

# What Your Patient Reads

## Should every fever be treated?

On February 28, the CBC News reported on recent research regarding fever and children. Dr. Farrar, co-author of the report states that parental anxiety about their child's fever often results in over treatment. Most often a child's fever is caused by viruses and will go away without medicine. There is no proof that untreated fevers lead to seizures or brain damage and there is also no evidence that lowering fevers reduces illness. The report says that: temperatures lower than 38 C (100.4 F) degrees are not considered a fever; there is no harm in treating a true fever with over the counter acetaminophen or ibuprofen; and the number one reason to use fever-reducing medicine is to make the sick child more comfortable. It also emphasizes that fever is not an illness but a mechanism to help fight infection. Fevers can slow the growth of viruses and bacteria and enhance production of immune-system cells. The report does not recommend any temperature cutoff or when to treat or call a doctor, but many physicians recommend calling the doctor if a child's temperature hits 40 or 40.5 C (104 or 105 F). Parents should also pay attention to other symptoms of illness, such as whether the child is unusually cranky, lethargic, not drinking liquids or avoiding food. Exceptions to this rule include infants that are younger than 3 months (seek medical help if temperature rises above 38 C (100.4 F) because young infants can be very sick without showing signs), children with heatstroke, and children with special medical needs (eg. heart conditions).

Fever over treated, MDs tell parents. CBC news, Feb 28, 2011. <http://www.cbc.ca/news/health/story/2011/02/28/fever-children.html>

### Referenced Work

Sullivan JE, Farrar HC; Section on Clinical Pharmacology and Therapeutics and Committee on Drugs. **Clinical Report--Fever and Antipyretic Use in Children.** Pediatrics. 2011 Feb 28. PMID: 21357332.

### Additional References from the Medical Literature

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Chiappini, E., Principi, N., Longhi, R., Tovo, P. A., Becherucci, P., Bonsignori, F., et al. (2009). **Management of fever in children: Summary of the Italian pediatric society guidelines.** *Clinical Therapeutics*, 31(8), 1826-1843.

### Sullivan's Key Points

- There is no evidence that fever itself worsens the course of an illness or that it causes long-term neurologic complications.
- Most fevers are of short duration, are benign and may actually protect the host
- Potential benefits of fever reduction include relief of patient discomfort, and reduction of insensible water loss, which may decrease the occurrence of dehydration
- Risks of lowering fever include delayed identification of the underlying diagnosis and initiation of appropriate treatment and drug toxicity
- When counseling families physicians should emphasize the child's comfort and signs of serious illness rather than emphasizing normothermia
- There is no evidence that reducing fever reduces morbidity or mortality from a febrile illness
- There is no evidence that antipyretic therapy decreases the recurrence of febrile seizures
- The real goal of antipyretic therapy is to improve the overall comfort and well-being of the child

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### Additional References from the Medical Literature

Dobson, J. V., Jacques, P. F., Bales, M., & Lee, R. (2008). **Managing the febrile infant: What is the standard of care?** *JAAPA : Official Journal of the American Academy of Physician Assistants*, 21(2), 50-53.

El-Radhi, A. S. (2008). **Why is the evidence not affecting the practice of fever management?** *Archives of Disease in Childhood*, 93(11), 918-920.

Kleijnen, J. (2009). **Clinical safety and tolerability of ibuprofen compared with paracetamol in pediatric pain and fever.** A systematic review. *Minerva Pediatrica*, 61(6), 757.

Makoni, M., & Mukundan, D. (2010). **Fever.** *Current Opinion in Pediatrics*, 22(1), 100-106.

Pierce, C. A., & Voss, B. (2010). **Efficacy and safety of ibuprofen and acetaminophen in children and adults: A meta-analysis and qualitative review.** *The Annals of Pharmacotherapy*, 44(3), 489-506.

Richardson, M., & Lakhanpaul, M. (2008). **Feverish illness in children under 5 years.** *Archives of Disease in Childhood. Education and Practice Edition*, 93(1), 26-29.

Roukema, J., Steyerberg, E. W., van der Lei, J., & Moll, H. A. (2008). **Randomized trial of a clinical decision support system: Impact on the management of children with fever without apparent source.** *Journal of the American Medical Informatics Association: JAMIA*, 15(1), 107-113.

- Parental counseling should focus on monitoring of activity, observing for signs of serious illness and appropriate fluid intake to maintain hydration
- Acetaminophen and ibuprofen, when used in appropriate doses, are generally regarded as safe and effective agents in most clinical situations
- Combination therapy with acetaminophen and ibuprofen may place infants and children at increased risk because of dosing errors and adverse outcomes and these risks must be carefully considered
- It is critically important for pediatricians to clearly describe the appropriate use of acetaminophen and ibuprofen to caregivers

### Links For Your Patients

#### About Kids Health: Fever

<http://www.aboutkidshealth.ca/En/HealthAZ/ConditionsandDiseases/Symptoms/Pages/FeverHome.aspx>

#### Caring for Kids: Fever and Temperature Taking

<http://www.caringforkids.cps.ca/whensick/Fever.htm>

#### Family Doctor.org: Fever in Infants and Children

<http://familydoctor.org/online/famdocen/home/tools/symptom/504.printerview.html>

#### Kids Health: Fever and Taking your Child's Temperature

<http://kidshealth.org/parent/general/body/fever.html>

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