



# The Tao of Pediatrics and Chinese Medicine

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symbol. Aside from the expression that energy equals matter, this symbol also expresses the interdependence of every part of a system. Thus, Taoist theory did not separate a disease from the environment it thrives in.

When treating a disease, the Chinese used several strategies typically in combination: attack the disease directly, strengthen the host to overcome the disease, and change the environment to where the disease can no longer sustain itself. How can we apply these strategies to pediatrics?

Because the ancient Chinese were an agricultural society, they were very aware of the interplay between people and their environment. Thus they described imbalances of the body in the same way they perceived imbalances in the environment. There were disease factors of cold (impeded circulation, organ or glandular hypofunction), heat (inflammation), dampness (fungus, molds, yeasts, endogenous or exogenous toxins), external wind (viruses, bacteria), internal wind (tics, tremors, seizures) and dryness (dehydration). These disease factors could be combined as well, so you could have wind combining with heat, which could be a bacteria or virus associated with sore throat, high fever, rashes and sweating.

To correct imbalances, the Chinese took a holistic approach. In the above example, not only would the microorganisms be addressed, but the internal environment would be altered and the host strengthened. This is where Chinese medicine becomes an art. The physician must decide which part of the strategy to prioritize. For example, in a strong child, a physician may decide to attack the microorganism directly. In a compromised child, the physician may want to deal with the microorganism indirectly by changing the terrain of the body.

So what does altering the terrain mean?

The internal environment is a result of the interaction of many factors that include genetics, diet, emotional factors, and external



environmental factors (such as xenobiotics, climate, radiation and other geopathic stressors). Altering the terrain can involve detoxification of xenobiotics and endotoxins, resolution of nutritional deficiencies and regulation of other physiological processes in the body. To accomplish this, Chinese medicine utilizes a wide variety of modalities such as acupuncture, herbal medicine and dietary therapy.

Before applying these therapies, a thorough evaluation must be performed. In children it is difficult to rely on subjective complaints so the Chinese have developed an intricate diagnostic system based on observation and palpation. Facial complexion, eyes, hands, nails, body morphology, tongue, ears, and mouth are examined. Qualities in the radial and carotid pulses, variances in temperature and quality at specific acupoints on the abdomen and along the paravertebral muscles are often palpated. Once the terrain has been assessed, then the appropriate treatment can be applied.

## Acupuncture

Acupuncture is a surprisingly effective modality for affecting many physiological processes in the body. According to acupuncture theory, energy circulates through the body along a series of pathways called meridians. Most meridians correspond to different organ systems and travel through all layers of the body.

Researchers are attempting to explain this phenomenon in many ways. Measurements of electrical current, release of enkephalin,  $\alpha$ -endorphin, serotonin, norepinephrine and



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cortisol levels have all been demonstrated, but these do not explain many of the physiological changes these points can induce. There is other promising research being conducted at the University of California Irvine by Dr. Zang Hee Cho, one of the inventors of the fMRI. Utilizing the fMRI, Dr. Cho has demonstrated the effects of distal acupuncture points on blood flow in the brain. For example, when a point traditionally indicated for the treatment of ocular disorders was stimulated, the fMRI showed an increase in blood flow in the visual cortex.

Unfortunately, research in acupuncture in the West is still in its infancy. There have been relatively limited numbers of Western studies done in pediatrics. Examples of some of the research in which acupuncture was shown to be effective in pediatrics include pain, post-operative nausea and vomiting, constipation, drooling, nocturnal enuresis and asthma. However, the range of conditions spans far beyond those mentioned due to the inherent energetic nature of acupuncture.

Modern acupuncture needles are very fine (generally between 32 and 38 gauge). They are manufactured in sterile blister packs and are disposed of immediately after use. Children are very sensitive to the effects of acupuncture and needles do not need to be retained very long. The older the child, the longer the needles are retained. Generally, the length of the needles is between 1/2 and 1 inch. Many pediatric acupuncturists use very shallow insertion (5mm), especially within the Japanese traditions.

Both research and anecdotal reports indicate that many children find acupuncture "positive or relaxing." Most fears were found to be overcome through communication and positive reinforcement. Should fear continue to be an issue, there are several effective non-invasive techniques available. These include:

- Microcurrent electrostimulation to acupoints
- Shonishin: Japanese pediatric technique involving a set of tools to be used to stimulate strategic meridians
- Magnet therapy (800-10000 gauss)
- Laser therapy (1-10 mW)
- External application of herbal preparations, essential oils or seeds to acupoints
- Massage and acupressure

#### Herbal Medicine

Herbal medicine can be a gentle and effective therapeutic modality. In Chinese Herbology, herbs are very rarely used alone. Combining herbs allows the practitioner to customize the formula to the specific needs of the child.

For example, a commonly used herbal formula from the later Han dynasty (25-220 CE)

used for influenza is cinnamon twig decoction (Gui Zhi Tang). This formula includes 5 ingredients: *Cinnamomum cassia*, *Peony lactiflora*, *Zingiber officinalis*, *Ziziphus jujube*, and *Glycyrrhiza uralensis* (honey-fried). *Cinnamomum* has been demonstrated to have antibiotic properties against such microorganisms as *Staphylococcus aureus*, ECHO virus and *Salmonella typhi*. It also has antipyretic and vasodilating properties. *Peony lactiflora* is anti-inflammatory and antibiotic in nature (*Shigella sonnei*, *Staphylococcus aureus*, herpes zoster). The remaining herbs are primarily for mitigating inflammation, and to protect, soothe, and strengthen the gastrointestinal tract. They can help alleviate symptoms such as nausea, sore throat, and abdominal discomfort. They also prevent negative interactions between incompatible herbs or other medications. While the great majority of research exists in the Chinese Medicine literature, empirically based research in the United States is less established.

As the terrain begins to change, an adequately trained herbalist will modify the ingredients and dosages. Herbal medicine can also be used in conjunction with pharmaceuticals to help support the child and minimize adverse drug reactions.

### Dietary Therapy

According to Chinese Medicine, children under the age of 6 do not have adequately developed digestive tracts. It is felt that many pediatric diseases can be directly attributed to inadequate dietary habits or the relative inability of the child to digest his/her foods. This creates toxic by-products the Chinese termed dampness. The dampness can be thought of as the undigested by-products and the heat can be thought of as the body's response (possibly allergies, otitis media, sinus infections). Acupuncture and herbal medicine are used to correct imbalances, but if the imbalance is rooted in the digestive impairment, it may continue to recur until the diet is addressed.

When used properly, Chinese Medicine can be a safe and effective adjunctive therapy for children. Research has shown that children respond favorably to acupuncture and herbal medicine. In 1992, NIH formed the National Commission for Complementary and Alternative Medicines and was allocated 50 million dollars for research. Currently, the NCCAM is expecting 113.2 million dollars in funding. Presently, at Childrens Hospital of Los Angeles, we are beginning a research program in collaboration with the Magik Pain Program and the Childrens Center for Cancer and Blood Diseases examining the integration of acupuncture for decreasing pain and fear in children going through painful medical procedures.

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#### FOOTNOTES

- <sup>1</sup> The sievert (Sv) is the current standard international unit used to describe a human radiation dose, used preferentially over the more familiar "rad." Sv refers to the *effective dose*, taking the type of radiation and tissue involved into consideration, while rad refers to the *absorbed dose*.

### ERRATA

The text below was missing from Dr. Harvey Karp's article Solving the Colic Mystery: The Fourth Trimester, the Calming Reflex and the Five "S's", which appeared in the Fall 2002 issue of *California Pediatrician*. *California Pediatrician* regrets the omission.

The calming reflex and Five "S's" are presented in detail in Dr. Karp's new book and video, "The Happiest Baby on the Block." To learn more, visit [www.thehappiestbaby.com](http://www.thehappiestbaby.com).

