

Good News for **Childhood Asthma Treatment**





Recent advances in childhood asthma diagnosis, treatment, and control are changing the landscape of how pediatricians help children who suffer from the disease.

By Bonny McClain

In recent years, research into the diagnosis and treatment of childhood asthma has made a real difference in the control of asthma among children. The burden of asthma is greater for children than for the rest of the population. Asthma is the most common lasting disorder in childhood, currently affecting around 6.2 million Americans under 18 years of age.

The reason why some people get asthma and others do not is still largely a mystery. Research findings have identified factors associated with asthma development, but none have proven to be the cause. However, when it comes to controlling asthma, the results have been far more helpful.

Asthma occurs when the small airways of the lungs become inflamed and narrower. Today's asthma medicines help reduce airway inflammation and relieve or prevent airways from narrowing. Two types of medicines are currently used to treat asthma: anti-inflammatory agents and bronchodilators (medicines that dilate, or expand, the bronchial air tubes).

Anti-inflammatory drugs halt the current airway inflammation and may also prevent future inflammation from developing. These types of drugs include corticosteroids, cromolyn sodium, and other anti-inflammatory compounds, and are usually inhaled. A new class of anti-inflammatory medications known as leukotriene inhibitors blocks the activity of chemicals called leukotrienes (LOU-koh-treenz) that are involved in airway inflammation.

An Individual Approach

Perhaps the most promising advance in treatment is an individualized approach to asthma therapy. Not all asthma patients respond to the currently approved treatment medications. Individualized reductions of asthma triggers (allergies, secondhand smoke, cold dry air, et al.) and individualized therapy addresses that problem. Today, pediatricians are moving toward improving asthma control and identifying new therapies that will help to stop asthma symptoms completely for each patient.

Researchers hope that an individual approach to treating asthma will lead to new information about what may cause poorly controlled asthma and potential new targets for therapies. This approach will be the topic for future research to advance asthma care for children.

The Asthma–Sinusitis Connection

Sometimes the symptoms of asthma continue even when patients are on appropriate medications. Research has shown a relationship between sinusitis and asthma. For some children who do not improve with asthma therapy, aggressively treating sinusitis (inflammation of the sinuses) may also significantly improve asthma symptoms and quality of life.

Asthma Fast Facts

- **Secondhand smoke can cause serious harm to children, especially those with asthma. An estimated 400,000 to 1 million asthmatic children have their condition worsened by exposure to secondhand smoke.**
- **Asthma is the third leading cause of hospitalization among children under the age of 15.**
- **Within the last few years, death and hospitalizations due to asthma have generally decreased, except for small children.**
- **Over 9 million U.S. children under 18 years of age (13 percent) have been diagnosed with asthma, and 6.5 million children (9 percent) currently have asthma.**
- **Boys are more likely to have asthma than girls.**

The sinuses are the hollow air spaces within the bones surrounding the nose. They can become blocked, resulting in infection and inflammation within the sinus space, leading to sinusitis. Not only does sinusitis trigger asthma at times, an important symptom of sinusitis in children, namely coughing, can mimic asthma.

Sinusitis in children is underreported in the medical community, notes Dr. Frank Virant, Clinical Professor of Pediatrics at the University of Washington School of Medicine. Sinusitis often begins as a cold that then turns into a bacterial infection after long periods of inflammation. The symptoms can be different from those seen in adults. For example, children report sinus pain less often than adults. Sometimes the diagnosis can be difficult to make. A cough that continues for weeks may indicate sinusitis and persistent inflammation, adds Dr. Virant.

Dr. Virant also notes that certain children appear to have colds all the time. "Most childhood colds should last 5 to 7 days, not continue for weeks with constant coughing," he says. When treating children with asthma, physicians should not forget to pay attention to the upper respiratory tract, as these steps can also benefit asthma control.

Other Advances in Childhood Asthma Research

New guidelines for asthma diagnosis and treatment are being developed by the country's leading asthma experts. They should be released in late 2007 and will help doctors treat asthma even more effectively. While inhaled corticosteroids therapy continues to be the preferred treatment for persistent asthma, other recent advances in understanding childhood asthma include:

- Questionnaires about asthma symptoms are good at predicting future asthma episodes in people older than 10 years of age, but are not as effective with younger children.
- Evaluating and managing severe asthma should include assessment for other illnesses that can either mimic or aggravate asthma and make it difficult to control.
- Treatments that work best include taking medications as prescribed, using the inhaled medications with proper inhaler technique, and, sometimes, using a combination of medications.
- Using inhaled corticosteroids early in childhood asthma reduces illness but does not alter the natural progression of the disease.
- Each patient responds differently to asthma treatment. That is true even among patients whose asthma symptoms are about equally severe. This difference in treatment response points to the importance of gauging asthma symptom control and making adjustments as needed.
- An individualized approach to asthma treatment seems to work best. ●

