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**FILE: ■ Allergy-Related Disorders**  
**■ Children**  
**■ Integrative Therapy**

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**RE: Integrating Therapies to Treat Allergy-Related Disorders in Children**

Rosen LD. An integrative approach to atopic disorders in children. *Altern Complement Ther.* April 2007:71-77.

Among the atopic disorders increasing in prevalence of U.S. children are asthma, food allergies, eosinophilic esophagitis in newborns, and dermatitis, gastroesophageal reflux, chronic rhinorrhea, and recurrent wheezing in infants. The so-called "atopic march" represents the natural tendency of children with early signs of allergic reaction to environmental stimuli to progress to more severe manifestations of allergic disease. Many families turn to complementary and alternative (CAM) therapies to prevent and treat atopic disorders in children.

The author refers to the functional medicine "iceberg" model as a way to understand a new method of care for children with atopic disorders. The tip of the iceberg represents the visible phenomena in atopic children (skin rashes, vomiting, runny noses, and coughing). Beneath the tip is a genomic predisposition -- a familial and individual tendency to develop immune dysregulation under certain environmental circumstances. Individuals with a genomic predisposition, under certain environmental circumstances, will suffer metabolomic consequences manifested by an increase in oxidative stress.<sup>1</sup> Certain immune cells are overstimulated relative to others, resulting in an imbalance between Th1-dominant and Th2-dominant immune responses.<sup>2</sup> Evidence suggests that certain infectious, nutritional, or toxic events may affect Th1/Th2 balance.<sup>3</sup> Perhaps, says the author, practitioners can intervene prenatally, or even preconceptionally, to prevent the inevitable sequence of events.

The "hygiene hypothesis" is a popular theory to explain the increase in atopic disease prevalence. According to this theory, many environments are too "clean," (because of the eradications of infectious agents by vaccines, anti-infectives, and "super-clean" living conditions), and individuals are not exposed to as many antigens (bacterial, fungal, or viral) as were those of previous generations. Another explanation is that another environmental factor, increased societal stress, is shifting the human immune response toward Th2-dominance.<sup>4</sup>

For at-risk individuals, exposure to certain foods may contribute to severe, lifelong asthma or food allergies. Focusing on the following areas is important: maternal pre- and postnatal antigen

avoidance; breastfeeding; choice of infant formula supplementation; timing of solid-food introduction; and fatty acid intake (both in breastfeeding mothers and in infants).

Many CAM therapies are reportedly effective for preventing and treating allergy diseases. Several studies have demonstrated that probiotics, given prenatally to women and then postnatally to either breastfeeding mothers or directly to formula-fed infants, can reduce the incidence of atopic dermatitis by half in infants at high risk. Prebiotics (special oligosaccharides that act as nutrients for probiotic growth) have also been shown to prevent eczema in vulnerable infants. The author cites other studies, including several randomized controlled trials that suggest a positive effect of probiotics and prebiotics on the course of atopic dermatitis.

Many botanically derived products have been used to treat eczema, allergic rhinitis, and asthma. One of the most promising herbs for allergy treatment is butterbur (*Petasites hybridus*). In one cited study, a specific butterbur leaf extract Ze 339 (Max Zeller Söhne AG; Switzerland) was shown to relieve allergic rhinitis effectively and safely. In other cited studies, boswellia (*Boswellia serrata*) gum resin and French maritime pine bark (*Pinus pinaster* syn. *P. maritimus*) were shown to reduce asthma symptoms.

In traditional Chinese medicine, says the author, acupuncture has been singled out as a promising therapy for conditions such as asthma, and acustimulation is considered a potential part of the care of children with atopic conditions.

Among the most widely studied, safe, and effective treatments for the stress component of atopic disorders are mind-body therapies, including self-hypnosis, guided imagery, biofeedback, mindfulness-based stress reduction, and meditation. Manual treatments include chiropractic, osteopathic manipulation, and therapeutic massage.

The author concludes that holistic integration of CAM and conventional strategies coupled with dedication to evaluating and alleviating environmental triggers can help families avoid the "allergic march to lifelong atopic disorder." He further writes: "It is often the practical combination of several approaches (e.g., nutritional modification, environmental trigger avoidance, or stress-coping skill training) that make the most sense and the biggest difference."

—Shari Henson

## References

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- <sup>2</sup>Kidd PI. Th1/Th2 balance: the hypothesis, its limitations, and implications for health and disease. *Altern Med Rev.* 2003;8:223-246.
- <sup>3</sup>Chung EK, Miller RL, Wilson MT, McGeady SJ, Culhane JF. Antenatal risk factors, cytokines and the development of atopic disease in early childhood. *Arch Dis Child Fetal Neonatal Ed.* 2007;92:F68-F73.
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