# Fever

Family Health Center
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### What is it?

A normal temperature is about 98.6 F when taken orally (by mouth). However, it is common for temperature to vary during the day from a low of 97.6 F in the morning to a high of 100.4 F in the afternoon. Temperatures taken rectally (by rectum) usually run 1 degree higher than those taken orally. So a normal temperature is about 99.6 F when taken rectally. Temperatures may vary several degrees during the day, even in healthy children.

Most people define fever as an oral temperature above 99.4 F or a rectal temperature above 100.4 F. Mild elevation in temperature from 100.4 - 101.3 F can be caused by exercise, excessive clothing, a hot bath, or hot weather. Warm food or drink can also raise the oral temperature. If you suspect such an effect on the temperature of your child, take his/her temperature again in one half hour.

# How do I take my child's temperature?

You may think you can tell if your child has a fever by touching his/her forehead. But this isn't an accurate way to tell. *Fever strips* which are placed on the child's forehead are also not accurate. Neither is temperatures taken from under the child's arm.

The most accurate way to take your child's temperature is orally or rectally. In a child younger than about 4 years, take the temperature rectally. In an older child, take it orally. Here are some tips:

- The thermometer should show a temperature lower than 98.6 F before taking a temperature. You can run cool water over the red end or shake the thermometer to lower the reading.
- Don't bundle your child too tightly before taking the temperature.
- Never leave your child alone while taking the temperature.
- Be sure to use the right thermometer. Rectal thermometers are thicker than oral thermometers.
- If you are taking your child's temperature rectally, coat the tip of the thermometer with petroleum jelly (Vaseline) and insert it 1/2 inch into the rectum. Hold the thermometer still for 2 minutes, by the clock. Never let go of the thermometer.



- If you are taking your child's temperature orally, place the end of the thermometer under the tongue and leave it there for 2 minutes. Don't let your child bite on the thermometer.
- After you're done using the thermometer, wash it in cool soapy water.

# What causes it?

Fever is a symptom, not a disease. Fever is the body's normal response to infection and plays a role in fighting them. Fever turns on the body's immune system. The usual fevers (100 - 104 F) that all children get are not harmful. Most are caused by viral illnesses; some are caused by bacterial illnesses. Teething does not cause fever. Although many parents worry that a fever may cause permanent damage, this is very rare.

# What are the symptoms?

Most fevers with viral illnesses range between 101 - 104 F and last for 2 - 3 days. In general, the height of a fever doesn't relate to the seriousness of the disease.

How sick your child acts is what counts. Fever causes no permanent harm until it reaches 107 F (41.7C). Fortunately, the brain's thermostat keeps untreated fevers below this level.

Although all children get fevers, only 4% develop a brief febrile convulsion. Since this type of seizure is generally harmless, it is not worth worrying about, especially if your child has had high fevers without seizures before.

# When should I call the doctor?

- Under 1 month old: Call your family doctor right away if your baby's temperature goes over 100.4 F rectally, even if he/she doesn't seem sick. Babies this young can get very sick very quickly.
- 1 3 months old: Call your doctor if your baby has a temperature of 101.4 F (even if your baby doesn't seem sick) or a temperature of 100.4 F that has lasted more than 24 hours.
- 3 months 2 years old: If your child has a fever of 101.4 F, watch how he/she acts.
   Call the doctor if the fever lasts more than 3 days or you have any concern about your child's health. If the temperature is 104F, call your doctor even if your child seems fine.
- Over 2 years old: If your child has a fever over 101.4 F watch how he/she acts. Call the doctor if the fever rises or lasts more than 3 days.

# Can it be treated?

Fevers are more frightening than they are harmful. They are usually just a sign that the body is fighting an infection. The main reason to treat your child is to make him/her feel better.

- **Drink plenty of fluids** such a water, juices, popsicles, Jell-O, soup and flat soda pop. If your child doesn't want much solid food, don't worry about it. The appetite will return as the illness gets better.
- Acetaminophen is a medicine that relieves pain and lowers fever. It is sold in stores as Tylenol, Tempra, Panadol or Datril. It comes in both liquid and chewable form. Use the weight of your child as the main guide in figuring out how much acetaminophen to give. If you have any questions about the right dose, ask your family doctor or pharmacist. Acetaminophen will usually reduce the fever, but may not bring it down to normal.

| Age               | Weight              | Acetaminophen<br>dose<br>(Every 4 hours) |
|-------------------|---------------------|--|
| 0 to 3 months     | Less than 13 pounds | Ask your family doctor                   |
| 4 to 7 months     | 13 to 17 pounds     | 80 mg                                    |
| 8 to 18 months    | 18 to 23 pounds     | 120 mg                                   |
| 11/2 to 3 years   | 24 to 32 pounds     | 160 mg                                   |
| 4 to 5 years      | 33 to 45 pounds     | 240 mg                                   |
| 6 to 7 years      | 46 to 61 pounds     | 320 mg                                   |
| 8 to 9 years      | 62 to 78 pounds     | 400 mg                                   |
| 10 to 11 years    | 79 to 98 pounds     | 480 mg                                   |
| 12 to 13 years    | 99 to 131 pounds    | 650 mg                                   |
| 14 years or older | 132 or more pounds  | 650-1,000 mg                             |

- **Ibuprofen** (children's Advil or Motrin) also lowers fever, sometimes better than acetaminophen. It can be alternated with acetaminophen if neither one seems to be working alone. It also comes in liquid and chewable form and is dosed by weight (see package).
- Luke warm bath water may help to lower a fever. Give the acetaminophen or ibuprofen before the bath. If the bath is given alone, your child may start shivering as his/her body tries to raise its temperature again. This may make your child feel worse. Your doctor may suggest giving your child a sponge bath if he/she has ever had a seizure during a fever period. Don't use alcohol for baths, because it can be absorbed through the skin. Also, don't use cold water, because it can cause shivering.

# Are there complications?

Children less than 18 years of age should not receive aspirin. Aspirin can cause *Reye's syndrome* in children who have the flu or chickenpox. Reye's syndrome is a serious illness that can lead to death. Because it may be hard to tell if your child has one of these infections, it's best not to use aspirin unless your family doctor says it's OK. Acetaminophen and ibuprofen are safer choices to use for fever in children.

### In summary

- Be sure to take a rectal temperature if your child is younger than 4 years.
- Give your child plenty to drink to prevent dehydration and help the body cool itself.
- Call your doctor whenever your child looks very sick or the fever persists according to the guidelines given above.