

# Stop Treating Your Pediatric Patients Like Little Adults

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In traditional Chinese families, the wisdom of the elder and the impulses of the child are not seen as opposite sides of the same coin. Children are not miniature adults and should not be treated as such. Chinese medical pediatrics has a rich history, and many good resources are available on the subject. This article offers a brief overview of some basic differences to consider when treating pediatric patients. Future articles will introduce readers to some specifics of diagnosis; treatment modalities; and herbal therapy in Chinese medical pediatrics.

Many physiological and pathological differences exist between children and adults. The younger the child, the more striking the difference. From birth through childhood, children are engaged in an unceasing process of growth and development. This process is reflected in the following 10 areas of divergence between children and adults in Chinese medical theory.

## Children Tend Toward Excess in Wood and Fire, Deficiency in Earth, Metal and Water

The embryological development of a human, according to Chinese medical theory, closely follows the generation (*sheng*) cycle. Gestation occurs over 10 lunar months, allowing two months for each of the five elemental *zang fu* to develop; the meridians then spring forth from their respective organs. Wood and fire, the first two elements in the generation cycle, have the longest time for development and therefore are the most abundant at the time of birth. Conversely, the systems of the kidney and lung (the latter having no prenatal function) have the shortest time for development, resulting in relatively frail respiratory and urinary functions in children.

Additional evidence of the excess in the wood element can be seen in the relatively large physical size of the liver. Anatomical renderings of child anatomy show that the liver takes up approximately two-thirds of the space in the abdominal cavity, diminishing the physical space available for the spleen, stomach, intestines and kidneys. One theory explaining the liver's relatively large size is the demand placed on it to process toxins pre- and post-natally.

## Children Are Susceptible to External Pathogens

The lung and kidney systems together are responsible for general health, immunity and *wei qi*. In light of the inherent deficiency of these organs, it follows that children are highly susceptible to invasion by external pathogens. Moreover, the delicate nature of a child's skin leaves their interstices vulnerable and open to invasion by pathogenic factors. The incomplete closure of the fontanel, and the undeveloped control over the lower orifices in the developing child, are additional portals through which pathogens may enter. Biomedical theory also recognizes that children have no independent immunity and rely entirely on antibodies passed through the breast milk for protection against pathogens.

## Children Have Undeveloped Digestive Systems

Children have no prenatal function of the spleen and stomach; the digestive and transformative functions are contributed by mother, and nutrients are distributed directly to the blood via the placenta. The *qi* of those organ systems only begins functioning after birth; hence, they are undeveloped initially and are unable to assimilate anything but rudimentary forms of nourishment. To balance this inherent weakness, importance must be placed on establishing regularity of diet in children, including appropriate feeding times and portions.

### Children Produce Phlegm Easily

When the function of the spleen to transform and transport food essences is inhibited by developmental weakness, dampness results. In the internal yang environment of a child, this dampness quickly transforms into phlegm. Children are susceptible to a variety of dampness and phlegm patterns including *gan*, a special class of childhood disease sometimes referred to as childhood nutritional impairment or infantile phlegmy. In *gan*, the phlegm produced obstructs the functioning of any organ system leading to differentiated pattern pathology specific to the system affected.

### Children Tend Toward Excess Yang and Deficient Yin

Yin is a buffer to our external environment. Without significant substance to insulate and protect their core temperature, children are highly susceptible to even modest environmental changes; they will overheat or become hypothermic much more quickly than adults. Their small physical stature and highly active nature creates a natural yin-deficient state. This yin-deficient state also causes insufficient fluids; therefore, dehydration and bladder infection is always a concern when working with children.

The deficient yin and highly active nature of children set the stage for excess yang. Children run hot and are very prone to spiking high fevers. Fever consumes the already deficient yin, drying out mucus membranes and leading to further yin damage, especially in the lungs and stomach. An acute fever in children is considered a good sign, representing sufficient *qi* and yang to fight an invading pathogen. However, excessive heat consumes *qi* and yin, and will quickly weaken a child.

Cradle cap, a common phenomenon in children, shows the interaction between the predisposition to yang excess leading to yang rising and the predisposition to phlegm. This phlegm is carried up to the vertex by the rapidly rising yang, creating the damp-heat condition.

### Children Inherit Fetal Toxins

Children inherit toxins *in utero*, from their mother. These toxins come from various sources. Physical or emotional stress, or shocks experienced by the mother, affect the developing child. A common form of toxins come from dietary factors including hot, spicy foods or chemically processed foods consumed by the mother during gestation. Toxins also include hormones transferred from the mother to the fetus, and febrile disease contracted by the mother. Finally, alcohol, pharmaceutical and recreational drugs, and exposure to pesticides or other poisons, transmit to the fetus.

Children naturally attempt to release or expel these toxins after birth. The release can take various forms including hyperactive behavior; febrile disease; or skin eruptions.

### Children Are Highly Susceptible to Emotional Stress

As previously discussed, the liver is disproportionately large in children, making them more susceptible to emotional stress. This disproportionately large liver acts like a highly sensitive

internal satellite or antenna, picking up all emotional *qi* in the vicinity and making children extremely irritable, or "liverish." Anyone who has raised a child can attest to a child's inherent ability to sense emotions in their environment and therefore be affected by them.

### Children Are Prone to Convulsions

Febrile convulsions and seizure disorders are far more common in children than adults, and are considered less serious. Convulsions are a result of the child's lack of yin substance; the tendency towards heat and hyperactive yang; and the presence of dampness and phlegm obstruction. These episodes can have an abrupt onset (and equally abrupt resolution). Convulsive episodes can be minimized or avoided by working to strengthen digestion, transform phlegm, supplement yin and anchor yang.

### Children Depend on the Kidneys for Growth and Development

Children are engaged in a constant state of growth and development. The kidneys govern growth and development. As we observed earlier, they are among the last organ systems to form, and therefore have the shortest time to develop prenatally. The inherent weakness of the kidneys, combined with the rapid and constant burden placed on them by the developing child, emphasizes the importance of supporting them throughout childhood.

### Pathogens Easily Become Entrapped in Children

When you combine all of the above factors, it is easy to see how pathogens, which enter the child with relative ease, can become entrapped. When the child lacks the *qi* to fully expel the pathogen, it becomes bound with dampness and phlegm, while rapid growth and development occurs all around, leaving it to dwell within.

### Conclusion

Keeping the above principles in mind, the importance of viewing and treating the pediatric patient differently than a miniature adult is clear. As a general rule, a pediatric treatment should include regulating or clearing the liver and heart while strengthening or supplementing the stomach, spleen, lungs and kidneys. Children have clear and healthy visceral *qi* and vigorous vitality, which leads to rapid recovery from disease. Expect the condition of the child, and therefore your diagnosis, to change easily and rapidly compared to the adult patient, and be ready to modify treatment protocol and herbal therapy at shorter intervals. Recognize the importance of everything in the child's environment in light of their susceptibilities, and educate parents about issues of diet and emotional factors to balance these predispositions toward pathology. Finally, don't be afraid to treat the child exhibiting an acute and relatively extreme sign or symptom; based on the above factors, it is not as severe as it would be in an adult patient.

For more information on pediatrics in Chinese medicine, make yourselves familiar with some of the resources listed below and expand your practice with confidence.

### Sources

- Cao J, et al. *Essentials of Traditional Chinese Pediatrics*. Beijing: Foreign Language Press, 1996.
- Crelin E. *Functional Anatomy of the Newborn*. New Haven: Yale University Press, 1973.
- Flaws B. *A Handbook of TCM Pediatrics*. Boulder, CO: Blue Poppy Press, 1997.
- Scott J, Barlow T. *Acupuncture in the Treatment of Children*, 3rd ed. Eastland Press, 1999.
- Tiberi A. Clinical experience and lecture notes.

- Xu X, et al. *The English-Chinese Encyclopedia of Practical TCM*, vol. 13: Pediatrics. Beijing: Higher Education Press, 1994.

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