

Asthma and Allergy ANSWERS

PATIENT EDUCATION LIBRARY

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Basic Facts about Asthma

Asthma is a chronic respiratory disease that affects millions of Americans of all ages.

This fact sheet describes asthma in general terms and provides information about asthma signs, symptoms, and treatment. We hope that the material here helps you better understand this disease and how to manage it.

For nearly six months, 28-year-old Luis spent most of his nights coughing. He tried several things recommended by the drug store pharmacist, but he never really felt good. One night at a party he started laughing at a joke and couldn't seem to catch his breath afterwards. His mother mentioned that her own brother had suffered for years with asthma – maybe Luis should talk about his symptoms with the physician. With some in-office testing, it was determined that Luis had some airway obstruction, a classic sign of asthma. His physician prescribed one of the newer kinds of easy-to-use inhalers, and together, they worked out what Luis should do if things didn't get better.

What is asthma?

Asthma is a disease in which the airways become blocked or narrowed. When you breathe in, air travels through your nose and/or mouth through a tube called the trachea (often referred to as the windpipe). From the trachea, air then enters a series of smaller tubes branching off of the trachea. These branching airways are called the bronchi, and they divide further into smaller airways called the bronchioles. Asthma primarily affects the bronchi and the bronchioles of the airways. They become inflamed and constricted, making normal breathing difficult.

What causes asthma?

Scientists do not know the specific cause of asthma, or why some people get asthma and others do not; however, much is now known about the biochemistry of asthma, that is, what happens in the body to create the various symptoms of asthma.

Researchers have found that certain traits make it more likely that a person will develop asthma. People with asthma have hyper-reactive airways. This means that their airways overreact to things that would just be minor irritants in people without asthma.

When the person with asthma encounters a known asthma trigger, the muscles within the airways tighten up (constriction), making the airways narrower. Some of the asthma triggers also cause the tissue inside the bronchi and bronchioles to become inflamed (inflammation). This inflammation further narrows the airway and causes thick fluid (mucus) to be produced by the airway lining tissue.

Altogether, these three reactions – constriction, inflammation, and mucus production – cause the asthma symptoms to appear.

Who gets asthma?

More than 20 million people in the United States have diagnosed asthma. People with asthma can be any age; male or female; and from any ethnic group or socioeconomic background. Asthma can appear at any time in life, although many people first experience asthma symptoms during childhood.

To some extent, asthma seems to run in families. People whose parents or siblings have asthma seem to be more likely to develop the illness themselves.

Is there a relationship between asthma and allergies?

Yes. The same substances that cause allergy symptoms can also trigger asthma symptoms. The allergen – often referred to as a trigger – sets off a chain of biochemical activity in the body, that results in the appearance of asthma symptoms.

Not all allergies result in asthma, and not all asthma is caused by being allergic to something.

It is best to avoid or limit your exposure to known allergens in order to minimize asthma symptoms.



Asthma and Allergy
Foundation of America

What is an allergy?

An allergy is an adverse reaction from an immune response to something that contacts the body, is inhaled, or ingested. The reactions include sneezing, wheezing, cough, itching, skin rashes, stomach pain, diarrhea, or even a fall in blood pressure which can cause dizziness or passing out. With proper management and education, people with allergies can lead healthy, normal lives.

What are asthma triggers?

An asthma trigger is something, which causes asthma symptoms to appear. Triggers are found in the everyday environment. Specific triggers for asthma symptoms vary from person to person. These things do not affect people who do not have asthma. Symptoms triggered by specific allergens or triggers also will differ among people. Some people react to only one or just a few triggers, while others with asthma are sensitive to many triggers. An individual may experience mild symptoms one time and much more severe symptoms another.

Some of the more common factors or triggers contributing to asthma are described here.

Allergens. Less than six categories of allergens cause most asthma and allergy symptoms. These allergens include pollen from grasses, weeds, and trees; dust mite proteins; animal dander; and mold spores. Foods, in general, do not cause asthma except as part of an anaphylactic reaction.

Tobacco Smoke. Cigarette, pipe, and cigar smoke are common triggers of asthma symptoms. The smoke carries various irritants, which when inhaled, create a series of biochemical events that result in asthma symptoms. Secondhand smoke – smoke from someone else – can trigger asthma symptoms in people with the disease.

Secondhand cigarette smoke exposure correlates with earlier age of wheezing, lower lung function, and asthma in children and adolescents. Secondhand smoke also increases allergic immune responses. Thus, cigarette smoking in the environment of at-risk children and adolescents is the most important modifiable risk factor proven to make a difference in disease.

Exercise. Exercise – especially in cold air – is a frequent asthma trigger. A form of asthma called exercise-induced asthma is triggered by physical activity. Symptoms of this kind of asthma may not appear until after several minutes of sustained exercise. (When symptoms appear sooner than this, it usually means that the person needs to adjust his or her treatment.) Physical activity that can bring on asthma symptoms include not only exercise, but also laughing, crying, holding one's breath, and hyperventilating (rapid, shallow breathing).

Weather changes. Cold air, wind, rain, and sudden changes in the weather can sometimes trigger an asthma episode.

Medication. Over-the-counter and prescription medications can sometimes cause asthma symptoms to appear. For example, ingestion of aspirin and aspirin-based products may result in an increase in asthma symptoms.

Illness. Upper respiratory viruses and bacterial infections trigger asthma symptoms. Viruses and bacterial infections related to colds, the flu, and bronchitis can cause an increase in asthma symptoms. Chronic obstructive pulmonary disease, generally referred to as COPD (includes emphysema and chronic bronchitis), may complicate asthma. Gastroesophageal Reflux Disease (GERD) also can cause or be associated with asthma symptoms.

Environmental factors. Various irritants or substances in your environment can trigger an attack. Perfume, paint fumes, cleaning solvents, and smog are all known to cause asthma symptoms.

Did you know . . . Asthma symptoms may not always occur right after exposure to a specific trigger? If you aren't sure what's triggering your asthma, try keeping a record of when symptoms appear, noting what you ate and where you were for the last 12-24 hours.

Each case of asthma is unique. If you have asthma, or suspect that you do, it is important to keep track of the factors or triggers that you know provoke your asthma symptoms. Discuss these in detail with your physician.

What are the signs and symptoms of asthma?

Asthma symptoms will vary from person to person and in fact, the same person may experience asthma symptoms differently from one episode to the next. Generally speaking, asthma symptoms include:

- **Wheezing.** Wheezes are whistling sounds that occur with breathing when the airways are constricted. Not all wheezing is audible. Some wheezing can only be heard with a stethoscope.
- **Tightness in the chest.** Airway inflammation and constriction make it feel like you can't take a deep enough breath or that you can't get enough air in or out. Some also describe this as if something was wrapped around the chest or someone was sitting on the chest.
- **Cough.** Asthma triggers irritate the airways, creating a lot – and sometimes nonstop – coughing. Nighttime coughing, especially, is a common symptom of asthma.
- **Difficulty breathing.** Symptoms may increase so that you feel like you cannot breathe adequately. You may be breathing more rapidly, or feel like you are not getting enough air no matter how hard you try. Mild exertion (such as walking up stairs) may become a strain.
- **Change in peak flow meter readings.** Asthma symptoms are increasing when your peak flow meter reads in the caution or danger range.

Severe asthma symptoms create a life-threatening emergency!

Asthma symptoms can become so severe that a person's life is endangered. Seek immediate medical help if the following symptoms appear:

- Severe cough or "heavy" wheezing
- Difficulty talking; do not want to swallow or eat
- Shoulders hunched for breathing; cannot lie down flat
- Nostrils flare with breathing
- Walking causes difficulty breathing
- Skin is pale, gray
- Lips or the area around the mouth are turning blue
- Shoulders, ribs are expanding and contracting to help with work of breathing
- Peak flow meter readings are in the danger zone

How is asthma diagnosed?

Asthma is sometimes hard to diagnose because it can resemble other respiratory problems such as emphysema, bronchitis, or respiratory infections. Intermittent symptoms also may result in limited findings or normal examinations during health care visits and delay the diagnosis. For that reason, asthma is under-diagnosed and therefore, under-treated. Many people with asthma do not know they have it. Sometimes the only symptom is a chronic cough at night, or cough and wheezing after exercise, or cough with laughter or during telephone conversations.

To diagnose asthma and distinguish it from other lung disorders, your physician relies on a combination of things: your medical history, a thorough physical exam, and laboratory tests. These tests include spirometry (measuring your breathing), peak flow monitoring, chest X-rays, and possibly allergy testing with a blood sample or skin tests. To help your physician make the best diagnosis possible, bring a record of your symptoms and experiences with you to the appointment.

What is the treatment for asthma?

Although asthma is a serious illness, it can be well managed with proper medication and education.

Did you know . . . Asthma is a disease that needs to be managed continuously, not just when symptoms appear?

The best way to control and manage asthma is to develop an individual asthma management plan with your physician. A good asthma management plan addresses your asthma care in four key ways:

1. **Medication.** You will understand your prescribed medications and when/how to change or adjust them. The more knowledgeable you are about your medications, the more likely you are to use them correctly – and not need stronger, riskier ones to help with serious symptoms.
2. **Education.** You will be able to identify and minimize or manage your contact with asthma triggers.
3. **Recognize warning signs.** You will recognize the pattern of events that result in your experiencing an asthma episode. You may use a peak flow meter to monitor airflow rate and detect when your asthma is getting worse, often before symptoms occur.
4. **Handling increased symptoms.** You will know what to do when your symptoms change or increase.

An effective plan should allow asthma patients to be active without having asthma symptoms, to participate fully in exercise and sports, and to have few or no side effect from asthma medications.

Can asthma be cured?

There is no known cure for asthma – yet. But symptoms can be prevented and controlled with proper treatment and the right balance of medication. Patient education is a crucial component in preventing and treating asthma symptoms.

What kind of physician treats asthma?

Many patients are treated for asthma by their pediatrician, internist, or family physician; however, if your asthma symptoms are not under control within 3-6 months, if you have severe persistent asthma, or if you are having asthma episodes that need emergency treatment, it may be time to see an asthma specialist. Allergists/Immunologists or Pulmonologists (who specializes in the treatment of lung diseases) are specialists that treat asthma. Those who have completed training in these specialties are usually called board-certified or board-eligible. Check *Where can you find more information about asthma or allergies?* below for more information about finding a specialist.

Does health insurance cover treatment for asthma?

Most health insurance plans provide some level of coverage for allergy and asthma patients. Check with your insurance carrier for details. Some things you may want to find out might include:

- Do you need a referral to an asthma care specialist from your internist, family physician, or pediatrician?
- Does the insurance carrier offer any patient education or specialized services related to asthma in general? Specific allergies?
- What coverage is offered for pre-existing conditions?
- What medications are not covered by your plan? (There can sometimes be a delay in approving newly released medications. Your physician may know about them, but your insurance may not cover them yet.)

Do you want to know more about asthma?

The Asthma and Allergy Foundation of America offers more than 50 fact sheets about aspects of asthma and allergies. To order additional photocopies on different topics, write to info@aafa.org.

What is the Asthma and Allergy Foundation of America?

The Asthma and Allergy Foundation (AAFA) is a not-for-profit organization providing practical information, community based services and support through education, materials, and a national network of Chapters and educational support groups. AAFA also sponsors research to find cures and better treatments for asthma and allergic diseases.

Your tax-deductible donation helps support our programs and services.

Where can you find more information about asthma or allergies and related topics?

Asthma and Allergy Foundation of America

Washington, D.C.

Information Helpline: (800)-7-ASTHMA/(800)-727-8462

Email: info@aafa.org

www.aafa.org

American Academy of Allergy, Asthma and Immunology

Milwaukee, Wisconsin

Patient Information and Physician Referral Line:

(800) 822-2762

www.aaaai.org

American College of Allergy, Asthma & Immunology

Arlington Heights, Illinois

www.acaai.org

Nationwide allergist referral service

1-800-842-7777 toll-free

National Asthma Education and Prevention Program National Heart, Lung, and Blood Institute Information Center

National Institutes of Health

Bethesda, Maryland

<http://www.nhlbi.nih.gov/about/naepp/index.htm>

National Jewish Medical and Research Center

Denver, Colorado

Phone: (800) 222-LUNG

www.njc.org

National Institute of Allergy and Infectious Diseases (NIAID) Office of Communications

National Institute of Allergy and Infectious Diseases

National Institutes of Health

Bethesda, Maryland

<http://www.niaid.nih.gov/factsheets/allergy.htm>

The information provided in this fact sheet should not be a substitute for seeking responsible, professional medical care.