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## FEVER

Fever typically represents a natural response by one's body to an infection. In general, elevated temperature is *neither dangerous nor harmful*. What is causing the fever *may (or may not)* be concerning. Fevers are often caused by viral infections, the treatment for which is simply to relieve symptoms. Occasionally fevers are caused by more serious conditions.

***In infants less than 3 months of age*** we need to hear from you when your baby's *rectal temperature\** exceeds 100.4°F (38.0°C). Avoid giving any medication to lower fever in babies less than 3 months of age before talking to us.

***Between 3 months and 3 years of age***, low to moderate temperatures in the range of 100 to 102.2°F (37.8 – 39°C) can be assessed by looking for other symptoms that may explain the source of fever. The most important question is “*how is your child behaving?*” If well, that is reassuring. If not, *does s/he improve when the fever is reduced?* [See box] Your child is less likely to have a serious illness if his/her overall condition is improved when you bring down the temperature.

Does your toddler have a runny nose? Ear pain? Cough? Sore throat? Is s/he vomiting or having diarrhea? Is your toddler waking at night? Has s/he been in contact with anyone who has had a cold? Illnesses that cause these symptoms can cause fever and will help guide therapy. If the fever is greater than 102.2°F (39°C) and your

- Always good to have on hand:
- rectal thermometer  
(keep in your travel bag)
  - acetaminophen, ibuprofen,  
Benadryl®
  - sunscreen (SPF = 15)

### Useful methods for reducing fever (and pain):

Acetaminophen (Tylenol®, Tempra®) and Ibuprofen (Advil®, Motrin®) are over-the-counter medications we recommend that you have at home. (Acetaminophen comes in a rectal suppository form as well---useful when oral medications are not tolerated.) These products come in *many concentrations*. Proper dosing is crucial---the appropriate doses are:

**Acetaminophen: 80 mg for every 12 pounds (15 mg/kg), every 4 hours as needed**

**Ibuprofen: 50 mg for every 11 pounds (10 mg/kg), every 6-8 hours as needed**

*Read the package to determine how many milligrams each dropper or teaspoon contains. Take care to avoid confusing milligrams (mgs) with milliliters (mls).*

We generally recommend using acetaminophen first because it has a longer track record of safety. (Ibuprofen can cause gastrointestinal symptoms and should be avoided if your child's stomach is upset.) *Ibuprofen may be more effective* for fevers unresponsive to acetaminophen or for overnight use because it lasts longer. Because these medicines work differently, one can be given directly after the other. It is permissible to alternate these medicines every 3 hours when fevers are hard to control. Finally, a shallow luke-warm bath may lower your child's temperature more quickly, although the reduction may not be long lasting. Reducing fever will make your child more comfortable.

\*Rectal temperatures are the *gold standard* for assessing fever in children less than 3 years of age. Using a digital thermometer, insert the lubricated end into the rectum until the thermometer beeps or the temperature stabilizes.

child is less than 3 years, we generally would like you to touch base with the office to determine whether your child needs to be evaluated. If your child is acting well, you can wait to call us during regular office hours. Call us at any time if your child appears ill to you or if you are unable to lower the temperature. (You should expect to see a decline of at least 1 – 2°F within forty to sixty minutes of administering acetaminophen or ibuprofen.) We generally recommend that you *avoid* using combination medicines (such as *Tylenol Cold*®) to lower fever, because the decongestant can inadvertently make your child cranky. Also, do not use ibuprofen in a child < 6 months of age.

***Children who are more than 36 months old*** with a fever can often be watched for 24 to 48 hours, provided that their fever decreases with each treatment, and their behavior improves when their temperature is reduced. Older children generally can be more informative about their symptoms, and fevers are less likely to be worrisome unless their symptoms or behavior speaks otherwise. If your preschooler or school-aged child with a high fever is eating, sleeping and acting well, s/he is less likely to have a serious illness. Lowering the temperature, however, may make your child feel better. Some children may act or speak in a bizarre fashion when their temperature is *highly* elevated, but this behavior should resolve when the fever is reduced.

***In children over 3 years of age*** we would like to hear from you if your child appears ill, the fever persists for 3 or more days, or if it spikes after 3 or more days of other symptoms such as are seen with a cold or the “flu.”

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In summary, fever does *not need* to be lowered in a well-appearing, comfortable individual. There are two reasons to lower temperature: to assess a child’s behavior more accurately and to provide comfort. (That is, treat *discomfort*, not fever.) Three percent of children between half a year and five years of age may have a *febrile seizure*. This is unavoidable, despite efforts at aggressive “fever management.” While anxiety provoking, these febrile seizures are usually benign (but need to be clinically evaluated). Call us urgently if a febrile seizure occurs.

**Sometimes a fever is a cause for more serious concern. We need to hear from you if your feverish child has difficulty waking-up, is inconsolable, is working hard to breathe, has a stiff neck or seizure, or has other extreme symptoms.**

Note that children normally breathe more quickly as their temperature increases, and less quickly as their temperature falls. You can expect most fevers to fluctuate during the day. They typically peak in the afternoon and early evening.

Finally, there are some things that you can do to help your child. Providing fluids is important. Although appetites typically fall while ill, it is important to make sure that your child is drinking adequately. Encourage your child to drink small amounts frequently to maintain urine output. Do not give water alone: give fluids containing electrolytes (such as Pedialyte). Additionally, children with fevers are usually more comfortable if they are dressed lightly. Do not overdress a febrile child; extra clothes or blankets can raise an infant or child’s temperature. They feel cold, but are not cold. As always, please call us if you are unsure about your child’s illness or have questions about this information.