

When Your Child Has A Fever

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Original article by Barton D. Schmitt, M.D., in *Contemporary Pediatrics*

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Your child has a fever if his body temperature is higher than it usually is under "normal" conditions. The body's normal average temperature, when measured orally, is 98.6 degrees F, but it normally fluctuates during the day. It is usually lowest in the morning and highest in late afternoon and evening, so sometimes a completely healthy child can have a "normal" temperature between 99 and 100 F in the evening. For purposes of definition, your child can generally be considered to have a fever if the rectal temperature is over 100.4 degrees F or the oral temperature is over 100 degrees F. Usually your child will also be acting differently from normal if he has a fever.

Fever is a symptom, not a disease. It is the body's normal, healthy response to infections and plays a role in fighting them. In other words, fever activates the body's immune system. The usual fevers that all children get from illnesses are not harmful. Most are caused by viral illnesses, which generally resolve on their own. Some are caused by bacterial illnesses, which generally need to be treated with antibiotics. Contrary to popular belief, fever is *not* caused by teething.

Most fevers that occur with viral illnesses range from 101 to 104 degrees F and last for two to three days, but occasionally certain illnesses (the flu, for example) will cause a slightly higher fever and may last a little longer. In general, the height of the fever isn't related to the seriousness of the illness. What is important is how sick your child acts. Fever causes no permanent harm until it reaches 107 degrees F or higher. Fortunately, the brain's "thermostat" keeps fevers caused by infections, even if untreated, below this level. Fevers over 107 degrees F usually result only from environmental heat overload, such as overdressing a child with a fever or leaving a child in a closed car on a hot day.

A small percentage of children, about 4%, can develop a brief convulsion from fever. This type of seizure, called a febrile seizure, is harmless and not a cause for medical concern. Although a febrile seizure can be very frightening to parents, it does not cause brain damage, lower IQ, or learning disabilities. If your child has had high fevers without seizures, his risk of having a future febrile seizure is extremely low.

Try to keep fever in perspective. "Fever phobia" is a term that describes the unwarranted fears many parents have about the normal fevers that all children experience. A study on parents' attitudes about fever found that 80% of parents mistakenly believed that fevers between 100 and 106 degrees F could cause brain damage or death. About 20% of parents thought that if they didn't treat the fever, it would keep going higher. Neither statement is true. Because of these misconceptions, many parents treat low-grade fevers unnecessarily with medicines and sponging. They also spend sleepless nights worrying about fevers. Try to keep fever in perspective when your child's temperature is elevated. Remember, the only goal in treating a fever with medicine is to make your child more comfortable; not to save his or her life.

Acetaminophen: An acetaminophen product, such as Tylenol, is usually the first choice for reducing fever in children older than 2 months of age. The recommended dose of acetaminophen is listed in the table below. Two hours after acetaminophen is taken, it will usually reduce the fever by 2 to 3 degrees F. Repeated doses of the drug are often necessary because the fever will go up and down until the illness runs its course. Remember that the fever's response, or lack of response, to medicine tells little about the severity of the infection. Also keep in mind that if your child's fever is very high to begin with (e.g. 104 or 105), then you shouldn't expect his fever to come down to "normal" with fever-reducing medicine. It will probably just come down 2 to 3 degrees. If your child smiles, plays, and drinks adequate fluids, you need not worry about the fever. If your child is sleeping, you don't need to wake him up to give medicines. If the fever is high enough to need medication, your child will awaken.

Remember that fever is helping your child fight infection. Use medication only if the fever is high enough to make him uncomfortable. Generally, this would mean anything over 101 or 102 degrees F. Give the correct dosage for your child's weight no more often than every four to six hours.

Acetaminophen (Tylenol) Dosage – can dose every 4-6 hours:

| Child's Weight (in pounds): | 6 - 11 | 12 - 17 | 18 - 23 | 24 - 35 | 36 - 48 | 49 - 71 | 72 - 97 | > 98 |
|--|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Total dose (mg) | 40 | 80 | 120 | 160 | 240 | 325 | 480 | 650 |
| Infant's Liquid or Children's Liquid (160 mg per 5 ml) | 1.25 ml | 2.5 ml | 3.75 ml | 5 ml | 7.5 ml | 10 ml | 15 ml | 20 ml |
| Chewable tablets (80 mg each) | -- | 1 tab | 1 ½ tabs | 2 tabs | 3 tabs | 4 tabs | 6 tabs | 8 tabs |
| Chewable tablets (160 mg each) | -- | -- | -- | 1 tab | 1 ½ tabs | 2 tabs | 3 tabs | 4 tabs |
| Adult tablets (325 mg each) | -- | -- | -- | -- | -- | 1 tab | 1 ½ tabs | 2 tabs |

Ibuprofen: Ibuprofen (such as Children's Motrin or Children's Advil) can also be used for treating fever in children over 6 months of age. The recommended dose of ibuprofen is listed in the table below.

Ibuprofen and acetaminophen have similar safety records and abilities to lower fever. One advantage that ibuprofen has over acetaminophen is a longer-lasting effect: six to eight hours instead of four to six hours. In most situations, however, acetaminophen is still the drug of choice for controlling fever, due to the fact that it is less likely to cause side effects such as stomach irritation. Also, acetaminophen is generally the safer choice if your child is significantly dehydrated. However, some children with high fevers that do not respond well to acetaminophen may do better with ibuprofen.

Ibuprofen (Motrin or Advil) Dosage – can dose every 6-8 hours:

| Child's Weight (in pounds): | 11 - 16 | 17 - 20 | 22 - 32 | 33 - 43 | 44 - 54 | 55 - 65 | 66 - 87 | > 88 |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Total dose (mg) | 50 | 75 | 100 | 150 | 200 | 250 | 300 | 400 |
| Infant's Drops (50 mg per 1.25 ml) | 1.25 ml | 1.875 ml | 2.5 ml | 3.75 ml | -- | -- | -- | -- |
| Children's Liquid (100 mg per 5 ml) | 2.5 ml | 3.75 ml | 5 ml | 7.5 ml | 10 ml | 12.5 ml | 15 ml | 20 ml |
| Chewable tablets (50 mg each) | 1 tab | 1 ½ tabs | 2 tabs | 3 tabs | 4 tabs | 5 tabs | 6 tabs | 8 tabs |
| Junior tablets (100 mg each) | -- | -- | 1 tab | 1 ½ tabs | 2 tabs | 2 ½ tabs | 3 tabs | 4 tabs |
| Adult tablets (200 mg each) | -- | -- | -- | -- | 1 tab | 1 tab | 1 ½ tabs | 2 tabs |

Comments on alternating medicines: In general, the practice of alternating (overlapping) acetaminophen with ibuprofen in an attempt to control fever is *not* recommended. First, this regimen generally provides no added benefit in reducing fever compared with use of either product alone (since both medicines reduce fever by the same mechanism of action). Furthermore, it can cause confusion and dosing errors. Finally, this practice can perpetuate an unwarranted fear about fever as described above. In general, for higher fevers that are making your child uncomfortable, it is probably best to give ibuprofen every 6 hours.

Do not give aspirin, since the use of aspirin in children has been associated with Reye Syndrome, a severe illness.

Sponge your child only when necessary. Sponging is usually not necessary to reduce fever. Sponge your child only if the fever is still over 104 degrees F when you retake the temperature 30 minutes after giving fever-reducing medicine, and your child is still uncomfortable. Do not sponge your child without giving acetaminophen or ibuprofen first. Until the medicine has taken effect, sponging will just cause shivering, which is the body's attempt to raise the temperature. If you do sponge your child, use lukewarm water (85 to 90 degrees F). Sponging works much faster than immersion, so have your child sit in two inches of water and keep wetting the skin surface over the entire body. If your child shivers, raise the water temperature or wait another ten to 20 minutes for the acetaminophen to take effect. Don't expect to get the temperature below 101 degrees F. **Caution:** Don't add rubbing alcohol to the water because breathing in the fumes can cause a coma or seizure.

Encourage extra fluids. The body loses fluids during fevers because of sweating. Encourage your child to drink extra fluids. Popsicles, ice cream, and iced drinks can be helpful.

Dress your child in light clothing. Clothing should be kept to a minimum because most heat is lost through the skin. Do not bundle up your child. It will cause a higher fever and can be dangerous. During the time your child feels cold or is shivering (the chills), give him a light blanket.

Discourage vigorous activity. Vigorous activities produce additional heat that the body must release. Normal, quiet play is fine.

When to take your child's temperature: In general, take the temperature twice a day (morning and evening) until the fever is gone. Take it more often if your child feels very hot or is acting miserable despite taking acetaminophen or ibuprofen. She may also need sponging. Take the temperature just before calling your physician.

With most infections, the level of fever bounces around for two or three days. Shivering or feeling cold means the fever is going up. A flushed (pink) appearance means the fever has peaked. Sweating means it is coming down. The main purpose of taking temperatures is to determine whether fever is present or absent, not to chart its every move.

Call the doctor's office IMMEDIATELY if your child has fever and:

- Your child is less than 2 months old
- Your child is crying inconsolably or whimpering.
- Your child is difficult to awaken.
- Your child cries if you touch him or move him.
- Your child's neck is stiff.
- Any purple spots are present on the skin.
- Breathing is difficult and no better after you clear the nose.
- Your child is unable to swallow anything and is drooling saliva.
- Your child has signs of dehydration, such as dry mouth and lack of urination
- Your child looks or acts very sick (if possible, check your child's appearance one hour after he has taken acetaminophen or ibuprofen).

Call within 24 hours if:

- The fever is over 104 degrees F, especially if your child is less than 2 years old.
- The fever is associated with ear pain or a severe sore throat.
- Burning or pain occurs with urination.
- Your child has had a fever for more than 24 hours without an obvious cause or location of infection.

Call during regular office hours if:

- Your child has had a fever for more than 72 hours.
- The fever went away for more than 24 hours and then returned.
- Your child has a history of febrile seizures.
- You have other questions or concerns.