



# BreathingEasier

Asthma and Allergy Foundation of America  
Maryland Chapter

SAMPLE ISSUE

## Maryland Chapter – Working For You!

The Maryland Chapter of the Asthma and Allergy Foundation of America has been an active voice for asthma and allergy sufferers for more than fifteen years. Since 1979 AAFA-MD has been building a foundation for all those who must face the challenges of living with these diseases. As the Foundation looks to the future, we are excited to introduce a new look for our newsletter. This SAMPLE edition of *BreathingEasier*, which replaces the Asthma and Allergy FORUM and the Asthma and Allergy TIMES, is a preview of our new publication which will be received by AAFA-MD members on a regular basis.

Many of our faithful readers have been associated with the Foundation for a number of years; but others are new to our resources. This SAMPLE newsletter will give you an opportunity to become familiar with these resources as well as with some of the events we sponsor throughout the year.

In 1979 AAFA-MD was founded by a local group of interested allergists, patients and citizens who realized the need for educating patients and informing the public and the allergists' medical associates about asthma and allergy. The initiative for AAFA-MD was seeded in the desire of its first President and current Chairman of the Board, Philip S. Norman, M.D., to apply scientific clinical advances to asthma and allergy patients. As a natural outgrowth of the needs of asthma and allergy patients attending the Johns Hopkins clinic, the Foundation received cooperation and support from Hopkins staff which developed into a tradition which continues to grow.

Dr. Norman has remained devoted to his work with AAFA-MD, and was the founder, writer and editor of the Asthma and Allergy TIMES. In *BreathingEasier*, he will continue to be Editor as well as a contributor, along with other experts in the field of asthma and allergic

diseases, to a featured column, "Scientifically Speaking." Look for the latest information that could affect you and your management of asthma and other allergic diseases in this informative column.

Many of our services will also be highlighted throughout the year, including our very important **Support Groups**. These groups are located around the state and are vital links with the community for children, adolescents and adults. Our newest group, Support for Asthmatic Youth, is beginning its second year. In each issue a different group will be featured, along with a current schedule of activities.

Your membership in AAFA-MD will give you the opportunity to keep abreast of these important features and many others. For example, each year the Foundation offers children the means to attend camp, details of which will be highlighted in the Winter edition. Keeping in touch through *BreathingEasier* will make it easier to learn what your Foundation is doing and what it can do for you. There are numerous opportunities for you to be involved with AAFA-MD, as well as with other asthma and allergy sufferers. Your membership will offer you access to these opportunities as well as the latest in newsworthy information on asthma and allergic diseases detailed in *BreathingEasier* which is sent to all members.

The Maryland Chapter has always concentrated on education and management of these diseases by providing services to thousands of people throughout Maryland. By means of our new publication, *BreathingEasier*, AAFA-MD will enhance its services as it strives to improve the quality of life for so many individuals and their families and friends.

*Maryanne Ellis*  
EXECUTIVE DIRECTOR



## KIDS' KORNER

I have asthma and had to give away my dog because of it. I have a new pet that's allergy free. It's a gecko. They get gecko tickets, meal worms and pinkies (baby mice). They only grow to 16 inches.

Zachary Borschuk

### How I Can Have A Pet, Even With Asthma!!!

I bet you think I can't have a pet because I have asthma. Well you're wrong. I can have a pet. Talking about pets, I do have a pet!!! He's a cat and his name is Popcorn!!!! I'm allergic to cats so when one of my friends and I found Popcorn, the cat was either mine or hers. Fortunately, she said "If I bring home one more animal my mom's going to have a cow!" Now the hard part, asking my mom if I could keep it. Surprisingly she said I could under ONE condition. That condition was he had to live on his own accord, live in the little garage, the shed, or the big garage. He picked all four!!! I don't get to see him much on school days but on weekends we have a great time!!!!

Once or twice he has sneaked in a tour of the house!!! I've sneaked him in too!!! Popcorn enjoys Sheba catfood, Deli Cat catfood, and naturally since his name is Popcorn, he prefers popcorn!!! His hobbies are guarding the pool, eating, getting into trouble and hunting. Sometimes Popcorn gets into trouble by getting into a fight with another cat. That's all I have to say about pets and allergies.

Adrienne Borschuk

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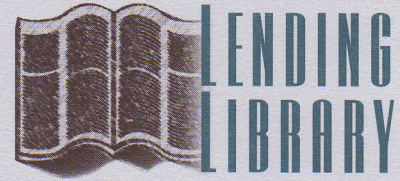
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This newsletter does not intend to replace consultation between patient and physician. Parties associated with this newsletter, *BreathingEasier*, or with newsletter production will not be held responsible for any action taken by the reader as a result of the interpretation of any article. All matters regarding your health require medical supervision.



By Linda Borschuk

The Asthma & Allergy Foundation of America, Maryland Chapter has an extensive free Lending Library. The library contains books about asthma and allergies for adults, books for children about having asthma and what they can do to control it, and videos on topics which range from environmental controls to educating one's school nurse.

Every Support Group has its own "portable" library. Items in these libraries may be borrowed at a support group meeting and returned at the next meeting.

The library in the Foundation office is large and visitors may borrow a book or video. When an individual is ready to return a borrowed item, it can either be mailed back to the office or dropped off. The office is open Monday through Friday between 9 a.m. and 5:00 p.m.

One popular book in the library is "One Minute Asthma, What You Need to Know" by Thomas F. Plaut, M.D. This is an excellent primer for the patient and family new to asthma. It provides a wonderful introduction to asthma management. The book begins with the Basics, continues on with Medicines, Diary and Home Treatment Plan, Devices, and ends with an excellent Resource Section. Each subtopic of information is covered on one page. The information is concise, accurate and available in Spanish.

Come and check out the Lending Library. Educating yourself and your family about asthma and allergies is one sure way to get your asthma under control!

October 24, 1996  
Dear Mrs Mary Elis  
I like you alot You  
make me feel happy I  
like it that you are teach  
me all about Asthma because  
I needed help lroaing about  
Asthma, I like all the things  
that you teach me. It make's  
me feel teched me. I am  
glad that I have you for  
a Asthma teacher because  
you are nice, I like  
all the things that you  
teach me, I hope you  
have a nice day  
I love  
you  
Love  
Amy



## SUPPORT GROUPS

AAFA-MD Support Groups give Maryland patients and their families and friends an opportunity to meet with health care professionals and to share information and experiences on coping with asthma and allergies. Asthma and allergy sufferers can discuss what it means to them to have asthma or other allergic diseases, have questions answered and express their concerns.

Support Group meetings are held in communities throughout Maryland. They feature a guest speaker who is an expert in the field of asthma and allergic diseases. AAFA-MD has groups that address the needs of various ages, including adults, adolescents and parents of children with these diseases.

If you are interested in the many opportunities offered through our AAFA-MD groups, contact the office at (410) 321-4710. If you are outside the Baltimore area, call (800) 727-9333.



## SCIENTIFICALLY SPEAKING

*In each issue of BreathingEasier, the SCIENTIFICALLY SPEAKING column will offer readers presentations written by selected columnists who are knowledgeable in the fields of asthma and allergic diseases in order to provide ongoing information to those suffering from these diseases. In this SAMPLE issue, we present two basic topics: "What Is Asthma?" and "What Is Allergy?"*

### What Is Allergy?

*LeLeng To, Ph.D.*

While the immune system's protective function is necessary against infections, in some of us it causes allergic diseases. When it mounts an inappropriate response to harmless foreign substances, this is known as allergy. As substances such as ragweed pollen, animal dander, etc., would not cause damage to a person, this misguided response is inappropriate and harmful. These harmless substances are called allergens. What constitutes allergens are different for different people.

Allergy is one of the most common diseases among Americans, affecting about 20 percent of the population. It diminishes the quality of life of about 40 million children and adults. In severe cases, allergy handicaps people and the loss of time from work or school is costly. In drastic cases, allergy can be fatal.

#### What causes allergic reactions?

First exposure to an allergen causes an allergy-prone person to become sensitive. Re-exposure to the same allergen brings out the allergic reaction. Allergic responses range from the familiar runny nose and sneezing of hay fever to a generalized response that can be lethal. Usually, the first exposure induces immune cells to produce IgE antibodies specific for the allergen. The antibodies attach to the surface of guardian cells called mast cells which are found in connective tissues and beneath mucous membranes lining the airways and the gut. Each

re-exposure to the same allergen results in more IgE production. When the allergen binds to the IgE sitting on the mast cells, this activates the mast cells to release chemical agents such as histamine. These chemicals alter the blood vessels and smooth muscle cells in their vicinity and cause allergic symptoms.

#### Types of allergic reactions:

The exact manifestations depend on the amount of IgE antibodies present, the route by which the allergen is introduced and its dose. Inhalation, the most common route, can cause stuffy, itchy, and runny nose, sneezing, itchy ears, and itching of the roof of the mouth. These symptoms are mild compared to allergic asthma which is caused by constriction, increased fluid, and mucous in the lower airways. Breathing is difficult with wheezing, coughing, shortness of breath, tight chest, and/or chest pain. Asthma patients often require treatment and acute asthmatic attacks can be life-threatening. Symptoms may be seasonal or year round.

When the allergen is eaten, two types of allergic reactions are seen. When the mast cells below the mucous membrane of the gut are activated, smooth muscle contracts so that vomiting or diarrhea results. When the allergen diffuses into blood vessels and is widely distributed, mast cells in the deeper layers of the skin are activated causing hives. Diffusion of food allergen to the lungs can also, on rare occasions, result in allergic asthma.

If the allergen is introduced into the blood stream by intravenous injection of a drug like penicillin or of insect venom, the mast cells in connective tissues associated with all blood vessels may be activated. This widespread mast cell activation leads to a dangerous condition called systemic anaphylaxis characterized by swelling of body tissues (angioedema), vomiting, cramps, and a drastic drop in blood pressure. It occurs most frequently in people with allergies to insect stings, drugs, and certain foods. In more severe cases, the loss of blood pressure is catastrophic. Together with severe airway constriction and swelling in the larynx, death may result from suffocation and circulatory collapse. This rapidly fatal condition is called anaphylactic shock but it can usually be treated by immediate injection with epinephrine.

#### Why does the body make IgE?

Parasitic worms normally induce IgE anti-

bodies. IgE coats the worm so that certain white blood cells (eosinophils) can surround the worm by attaching to the IgE coating. The eosinophils then release digestive enzymes and other substances to kill the worm. Persons with high IgE levels for this reason are not more prone to allergic reactions presumably because the IgE antibodies sitting on mast cells are specific for the parasitic worms. In the absence of a parasitic infection, IgE levels are very low in most people. Since parasitic infections are rare in industrialized countries, most people have very low IgE levels and people with high IgE levels are usually allergy-prone individuals.

#### Who gets allergies?

No one is born with allergies but one can be born with the predisposition to allergies. Hypersensitive immune systems that make high IgE levels tend to run in families. The most common allergies among infants are food allergy and eczema (patches of inflamed skin). The timing and frequency of exposure to an allergen appears to affect the age at which allergies develop. Feeding infants cows' milk at an early age is discouraged. The early age at which children are fed peanut butter is correlated to the increased incidence in peanut allergy. One thing is common among all allergic people: the more often one comes in contact with an allergen, the more one is likely to develop allergic reactions to it.

The types of allergic reactions discussed so far are due to the interactions of allergens and mast cell-bound IgE. Another common type of allergic reaction is not attributed to an IgE response. The itchy rash produced by poison ivy is due to a response by immune cells, called T cells, to the chemical pentadecacatechol in the poison ivy leaf. Because the chemical is delivered by contact with the skin, the condition is called contact dermatitis. As the response by T cells takes several hours, the rash often occurs 24-48 hours after exposure. Since this reaction is delayed compared to the immediate reaction seen in the early phase of an IgE-mediated allergy, contact dermatitis is classified as a delayed type hypersensitivity.

#### Some common allergens are:

- Dust mites and their waste
- Cockroaches and their waste
- Dander and saliva of furred and feathered animals

- Mold spores
- Drugs such as penicillin, sulfa antibiotics, aspirin
- Foods like eggs, milk, legumes (peanuts), nuts and seafood
- Ingredients in dyes, cosmetics and latex
- Chemicals in poison ivy, poison sumac and poison oak

## What Is Asthma?

*Charles Mihalik, R.Ph.*

Physicians in ancient Greece and Egypt first described "Asthma" as meaning to "breathe" or "pant." In approximately 400 B.C., Hippocrates recognized that "asthma has its own nature and arises from external causes." Five centuries later, Arctaeus of Cappocia recorded the first accurate description of an asthma attack saying: "the lungs suffer and the parts which assist respiration sympathize with them." Despite these early insights into the understanding of asthma, very little progress was made toward finding relief for "those whose lungs suffer" until the twentieth century.

To understand how "asthma has its own nature," we need to have a basic understanding of how our lungs work. To do this let us imagine ourselves as tiny air particles which have just been "breathed-in." We begin our journey in the trachea (windpipe), the largest of the body's airways. Reaching the end of the trachea, we come to a "fork in the road" where the windpipe divides into two main branches called the bronchi. There is one bronchus for each lung. It is here in the bronchi where the trouble lies in asthma.

As we travel down one of these large airways, we observe it to be a spiral-like tube covered with tiny hair-like structures called cilia. These cilia are lined with a thin layer of mucous which rapidly beat toward the trachea. The cilia prevent dust and other particles which are trapped in the mucous from going deeper into the lungs. If we were to travel further through a series of smaller branching tubes (bronchioles), we would eventually end our journey within small sac-like areas called alveoli. There are approximately 300,000 of these in each lung. As air particles in the alveoli we would supply oxygen to be carried by the blood to all parts of our body.

Asthma affects people of all ages, but it most commonly affects children accounting for

more than 7.5 million lost school days per year in the United States. Children and adults who have a parent with asthma or who have allergies are more likely to develop asthma. As a chronic (lasting more than three months) disease with repeating flares (attacks), asthma may lead to permanent disabilities as well as life-threatening emergencies. Some patients learn to manage their asthma conditions very well, while others experience frequent attacks, some requiring emergency room treatment or even hospitalization.

On some occasions, asthma symptoms such as wheezing, breathlessness and cough may come on swiftly. Symptoms may go away on their own or may improve with "reliever" medication. Symptoms may arise from exposure to unavoidable, known or unknown triggers. Triggers may be substances such as pollen, pet dander and mold; they may also include irritants in the air such as smoke, household sprays and perfumes. Other common triggers include infections, exercise and weather changes such as dry wind or cold air.

Reliever medication such as albuterol (Ventolin, Proventil) may be prescribed by your physician to reduce symptoms. This medication opens the airways to make breathing easier but does not reduce inflammation. People with mild asthma who experience symptoms no more than three times per week or have exercise-induced asthma may only need to use this type of medication.

Regardless of age or reason, or whether symptoms are present or not, most people with asthma at all times have some degree of inflammation with swelling of the linings of their bronchi (breathing tubes). It is this


inflammation that makes the airways "twitchy" or more sensitive to triggers. When irritated by a trigger(s), these twitchy airways become even more swollen and narrow. They may become clogged with mucous and the muscles around them may tighten (bronchospasm) making it increasingly difficult to breathe. This combination of swollen airways, mucous, and muscles clamping down, makes it difficult for air to pass out of the lungs.

Relieving inflammation with "controller" drugs such as inhaled cromoglycate (Intal) or steroids like beclomethasone (Vanceril, Beclovent) is the most effective way to help prevent more serious airflow narrowing and resulting symptoms. Your doctor will decide which medications are right for you. Examples of "controller" and "reliever" medications are included in the table below. Using your "controller" medications regularly whether you have symptoms or not is the key to preventing symptoms. Remember it is very important to use correct technique when taking medication by inhalation. See your pharmacist to make certain inhalers and all medications are taken properly.

Asthma can be a very serious condition and if not treated properly may result in death. Avoiding triggers of asthma symptoms, using controller medication regularly, taking all medications properly and monitoring peak flow to measure how well your lungs are working are the cornerstones of effective control. Effective control means easier breathing and improved quality of life.

### EXAMPLES OF MEDICATIONS COMMONLY PRESCRIBED TO "CONTROL" OR "RELIEVE" ASTHMA SYMPTOMS:

CONTROLLERS		RELIEVERS	
Generic Name	Brand Names	Generic Name	Brand Names
Beclomethasone	Beclovent, Vanceril	Albuterol	Ventolin, Proventil
Triamcinolone	Azmacort	Pirbuterol	Maxair
Fluticasone (new)	Flovent		
Prednisone (tablet)	Deltasone, Liquid Pred	Metaproterenol	Alupent
Cromolyn sodium	Intal	Salmeterol	Serevent
Nedocromil sodium	Tilade	Terbutaline	Brethaire
Theophylline (tablet)	Theodur		
Zafirlukast (new) (tablet)	Accolate		



# DEAR DOCTOR

The DEAR DOCTOR column offers readers the opportunity to submit questions about asthma and other allergic diseases for possible answers in *BreathingEasier*.

Questions will be answered by pharmacist Charles Mihalik, R.Ph.

## DEAR DOCTOR:

My eight-year-old son has been diagnosed with asthma and our physician has suggested that we purchase a Peak Flow Meter. I am unfamiliar with peak flow meters and am curious to learn how we will better manage my son's asthma by using this meter. Could you help me?

A peak flow meter is a small inexpensive instrument that enables your child to measure how well his lungs are working. It measures how fast a person can blow out air and gives a number that is sensitive to changes in lung function before your child may feel different and sometimes even before a physician can detect a change.

Nearly sixty percent of people with asthma cannot tell when their asthma is worsening and as many as fifteen percent cannot sense an attack until moments before they need emergency care.

Peak flow monitoring is recommended for patients who have symptoms more than once or twice weekly, experience flares that affect sleep and activity level and who require occasional emergency care. For such people, whether children over 5-7 years or adults, consistent use of a peak flow meter is a vital part of a personal management plan.

Using a peak flow meter is as important to controlling asthma as a blood glucose meter is to controlling diabetes. Many patients find they can use their medication with less frequency, and more effectively, when they monitor regularly. For peak flow monitoring to be

effective in controlling asthma, it is important that the child knows the proper way to use the meter and records the numbers. Asthma diaries record not only his numbers but also breathing symptoms, exposure to triggers and medications. Bring your child's diary with you when you visit his doctor.

### The correct way to use a peak flow meter:

1. Set the meter indicator on the bottom of the scale before each time you blow.
2. (If possible) take all measurements while standing. (If not, then take all in the same position.)
3. Make sure that the hole in the back of the meter is not covered.
4. Take a D-E-E-P breath.
5. Seal the lips tightly around the mouthpiece (do not let any air leak out).
6. Rest the mouthpiece on the tongue but do not close the opening with the tongue.
7. Blow as hard and fast as you can without bending over.
8. Record the best of three efforts in your diary.

Remember: Reliable and consistent peak flow numbers are dependent on a good effort. Make sure your child gives his best effort each time he uses his peak flow meter.

This does not appear too difficult. How often do we need to use the meter and how do we know when the numbers are warning us of a problem?

Record peak flow numbers at least twice daily for the first two to three weeks. Peak flow numbers should be obtained upon arising and ten to twelve hours later, before and after a "rescue-breather" [e.g., Albuterol, Proventil (R), Ventolin (R)]. Doing this will allow you and your physician to decide your child's "personal best" (the highest number your child can regularly blow) and establish that his asthma is/is not under control. People with moderate, severe or unstable asthma may need to record peak flow numbers twice daily both before and after treatment. Those with mild or very stable asthma (regularly in the green zone) may only need readings two to three times weekly. However, if a respiratory tract infection develops, a medication is changed, or exposure to an asthma trigger occurs, then monitoring should be done daily.

To help your child manage his asthma at home, a system of three color-coded peak expiratory flow zones have been established:

The numbers in the afternoon or evening often are a little higher than those in the morning. If they are different by more than fifteen to twenty percent, this may indicate that asthma is worsening.

Green Zone	<b>Indicates all clear.</b> Asthma is under control. Continue taking controller medications.	Peak Flow is 80-100% of personal best with less than 20% daily variability.
Yellow Zone	<b>Caution:</b> one of three problems may be: (1) A flare is occurring (2) Asthma is deteriorating (3) Frequently occurring changes in the yellow zone may suggest poorly -controlled asthma. Follow a plan developed by your physician.	Peak Flow is 60-80% of personal best.
Red Zone	<b>Seek Immediate Medical Attention.</b> Use your rescue breather immediately. Increase puffs as suggested by your physician.	Peak Flow is below 50-60% of personal best.

continued on page 6

# JOIN AAFA - MARYLAND CHAPTER

You can contribute to ongoing research, education and support for those with asthma and allergies by joining the Foundation. Membership includes subscription to *BreathingEasier* and The Asthma and Allergy ADVANCE, medication discount program, patient information and more.

Please make check payable to AAFA-MD and mail to address below. VISA and Mastercard are also accepted. Please provide your card number and expiration date.

**Asthma & Allergy Foundation of America  
Maryland Chapter  
Chester Building, Suite 321  
8600 LaSalle Road Towson, Maryland 21286-2002**

**Your membership or gift is tax-deductible.**

- \$25 One Year Membership
- \$45 Two Year Membership
- \$100 Professional Membership
- \$15 Senior Citizen or Student (1 year)

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## Send Us Your Questions

If you have a question regarding an asthma or allergy related concern, we would like to consider it for future discussion in this column. Send it to:

**DEAR DOCTOR Column  
Asthma & Allergy Foundation of America - Maryland Chapter  
Chester Building, Suite 321  
8600 LaSalle Road  
Towson, Maryland 21286-2002**

## Dear Doctor continued from page 5

### Do I need a prescription for my peak flow meter and how do I know if one is better than the other?

A prescription is not required for a peak flow meter. Your physician should determine which model is best for your child. Peak flow meters are normally durable enough to last a year or more. Since there may be moderate

variability between different brands of meters, we recommend that you purchase the same brand when replacement is necessary. Prices may range between \$20 and \$45.

Remember, the important thing is proper and consistent use. Peak flow monitoring is just one part of a comprehensive asthma management plan designed to give your child as "normal" and as "happy" a life as possible.

# BreathingEasier



Asthma and Allergy Foundation of America  
Maryland Chapter

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