is treated with an antibiotic.

Go to:

[https://www.youtube.com/embed/w-Fd\\_3cCeJw](https://www.youtube.com/embed/w-Fd_3cCeJw)

to view this web only media.

## What causes fever?

Many different infections can cause a fever. To find out what is causing your child's fever, their health-care provider 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.

Fevers in children are most often caused by a cold or flu. These infections are caused by viruses and the body must fight off the infection. Antibiotics will not help your child get better from an infection from a virus. Some fevers are from bacterial infections, such as an [ear infection](#), [urinary tract infection \(UTI\)](#) or [pneumonia](#). These infections will only get better with antibiotic medicine.

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 health-care provider how many days 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

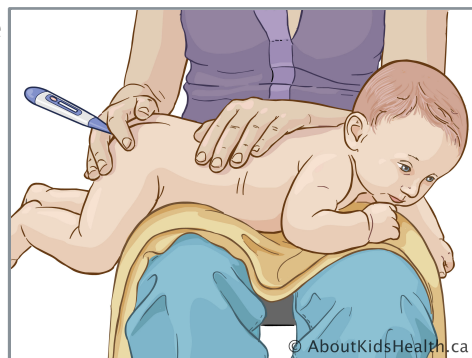
Children often feel warm to the touch when they have a fever. To confirm that your child has a fever, use a thermometer to measure your child's body temperature. A temperature of 38°C (100.4°F) or higher means that your child has a fever.

### 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. The type of thermometer and where it is used will depend on the age of your child.

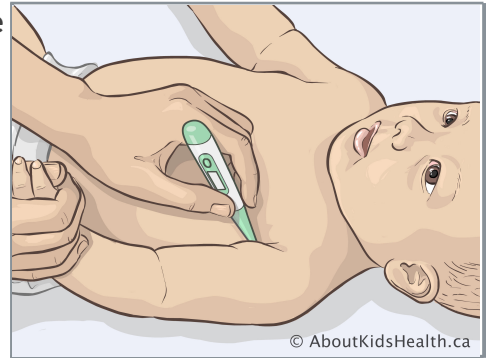
- **How to measure a rectal temperature**



Rectal temperature

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

- **How to measure an armpit (axillary) temperature**



Axillary or tympanic temperature

In children between 2 and 5 years of age, temperature is often measured under the armpit or in the ear.

- **How to measure an ear (tympanic) temperature**



Using an ear thermometer (tympanic temperature)

- **How to measure an oral temperature**



Oral temperature

Temperature can be measured in the mouth in older children over the age of 5 if they are able to hold the thermometer in their mouth long enough.

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 health-care provider 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 their regular health-care provider; go to the nearest Emergency Department right away to have your baby assessed. Do not give any fever medication to your baby unless a health-care provider 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. It is fine to give dairy or milk when your child has a fever if that is what your child prefers best.

### 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. It is fine to bathe your child when your child has a fever or illness.

### Medication

You should use medication to keep your child comfortable. You should not base your decision on how high the temperature is on the thermometer 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. Just because the medication does not bring your child's temperature down to normal, does not mean there is a more dangerous cause to the fever.

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 medications 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 child's health-care provider or your local 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. Acetaminophen can be given every 4 hours as needed (not more than 5 doses per day) and ibuprofen every 6 hours as needed.

For information on how to safely use acetaminophen or ibuprofen tablets by mouth for children please see this [information sheet](#).

These medications 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.

If your child has a pre-existing medical condition or is already taking other medications, talk to your child's health-care provider to make sure that acetaminophen or ibuprofen are 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 health-care provider has specifically told you to do so. You may need to check the label of other medication or ask a pharmacist to make sure that they do not contain ASA.

## When to see a health-care provider

**See your child's regular health-care provider 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 seems confused or is showing changes in behaviour.
- 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 health-care provider 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 or has pain when peeing.
- You have other concerns or questions.

Your child may show physical changes when their condition is serious or when their condition gets worse. Parents and caregivers can learn how to [spot these signs](#) in order to seek help from a health-care provider.

If you need advice about your child's health Telehealth can be accessed from anywhere in Canada by calling 811.

## Myths about fever

It can be very scary as a parent or caregiver to see your child with a fever. There are many myths about fever, and some of these myths may make you more worried than you need to be. If your child has a fever, the most important thing is how your child looks and acts, not the number on the thermometer.

### Myth: Fever needs to be treated with medication

The fever is a sign that the body is fighting off an infection. The fever itself is not dangerous and does not need to be treated. Children with a fever are often uncomfortable, so 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 determines how sick my child is**

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 unwell or not waking up properly or able to drink fluids. Some viral illnesses like the flu may trigger high fevers, while some serious bacterial infections may be associated with an abnormally low body temperature. Just because a fever is higher or lower, does not help the health-care provider to decide which child needs antibiotics. It is useful to measure your child's temperature so you can keep a record of the number of days of fever.

### **Myth: Fevers cause brain damage**

One of many parents' biggest worries is that a high fever can cause brain or organ damage. Fevers caused by 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), which a person might get from heat stroke or after exposure to certain street drugs or medications, such as anaesthetic or some psychiatric medications, can cause brain damage.

### **Myth: Fevers are bad for children**

A fever is a sign that the body's immune system is fighting an infection. Fevers help to fight infections because many germs do not survive as well at slightly higher body temperatures. So, 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**

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. Just because the medication does not bring your child's temperature down to normal, does not mean there is a more dangerous cause to the fever.

### **Myth: Fevers should respond quickly to antibiotics**

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 will not make your child feel better or make their fever go away if they have a viral infection. 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**

In all the research that examines ways to prevent febrile seizures, treating the fever with medications will not prevent febrile seizures and it is not necessary to 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. Sometimes febrile seizures happen before you even know that your child is getting a fever.

Please visit [AboutKidsHealth.ca](https://www.aboutkidshealth.ca) for more child health information.

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