

Breath of Fresh Air

Volume 9, No. 2

Information, news and advice for improving asthma well-being

Summer 2006

Your Invitation to the Ball

Partners Asthma Center will hold its second annual **Dinner-Dance and Silent Auction on Thursday, October 12** at the Hyatt Regency Hotel in Cambridge—and you are invited to attend.

This gala evening is a fundraising event for our Asthma Center. With the money raised, we will be able to continue and expand our efforts in asthma care, education, research, and community outreach.

Example: in response to recent concerns about the safety of certain asthma medications, we have created an educational pamphlet discussing the long-acting inhaled beta-agonist bronchodilators and made it available at all of our practice sites. We are in the process of creating and printing a version of this pamphlet translated into Spanish.

Example: we have obtained state-of-the-art pulmonary function testing equipment for our practice sites at two inner-city neighborhood health centers.

Example: we continue to make spacers, peak flow meters, and peak flow diaries available to our patients at no charge.

We still have much work to do—at our hospitals and in the community. Here's a brief sample "wish list." With enough financial support and sufficient personnel, we could:

- make a toll-free phone line and information service (a 1-800 telephone number) available to anyone with a question about asthma and related diseases;
- we could staff an "Asthma Van" that visited schools and inner-city community centers to provide free asthma advice;

- we could ensure appropriate follow-up care at Partners Asthma Center for all patients admitted to participating Partners hospitals with severe asthmatic attacks;
- and we could create electronic databases about our asthmatic patients and their care across the entire Partners HealthCare system.



This year at our Dinner-Dance we will honor John Auerbach, Executive Director of the Boston Public Health Commission, for the work that he and

his commission have done to improve the lives of people living with asthma in Boston. And we will give recognition to three of our patients who have made remarkable achievements despite their asthma.

Here are the event details:

Location: Hyatt Regency Hotel, 575 Memorial Drive, Cambridge.

Time: Silent Auction begins at 6:30 p.m.; dinner begins at 7:30 p.m.

Music by: The Pulse of Boston.

Ticket prices: \$150 for 1 ticket; \$275 for 2 tickets; \$1,250 for a Table of 10. A few "scholarship tickets" are available for those who wish to attend but cannot afford to contribute the ticket price.

For more details, contact Jackie at 617-732-7464 or visit our website at www.asthma.partners.org.

We hope to see you there. Come join us for a wonderful evening of good food, camaraderie, and dancing—all in the service of a good cause.

Allergen Avoidance—Does It Really Work?

If you have asthma and are sensitive to some of the common allergens that trigger asthma, your doctor may have recommended that you make changes in your home or workplace to minimize your exposure to them. Make “environmental modifications,” as they say. Reduce your exposure to the triggers of your asthma, and you will feel better. Makes sense, but do we know that it works?

In fact, some of the earlier scientific studies were somewhat discouraging. Those patients who were dust-mite allergic and put air purifiers (free-standing high-efficiency particulate air or HEPA filters) in their bedrooms did not have improvement in their asthma. Patients who were dust-mite allergic and wrapped their mattresses and pillows with impermeable, “allergy-proof” wraps did no better than the control group of asthmatic patients who used traditional cotton covers. It seemed that asthma was too complicated to be made better by fixing only one of the contributing causes.

But here comes the good news. Recently investigators tested whether a multi-faceted approach might work, reducing exposures to multiple allergens at the same time. And they took on as their challenge the most difficult setting: the homes of children living in poverty in the inner city. In several cities across the country, including Boston, “intervention teams” went into these homes to help families reduce allergen exposures. Here’s what they did:

- Professional cockroach extermination for children allergic to and exposed to cockroaches
- Impermeable covers for the mattress, box spring, and pillows
- Vacuum cleaners with HEPA filters
- Free-standing room HEPA filters when there was a pet or a cigarette smoker in the home or if the child was allergic to mold

In this experiment other families were enrolled but did not receive this “environmental modification” intervention. The outcomes were significantly different between the two groups. Children in the homes where allergen exposure was diminished had better asthma control, including more symptom-free days, compared with the control group. The improvement was said to be of the sort that might be achieved with daily medication with an inhaled steroid – quite dramatic! And the benefit was sustained for two years, even though the intervention teams stopped their home visits after the first year.

Our sense is that this study should give every person with allergic asthma encouragement. Like the song about New York City — “if you can make it here, you can make it anywhere” — if allergy control measures can be successful in poverty-ridden, inner-city, multi-resident dwellings, they can likely help in your home (or workplace or child’s school) as well. And as a reminder, the list of indoor allergens to which people with asthma tend to be sensitive is relatively short: dust mite, mold, cats and dogs (and other furry animals), and cockroaches. One other key (non-allergic) thing to tackle at home and elsewhere: *cigarette smoking*. We will address new developments in aids to smoking cessation in the next issue of *Breath of Fresh Air*.

Breath of Fresh Air

Editor-in-chief

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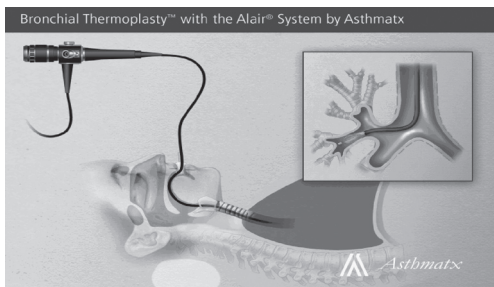
News About Asthma

Bronchial Thermoplasty

Talk about “thinking outside of the box,” here’s a novel idea for the treatment of asthma. What if you could reduce the mass of bronchial muscle that surrounds the bronchial tubes, and thereby render the muscle less able to contract in response to the usual triggers of asthma? Might you make the bronchial tubes less “twitchy,” and less likely to narrow? Could you prevent “bronchospasm” to some degree by reducing the amount of muscle tissue that causes it?

That is the rationale behind bronchial thermoplasty, an attempt to destroy some of the muscle that surrounds the bronchial tubes by heating it via radiofrequency energy applied to the airway wall. The Asthma Research Center at Brigham and Women’s Hospital is joining more than 30 other medical centers worldwide in an on-going research trial to test the safety and effectiveness of this procedure. Preliminary results from a Canadian study of 16 asthmatic patients treated with bronchial thermoplasty and then monitored for two years was recently published in a medical journal, and the results were encouraging. All subjects had significantly less twitchiness of their airways (less bronchial hyperresponsiveness) after the procedure, and this difference persisted for the two years of follow-up. Symptoms and peak flow values also improved when tested three months after the procedure.

The procedure involves bronchoscopy (a flexible tube with a camera at its end introduced



through the mouth and back of the throat into the windpipe and bronchial tubes) performed on two or three occasions. Each session takes about 30 minutes and is conducted with subjects sedated with medications. To date, side effects appear to be few and mild, and no harmful permanent injury to the bronchial tubes has been observed.

The long-term value of bronchial thermoplasty for persons with asthma of all different degrees of severity remains to be determined. It will be determined by the results of current and future randomized clinical trials, where persons with asthma of similar severity are randomly assigned to receive either bronchial thermoplasty or their usual therapy (control group) and are then observed for differences in outcomes.

New Therapy Products

This fall GlaxoSmithKline will introduce two new products for asthma therapy. (Disclaimer: *Breath of Fresh Air* newsletter receives grant support from GlaxoSmithKline in partial support of its printing and mailing costs.)

Ventolin-HFA with built-in dose-counter.

One of the frustrations with use of metered-dose inhalers (MDIs) is trying to determine when they are empty and can provide no medication, or when they are nearly empty and need replacing. This fall GlaxoSmithKline will introduce the first MDI with built-in dose-counter. You will be able to purchase the quick-relief bronchodilator, albuterol, as the brand name medication, Ventolin-HFA. (As you may recall, HFA refers to the propellant in the medication canister; HFA is a non-CFC propellant, safe for the ozone layer high in the atmosphere.)



At the base of the plastic holder, on the side opposite the mouthpiece, you will find a counter indicating the number of doses remaining in the metal canister, beginning with 200 doses in the full canister. The cost of the device will undoubtedly exceed that of generic albuterol in conventional metered-dose inhalers.

Advair in metered-dose inhaler formulation.

Advair is one of the most popular controller medications used to treat asthma. It contains two medications, one an anti-inflammatory corticosteroid (fluticasone, Flovent) and the other a long-acting bronchodilator (salmeterol, Serevent). Until

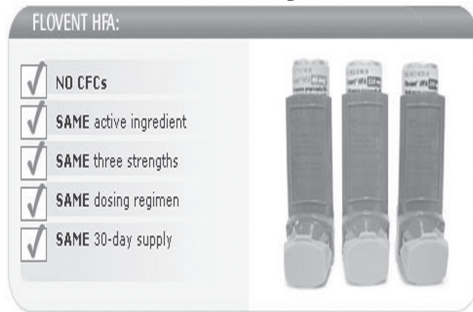
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now, Advair has only been available as a dry-powder inhaler, the Advair Diskus. Now GlaxoSmithKline will release the same medication combination as a metered-dose inhaler, using an HFA propellant (Advair-HFA). As in the dry-powder devices, three different strengths will be available, comparable to the Advair Diskus 100/50, 250/50, and 500/50. The different strengths reflect

different amounts (micrograms) of the steroid component, fluticasone. The amount of salmeterol

will be constant in each of these three formulations (21 micrograms per inhalation). Advair-HFA will typically be prescribed as 2 puffs taken twice daily, and its strengths will be Advair-HFA 45/21, 115/21, and 230/21. Those sensitive to the bronchodilator component of Advair (that is, sensitive to the stimulatory effects of salmeterol) will be able to take one puff rather than two, reducing their dose in half—a possibility not available with the Diskus device. Advair-HFA is approved for use in children as young as 4 years of age.



New combination inhaled steroid and long-acting bronchodilator.

For many years now, only one product has been available that delivers in a single inhalation both a long-acting bronchodilator and an inhaled corticosteroid, namely the Advair Diskus. This summer the Food and Drug Administration has given approval to release of another such combination inhaler. This medication, called Symbicort, contains the inhaled corticosteroid called budesonide, currently available as a dry-powder inhaler (Pulmicort Turbuhaler) and as a liquid for nebulization (Pulmicort Respule). It also contains the long-acting inhaled beta-agonist bronchodilator, formoterol, currently available as a dry-powder inhaler (Foradil Aerolizer). In a single puff of Symbicort one receives both budesonide and formoterol.

Symbicort will be released as a metered-dose inhaler driven by the ozone-safe propellant, hydrofluoroalkane (HFA); and it will be available with two different doses of the inhaled steroid component (Symbicort 80/4.5 and Symbicort 160/4.5). A standard prescription for both strengths will be two inhalations taken twice daily, and a full canister will contain 120 puffs. Symbicort has been approved for use in adults and in children 12 years and older. Like Advair, it comes with a warning about the potential hazards of long-acting inhaled beta agonists (as discussed in the last issue of *Breath of Fresh Air*, “A ‘Black Box’ Warning for Asthma Treatment”).



Is Your Asthma Well-Controlled?

The goal of asthma care is well-controlled asthma. As of yet, we don't have a cure for asthma. We can't make it go away once and for all, so that you never again need to take a medication for your asthma or be concerned that an asthma “trigger” will set you off coughing and wheezing and make you uncomfortable in your breathing. What we do have are medications to relieve symptoms when they occur (the quick-relief bronchodilators) and preventive medications to keep your asthma quiet and protect you from asthmatic attacks. We can also offer techniques to avoid triggers of asthmatic symptoms and incit-

ers of asthmatic inflammation (such as allergens), and, in some instances, allergy desensitization injections to alter your immune response to allergic stimuli. For the most part these are regular, chronic interventions. If you stop them, your symptoms of asthma will eventually return. Even if you feel perfectly well, it is likely that you still have asthma.

Our focus must be keeping asthma well-controlled. An important starting point in asthma care, then, is defining well-controlled asthma. Ask people with asthma if they think that their asthma is “well-controlled,”

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as was done in the large nationwide telephone survey called “Asthma in America” (see www.asthmainamerica.com), and more than half of the respondents indicated that they thought that their asthma was either “completely controlled” or “well controlled.” Sounds good, but among this same group of people nearly 1/3 reported waking from their sleep due to asthma at least once a week; ¼ of the adults and nearly ½ of the children had missed work/school due to asthma in the preceding year; more than 1/3 said that asthma limited their normal physical activities; and more than ½ the children and more than 1/3 of the adults had had an urgent care visit for their asthma over the past year. It seems that at least some of the respondents had low expectations as to how well they might be able to feel despite having asthma.

How would you define “well-controlled” asthma? Members of the Expert Panel assembled by the National Institutes of Health (NIH) set these criteria:

- No daytime symptoms that interfere with activities of daily living;
- No nighttime awakenings due to asthma;
- No urgent care visits for asthma;
- Infrequent need for quick-acting bronchodilator to relieve symptoms;
- Normal or near-normal lung function.

It is likely that when the new set of treatment *Guidelines* for asthma care are released by the NIH within the coming year, they will stress adjusting asthma treatment according to asthma control. If your asthma is not well-controlled, your doctor will want to intensify your treatment regimen (that is, “step-up” your treatment). If your asthma is well-controlled, your doctor may decide to continue the current program or to reduce your daily preventive medicines to the least amount necessary to maintain good control (that is, to “step-down” the treatment). In that way, asthma care will be similar to treatment for high blood pressure, where doctors set a target blood pressure that constitutes well-controlled hypertension, and adjust up or down the intensity of anti-hypertensive medications to achieve that target.

A number of tools have been developed to help you (and your doctor) judge whether your asthma is under good control. One such tool, developed by GlaxoSmithKline, is called the Asthma Control Test (ACT). It asks you 5 questions about your asthma symptoms and asks you to score each answer 1-5. If the sum of your scores on all 5 questions is 20 or greater, your asthma is thought to be well-controlled. You can try it now. The ACT test does not include a measure of your lung function, but you can add it yourself if you have a peak flow meter, or the next time you have your lung function checked at your doctor’s office.

Asthma Control Test™ (ACT)

1. In the past 4 weeks, how much of the time did your asthma keep you from getting as much done at work, school or at home?	Score
<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> All of the time 1 Most of the time 2 Some of the time 3 A little of the time 4 None of the time 5 </div>	<input style="width: 30px; height: 30px;" type="text"/>
2. During the past 4 weeks, how often have you had shortness of breath?	
<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> More than once a day 1 Once a day 2 3 to 6 times a week 3 Once or twice a week 4 Not at all 5 </div>	<input style="width: 30px; height: 30px;" type="text"/>
3. During the past 4 weeks, how often did your asthma symptoms (wheezing, coughing, shortness of breath, chest tightness or pain) wake you up at night, or earlier than usual in the morning?	
<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> 4 or more nights a week 1 2 or 3 nights a week 2 Once a week 3 Once or twice 4 Not at all 5 </div>	<input style="width: 30px; height: 30px;" type="text"/>
4. During the past 4 weeks, how often have you used your rescue inhaler or nebulizer medication (such as albuterol)?	
<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> 3 or more times per day 1 1 or 2 times per day 2 2 or 3 times per week 3 Once a week or less 4 Not at all 5 </div>	<input style="width: 30px; height: 30px;" type="text"/>
5. How would you rate your asthma control during the past 4 weeks?	
<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> Not controlled at all 1 Poorly controlled 2 Somewhat controlled 3 Well controlled 4 Completely controlled 5 </div>	<input style="width: 30px; height: 30px;" type="text"/>
<small>Asthma Control Test is a Trademark of QualityMetric Incorporated. Copyright 2002, QualityMetric Incorporated.</small>	Patient Total Score <input style="width: 50px; height: 25px;" type="text"/>

Enjoy an evening of good food and fun
to benefit the Partners Asthma Center

*Partners Asthma Center's
Gala Dinner-Dance
& Silent Auction*



SAVE THE DATE
Thursday, October 12, 2006
Hyatt Regency Hotel
575 Memorial Drive, Cambridge

- Make a donation to the auction
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Breath of Fresh Air

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