

Fevers, Friend or Foe

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FEVER AS HEALER

It was Western history's first great physician, Hippocrates who said "give me fever and I will cure all disease". A shocking statement perhaps to some, as we are constantly reminded by advertisements for cold and flu medicines, which characterize fever as the villain, that we should always suppress a fever before it does harm. Within the past decade, research has provided a scientific basis for what has been observed empirically by physicians and those caring for the sick for hundreds of years; a fever that is allowed to develop and run its course naturally is one of nature's great healing responses.

The word "fever" is taken from the Latin word *favere* which means "to warm". In adults, the normal body temperature is considered to be 98.6 F (37C), with young children being slightly higher. While the onset of a fever may be frightening, it is not caused by a breakdown of the body's temperature-regulating mechanism as in heat stroke. Rather, it is the body's normal self-preserving mechanism of "hyperfunctional repair". In other words, a fever is a normally occurring body process that destroys the infecting agent or toxemia and repairs the damage done by these agents. It acts to preserve the status quo of the healthy body.

Fever may occur for a variety of reasons. It is most often a response to a bacterial or viral infection that has occurred because of the body having a lowered resistance. But fever may also occur when toxic wastes have accumulated in the body, the increased temperature serves to neutralize and eliminate the toxemia. In response to the offending agent's influence, an elevated temperature acts to increase resistance to disease and restore the body to health. Fever has been shown in research to elevate the white blood cell count. White blood cells act to bind toxic materials and engulf microorganisms, aiding in their removal from the body. In addition there occurs an elevation in the heart and respiration rates which aid to spread oxygenated blood to the site of infection. Microorganisms do not tolerate high oxygen environments well and are less likely to multiply. In addition, the body's metabolic rate increases, causing elimination of toxic wastes from the infection site. While enhancing these normal body mechanisms to fight disease, fever also acts to lessen microbe growth. Most microorganisms that cause harm to the body are only able to live within a narrow temperature range. A higher temperature destroys these organisms by restricting their growth and allowing the white blood cells to get the upper hand.

In the wholistic view, an elevated body temperature is the organism's way of correcting an imbalance between its own "vital force" and the external environment. Viruses and bacteria prevalent in the air, soil and water around us cause infections when a person's "vital force" is no longer able to oppose it. When we

are in good health, exposure to these infective agents can occur without the person getting sick. This is why some people get a "flu bug" that is going around while others are unaffected.

WELCOME COMPANION TO DISEASE

It is important in therapy to support a fever, allowing it to do its work by eliminating the infective agent or toxin and building the immune system. If not allowed to complete its natural progression, the body will become progressively weaker, unable to mount the reactive power to overcome disease. Administering agents that block the ability to mount a fever is similar to teaching a child to tie their shoes then never allowing them to do so because someone finishes it for them. When the time comes to do it on their own, they are not able to do a good job as they have not been able to practice and are not well prepared.

Fever then should be a welcome companion to any disease process. It signifies that the body is attempting to eliminate the disease and toxic influences upon it. The process can be enhanced by following a few simple guidelines.

1) **Rest** - decrease all unnecessary activity, take the day off from work or keep the child home from school. Take the time to keep warm and read a good book, or if your body tells you, sleep.

2) **Increase fluids** - drink at least 6-8, eight ounce glasses of water a day for an adult and slightly less for a child. If you feel the need for more, then do so. Decrease all foods, taking only soups and broths for nourishment.

3) **Medicines** - take only those that enhance fevers and sweating. Teas such as Yarrow, Chamomille or Cat Nip enhance this mechanism and also help to calm the person. Other immune stimulating herbs or homeopathic medicines are excellent for this process, and may be used along with hydrotherapy techniques which enhance their action.

4) **Monitor the temperature frequently** - especially in a child. Rectal temperatures run 0.5 °F above oral temperatures and those taken under the arm will be 0.5-1.0 °F below the oral value. The new electronic digital thermometers (battery operated), are felt to be slightly inaccurate compared to the standard mercury ones. This should be kept in mind if the temperature starts to approach 105 °F. The skin temperature measuring strips are good only as a screening test and a more accurate measure is needed to obtain a true value.

5) **Observe** - for changes in behavior, levels of consciousness or onset of convulsions and dehydration. Most parents have little problem with this as "parental intuition" plays a role. Your "feelings" should be listened to as they may prevent a fever or illness from getting out of hand. Dehydration may be assessed by pinching and feeling the skin on the face and hands for turgor (does the skin bounce back to its normal position) and dryness and observing the tongue for moisture. In newborns, retraction of the fontenells is a sign of dehydration as well. If in doubt, contact your physician.

6) **Let the person know** - you are there for them and that you care. This is felt to be one of the main therapeutic values of "chicken soup". Often times this is all it takes to allay fears and anxiety, which will aid in the healing process. Fear and anxiety have been shown in studies to depress the immune system.

SCIENCE DISCOVERS FEVERS

In studies done with animals, it has been discovered that with the first onset of fever, they will seek out a warm place in which to lie quietly. They refuse all food and take fluids only as necessary to maintain that which is lost with perspiration. Children and most adults, respond to fever much like animals. A child will often find a warm place to lie down or cling to an adult and insist on being held tight. They usually do not wish to eat their most favorite foods (even ice cream), and tend to drink fluids sparingly, or if perspiring. As time goes by, they tend to become more quiet and less likely to tell you what is wrong unless they are uncomfortable. This commonly observed behavior has been termed "adaptive withdrawal" and serves to concentrate the body's efforts on fighting the disease process.

Some children however, may not show any discomfort with fevers below 102 °F (39 °C) and, in fact, may wish to continue to be active and play. This may not hold true for infants, but refusal to breast or bottle feed and easy or unexplained irritability may be a sign of illness and fever.

Elderly persons do not often manifest temperatures like children or adults do, as they generally develop a lower temperature for a similar condition. In general, the elderly have a narrower tolerance range than adults or children and so a fever in an elderly person should be viewed as being serious and the reason for its occurrence should be sought.

BODY RESPONSES TO INFECTION

When infection occurs, there may be a gradual or sudden onset of fever. Frequently it is of a gradual nature, but is more noticeable when it announces its presence with sudden chilling and shivering. When this happens, the body's thermostat receptors in the brain, spinal cord, and in other parts of the body suddenly reset themselves at a higher mark. Vasoconstriction (flushed face and coldness of the hands and feet) and shivering occur. The heart and respiration rates increase and the person affected may become lethargic and wish to sleep or excitable, alert and restless. As the blood pours into the body's central core for warming, the skin will often feel hot and dry while the hands and feet may feel cold. Pyrogens, given off by white blood cells, serve to increase temperature by acting with the body's prostaglandins to reset the thermostat. Aspirin, which will reduce a fever, inhibits prostaglandin synthesis. Association of aspirin

usage in children with fevers and the onset of Reyes Syndrome (inflammation of the brain), has made this type of therapy less popular in recent years.

After the body has reached a sufficient temperature to overcome the infection, its "thermostat" resets at a lower temperature and sweating occurs. The fever is said to have "broken" and it is a sign that the crisis has now passed. The person affected will begin to feel better after resting.

As the person recovers, sweating may occur periodically as the body attempts to cool things down to keep the temperature from getting higher. For this reason, the fluid intake should be monitored, particularly in children, because fluid replacement is essential if prolonged sweating occurs. One of the values of "chicken soup" lies in its fluid and electrolyte (sodium, potassium, chloride and other mineral salts) content which helps replenish body fluid stores. If fever is accompanied by vomiting, then they may be given by enema in order to rehydrate. If diarrhea is present, then intravenous fluid replacement is necessary if the condition is prolonged.

Fevers above 106 °F should be controlled as brain damage may take place. While a core body temperature of 105 °F to 106 °F will not cause damage, the brain is comprised of much more delicate tissue than other organs and convulsions may occur. Convulsions are one of the first signs, along with extreme lethargy and unresponsiveness, that a fever is too high and should be brought down to a manageable 102 °F to 104 °F. Cold compresses to the neck and scalp will help decrease the temperature as will rubbing with alcohol or a Brand (decreasing temperature) bath. Anytime convulsions are present, the person should be seen by a physician immediately, especially if it is a child.

Fever without sweating is of concern, because elimination of toxins through the skin is important to temperature regulation and the body's ability to maintain optimal metabolic function. A fever can go on for a longer period of time provided it is accompanied by sweating. A high fever with no perspiration is cause for concern especially if the person is uncomfortable and unresponsive. In general, a fever can last anywhere from 1-4 days at temperatures between 101 °F and 104 °F and are higher in the morning and lower in the afternoon.

The duration of a fever is as important as how high it is. A high fever for a short period of time is tolerated better than a high fever for a longer period because there is less depletion of body energy reserves. The longer a fever goes, the less stamina a person has. While this varies from person to person, a person with a fever running longer than 4 days with no changes, should see a physician.

How one tolerates a fever then, depends upon how high it goes, how long it lasts, if there is sweating, and how much energy reserve a person has. In general, if the person eats well, tends to have few illnesses, and when they do, illnesses of short duration, and are fairly alert and oriented; they undoubtedly have a strong constitution and will be better able to handle the effects of a fever. They also tend to mount a fever quickly, a sign of a strong immune system.

By contrast the person who is frequently or chronically ill, has poor eating habits or eats poor quality food, and tends to be low energy when not ill is less likely to weather the effects of a fever. He or she will not spike the high temperatures needed to overcome the infection but will tend to have lower fevers which "hold the line" against infective agents but are unable to overcome them. Elderly persons are often in this group as a result of the aging process, narrow tolerance ranges and generally poor diets.

IDEAL FEVER

Ideally a fever will follow a pattern somewhat like this. There is a period of incubation when the infective agent or toxin has taken hold. This is where we first notice that we are getting a cold or flu and are feeling a bit "under the weather". Next, there is an aggravation period when temperature elevation occurs. The person tends to go into "adaptive withdrawal" as chilling often occurs. The destruction period is marked by a sustained high temperature to eliminate the infective agent and toxins. Next is the abatement stage which is characterized by sweating to bring down the fever; as mentioned previously, the fever is said to have "broken" and the person begins to feel better. The reconstruction period is the time when one wants to rest, as the body uses this time to restore its strength and resources.

For the most part fevers follow this pattern. There are exceptions however and different types of fever patterns can point to various infective agents. Fevers in adults tend to show up differently than in children because "grown ups" often do not allow their body's to fight the infection the way it was designed to. More often than not, adults continue to work and not rest, eat meals even though they may be nauseated or not hungry, take medications to "get rid" of symptoms and, in general, ignore the process. Continuing to ignore the condition will only prolong it and in the long run, make it worse.

It is interesting to note that many of the elderly will undertake actions that act to enhance the body's healing mechanisms similar to those discussed earlier in children. Perhaps this is due to lifestyle patterns learned in early childhood when there were fewer medicines available to counteract fever symptoms. It is also possibly due to instinctual patterns inherent in our bodies which are now heeded, as the effects of illness can be much more serious in this age group.

Only through supporting the body and its natural ally, fever, will it be able to overcome the disease or toxic process and simultaneously strengthen the vital force. In the long run it will make for less illness and a longer, healthier life.