

One of the most common questions parents ask pediatricians is “What should I do when my child has a fever?” These questions can seem especially urgent when the child is very young or the temperature is quite high. It may be helpful to understand a bit more about fevers.

## What is a fever?

The first thing to understand is that **fever is not a disease or illness. It is a symptom of disease**, just like a cough or a sore throat. Usually it indicates an infectious disease, possibly a simple viral illness, but also possibly something more serious. Normal temperatures vary during the day, also with age and activity and the site where they are measured. The normal standard for internal body temperature is 98.6 degrees Fahrenheit plus or minus about one degree. (Alternately, people may use 37 degrees Celsius plus or minus about 0.6 degrees). Thus, a rectal temperature of 99.6 degrees may be considered normal from time to time in babies. These variations may represent a variety of physiologic changes or activities, and may perhaps even be seen with teething as many families will report, but should not be considered a fever and are not, by themselves, evidence of illness.

The body has a kind of internal thermostat that helps keep your temperature constant despite changes in external temperatures and other conditions, like exercise, which may generate heat. People will dilate or constrict small blood vessels in the skin, sweat, and change respiratory rates in an effort to regulate temperature. Changes in skin temperature can represent elevations in body temperature, but could just as easily represent the body trying to normalize its core temperature. Often people will seem flushed or warm when they have a fever, but sometimes they will feel cold or clammy. Sometimes they can feel warm or clammy for other reasons as well.

There can sometimes be disagreement over what temperatures constitute a “fever”. Generally speaking, **we use temperatures over 100.4 degrees F. (38 degrees C.) to define fever**. That is not to say that children with temperatures of 100.3 degrees are not sick. They probably are. However, when doctors study patients with fever to decide, for example, whether a child with fever and cough needs a chest x-ray, they first need to decide which patients to look at and 100.4 is the number most often used for that kind of work. As a result, higher temperatures will affect the way we think about a patient in a way that numbers below 100.4 do not.

## Don't Panic!

There is no need to panic over fevers. The fever is simply telling you that your child is sick. It does not mean the illness is serious, although of course we need to consider that possibility. There are certain guidelines we want you to keep in mind, but most often fever is a simple problem that parents can manage on their own.

First, if your child is **under 2 months of age**, you may need to call us (your doctors) immediately. If your child received vaccines in the last twenty-four hours and you were told perhaps to expect a small fever, you can probably just watch this child at home for a little while. Otherwise, take a moment to double check the temperature. Make sure you have a reliable thermometer. A rectal temperature is usually best. However, if the fever is real, a child under 2 months of age will likely require a medical evaluation and, while it may only be a mild viral illness, the evaluation probably should not wait until the next day.

**Between 2 and 4 months of age**, the child will still likely need an evaluation but it is a little less urgent. If the child appears well, especially after giving a dose of acetaminophen, the evaluation can probably be managed during regular office hours. If, however, the child still appears ill 45 minutes following an appropriate dose of acetaminophen, you should call us immediately. (Appropriate dosing for anti-fever medicines is discussed in separate articles elsewhere in the “Advice” section.)

After 4 months of age, we really encourage parents to **focus more on the clinical appearance of the child than the number on the thermometer**. Keep in mind that the fever is simply a symptom of the illness, and it is the illness itself which should concern us. **Generally speaking, the fever itself will not cause any harm.** Remember, too, that many people will look awful simply because their temperature is up. A good first step is to try and bring the temperature down a bit, first, and then evaluate. You should be more concerned about a child with a lower temperature who looks ill than about a child with a higher temperature who looks pretty good. Having said this, if your child is having symptoms other than fever which are concerning by themselves (difficulty breathing or extreme lethargy, for instance), you should call us immediately.

Of course, there are certain numbers that we do get concerned about. Sustained temperatures over 105 degrees can be dangerous. If you cannot bring such temperatures down within the hour, your child will need prompt evaluation. Temperatures over 106 degrees should prompt an immediate visit to the nearest appropriate medical facility.

The most important thing about a fever, though, is that it is a symptom of illness and it is the illness itself that should concern us. If, apart from the fever, the illness appears mild, most children can be managed appropriately at home for a few days. However, if fevers persist, even children who do not appear very ill should be evaluated to make sure nothing more serious or treatable is going on.

## Managing a Fever

We treat fevers mostly to make children more comfortable. A perfectly happy child with a fever may require no treatment at all. The fever, after all, is part of the body's immune response and may be important in helping your child fight an infection. Often, though,

fevers are quite uncomfortable for patients and can be scary for parents. There are a number of things we can do.

Do the simple things first. Keep the room comfortably cool, ideally between 68-73 degrees Fahrenheit. Do not over dress or over bundle your child. Use light clothing, unless your child is having chills.

Make sure the child has plenty to drink. Fevers increase the body's fluid requirements and dehydration will make almost any illness worse.

Most times, we prefer to use acetaminophen or ibuprofen to help manage fevers. These medicines are very safe and effective, well tolerated by children, and readily available. They are usually given by mouth, although rectal suppositories of acetaminophen are available and sometimes useful for a vomiting child. Be sure to use a dose appropriate to the child's weight. (Dosing addressed elsewhere.)

Tepid water can also be used to bring down a child's temperature, either as a sponge bath or just by using a moist washcloth. The water should be slightly warm to the touch, usually about 85-90 degrees Fahrenheit. Colder water can cause shivering, which could actually raise a child's temperature, or even bring the temperature down too quickly and cause a seizure. As a result, ice baths can do more harm than good.

Please do not use rubbing alcohol to bring down a child's temperature. In large quantities, the alcohol can be absorbed through the skin and cause serious injury.