

## **FEVER (pyrexia) - Simple facts you need to know** *Part 1, by OzChiropractic*



The sight of a little child in the grips of a major fever brings fear to most parent's hearts and is probably why fever is one of the most common reasons that parents seek medical attention for their children.

A study published in *Pediatrics*, Vol. 107, No. 6, June 2001, pp. 1241-1246 questioned parents and found well over 50% of them were very worried about the potential harm of fever in their children. Almost half considered 102°F to be a "high" fever, and 7% thought that a temperature could rise to greater than 110°F if left untreated. Ninety-one percent (91%) of parents believed that a fever could cause harmful effects; 21% listed brain damage, and 14% listed death.

### **Why a fever?**

When our body detects an irritant such as "infectious bugs," the white blood cells go into action in a specific way. They release a substance called endogenous pyrogen, which signals the brain's hypothalamus to raise the body's thermostat setting. In turn, the body heats up by increasing its metabolic rate, shivering, or seeking warm environments, i.e. wrapping yourself in a blanket.

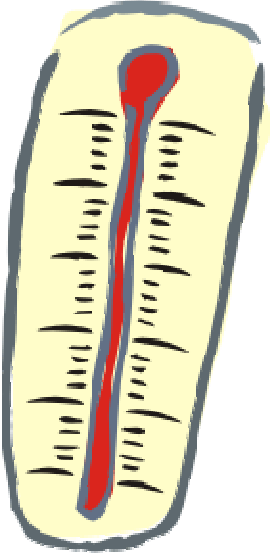
It also minimizes heat loss by restricting blood flow to the skin, giving it a pale appearance. Once body temperature rises, the skin flushes and sweats. A fever sufferer may lose appetite and feel lethargic, achy, and sleepy.

A fever is usually an expression of the immune system working at its best. Given that most animals mount a fever in response to illness, it's likely that humans have preserved this response because it improves survival; some research supports this theory. Animal studies show that when fever is blocked, survival rates from infection decline.

Fever increases the amount of interferon (a natural antiviral and anticancer substance) in the blood. A mild fever also increases the number of white blood cells that kill cells infected with viruses, fungi, and cancer, and improves the ability of certain white blood cells to destroy bacteria and infected cells. Fever also impairs the replication of many bacteria and viruses.

The severity of a fever is an unreliable indicator of the severity of the child's condition as it is often the sick child that does not have a fever and the well child that throws the raging fever (and I bet you thought it was the other way around).

Any time body temperature increases, salt and water are lost via sweating, and stores of energy and vitamins, especially the water-soluble ones, are burned up. The wisdom of the human body makes some minerals unavailable as bacteria need them



to thrive. In terms of energy stores, our bodies switch from burning glucose (the favorite meal of bacteria) to burning protein and fat.

Very high fevers - those above 106°F (41°C) - can harm the heart and brain. Some authorities, however, say that fever in this range is unlikely to cause brain damage in a previously healthy child.

During most infections, the brain keeps body temperature at or below 104°F (40°C). About 3 percent of kids have febrile seizures. Of those kids who have a first-time febrile seizure, about one-third have a recurrence. Frightening as these seizures are for parents, they're benign; once they pass, the child continues to develop normally. It is also noted that those children who have had their previous fevers suppressed by medication stand a greater chance of febrile convulsions.

Most people are **seriously misinformed** about the mechanisms and purpose of fever. The belief that fever is a disease rather than a symptom or sign of the body doing what it needs to do to enhance its immune response, leads many parents to want to stop the fever.

But, is that the best course of action and what are your choices? We will visit in the next issue.

**Go to Part II**

## **FEVER (pyrexia) - Simple facts you need to know** *Part 2, by OzChiropractic*

In our last issue, we discussed a study published in the journal, *Pediatrics, Vol. 107, No. 6, June 2001, pp. 1241-1246*, which found that most parents are both afraid and seriously misinformed about the mechanisms and purpose of fever. The belief that fever is a disease rather than a symptom or sign of the body doing what it needs to do to enhance its immune response leads many parents to want to stop the fever.

Today we will look at whether stopping the fever is the best course of action. If not, what other choices do you have?

In the above study, 73% of caregivers said that they sponged their child to treat a fever, 24% sponged at temperatures less than 100°F and 18% used rubbing alcohol.

In an article from *Archives of Disease in Childhood, 2000; 82:238-239*, the authors concluded that sponging and fans do little to bring down fever. They found that in the first half-hour to hour after sponging, a child's fever is reduced slightly, but even that effect is short-lived. It's like central heating...if you have the thermostat set high and then open the windows to cool the room, it is unlikely to work because the heating will just work harder to keep the room at the thermostat setting. During most common fever states the brain keeps body temperature at or below 104°F (40°C).

## **If sponging isn't useful, then what about using drugs to reset the thermostat?**

In a study reported in *Pharmacotherapy*, December 2000; 20: 1417-1422, the researchers compared the duration of illness in those who received aspirin or acetaminophen (paracetamol) for relief of fever with those who did not and found that **flu sufferers who took one of the anti-fever medications were sick an average of 3.5 days longer** than people who did not take either of the drugs. On average, flu symptoms lasted 5.3 days in those who did not take aspirin or acetaminophen, compared with 8.8 days in people who took the anti-fever drugs.

It makes sense that if fever helps defend against infection, giving fever-reducing medications may make things worse. We also notice in practice that when fever has been suppressed there is a greater frequency of reoccurrence in the future.

## **So, what are some ways you can support a fever?**

### **Increase fluid intake**

Fever increases fluid loss, and dehydration can drive up your child's temperature beyond what their body intends. Children with fever often do not feel thirsty, or by the time they do, they're already dehydrated. So keep offering fluids. Small, frequent sips are often best, especially if the child feels nauseated. If necessary, use a plastic medicine dropper to gently insert water into your child's mouth.

### **Dress warmly or lightly?**

The answer depends on your children's perception of temperature - follow their cues. If your child looks pale, shivers, or complains of feeling chilled (things that tend to happen in the early stages of fever), bundle them in breathable fabrics so that sweat will evaporate, but make sure they can easily remove the layers. If they are comfortable and their fever is low, dress them warmly and give warm liquids to assist the body's fever production. If they sweat and complain of heat, dress them lightly and let them throw off the blankets. This usually means the body is bringing the temperature down - either because it has finished the fever or it is just taking a break.

### **Food is not important**

People with fevers generally don't have much appetite. Let your child determine when and what they eat. Just bear in mind that consumption of sugary foods could delay the natural immune response.

### **Adequate rest**

Rest and sleep gives the child an opportunity to repair and rebuild.

### **Get them adjusted**

The regulator of the immune system as well as the fever is the nerve system, and interferences to nerve system function will stop the immune system from doing what it needs to. Get your child checked for subluxations on a regular basis and get an extra check if your child has a fever.

A fever is a vital function of the immune system and should be supported whenever

possible, not suppressed.

**This is Part II, [Click Here](#) to read **Part I****