

## Update 28

### Respecting the Body's Inborn Adaptive Responses - The Importance of Fever: An update

From a medical perspective fever is a symptom of an underlying disease and in general is considered potentially harmful in the pediatric age group as it may lead to febrile seizures, stupor, dehydration, discomfort and tachycardia. Many chiropractors similarly conceptualise their role such that they strive to help patients by 'reducing' symptoms, like fever, through chiropractic adjustments. However, from a chiropractic 'adaptationist' perspective one would be more respectful of the body's inherent wisdom such that before striving to interfere, one would appreciate the adaptive significance of fever. Fever results not from any mistake in temperature regulation but from the intelligently orchestrated activation of a sophisticated mechanism.

Below I share with you a few more snippets of the growing body of evidence that speaks loudly of the need for chiropractors to continue to respect and support the body as it orchestrates an essential adaptive response called fever. Reducing fever may delay recovery or worse.

In one study a group of researchers (1) explored the deleterious effects of interfering with fever in rabbits (*Oryctolagus cuniculus*). The rabbits were injected with *Pasteurella multocida* and either salicylate or a control solution.

Both groups developed fevers, but the fever of the rabbits infused with the antipyretic was reduced by 50% during the initial stage of infection.

All of the infected rabbits infused with salicylate, so that their fever was artificially lowered, died whereas only 29% of the infected control rabbits died. Rabbits receiving sodium salicylate alone did not die.

The authors concluded that,

"The increased mortality could possibly be the result of a fulminating infection caused by rapidly multiplying bacteria during the initial, attenuated phase of the febrile course in the salicylate-treated rabbits." The authors are suggesting that treating fever with salicylates resulted in increased mortality.

In a further study (2) the same researchers investigated the hypothesis that the increased mortality was the result of decreased killing and/or increased multiplication of bacteria during the initial,

attenuated phase of the febrile course in the antipyretic-treated rabbits. They found that the increase in bacterial numbers corresponded well to the increased mortality found in their previous study.

Interesting results have also been documented in humans -

One study reported that adults infected with rhinovirus and treated with aspirin were more likely to exhibit nasal viral shedding than those receiving placebo. (3) A similar (but non-significant) trend was recently reported with both aspirin and paracetamol; moreover, both drugs (and ibuprofen) increased nasal obstruction and suppressed the serum neutralizing antibody response. (4)

In a survey of 147 children hospitalized with bacterial infections, no difference in length of stay was found between patients receiving two or more doses of antipyretics during their stay and those receiving no or one antipyretic dose. (5) A randomised clinical trial in children with chicken-pox found no significant differences in duration of symptoms (itching, activity, or appetite) but a longer time to total crusting of lesions in paracetamol compared to placebo treated subjects. (6)

What then might be the role of chiropractic?? Because some symptoms like fever have an important health optimising function, we as chiropractors might do well to explore, clinically and scientifically, the extent of our role, via the chiropractic adjustment, in helping the body to accurately interpret its environment and thereby generate the optimum adaptive response. Making the conscious decision not to attempt to minimise a child's fever (when  $<42^{\circ}\text{C}$ ) seems counter intuitive at first. However, according to the above studies we will do well to avoid arrogantly assuming that fever should be 'fixed' as if the body is malfunctioning. We might also help to improve the well-being of our species by further exploring the degree to which symptoms in general are an intelligent and appropriate response to internal and external environmental stimuli.

Interestingly a new paper, just published in *BMC Pediatrics* (7), poses the question, "Is fever suppression involved in the etiology of autism and neurodevelopment disorders?"

[Note - Harmful effects of fever are rare and are found mainly in very ill children with very high fever (above  $42^{\circ}\text{C}$ ). High fevers or rapid rise in temperature in young children are associated with febrile convulsions but these generally resolve spontaneously and are not associated with long-term neurological complications.]

#### References:

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