



## FACTS ABOUT ASTHMA

Asthma is a chronic lung condition characterized by repeated episodes of difficulty in breathing. People with asthma may react to smoke, pollen, dust, air pollution, allergies, or other triggers. When a person has asthma, his or her breathing tubes are inflamed and sensitive. When the breathing tubes react or get inflamed, they narrow, which makes it harder to breathe fresh air in and stale air out. Sometimes a person with asthma will feel fine and other times may have breathing problems.

Asthma can develop at any age. Close to 20 million Americans currently have asthma, including approximately two million people over the age of 65. For adults, asthma is the fourth leading cause of work absenteeism. Asthma is more common among adult women than adult men. In 2003, 767,799 people over the age of 65 had an asthma attack or episode. In older people, it is sometimes difficult for the doctor to decide whether the problem is asthma or heart disease. (Other lung diseases that cause similar problems are bronchitis and emphysema, particularly in people who smoke.)

Since 1980, asthma death rates overall have increased more than 50% among all genders, age groups, and ethnic groups. African Americans are three times more likely to be hospitalized and three times more likely to die from asthma. Every day in America, 12 people die from asthma. Senior citizens have the highest mortality rate for asthma in the U.S., accounting for nearly 3,000 of the annual 5,000 deaths.

## SYMPTOMS OF ASTHMA

Asthma symptoms include the following:

- Wheezing, which is a whistling sound made by air partially blocked by narrowed airways
- Shortness of breath or difficulty breathing, known as dyspnea
- Cough
- Chest tightness, which may be a sign that asthma is getting worse or progressing

Sometimes the asthma attack is so severe that air cannot flow at all. This is a life-threatening emergency requiring immediate treatment.

## TESTING FOR ASTHMA

There are two methods for testing for asthma.

- » **Lung examination:** A physician will listen for wheezing, decreased breath sounds, and disturbed airflow.
- » **Peak flow testing:** A device called a peak flow meter is used to measure the amount of air that can be expelled. This airflow is reduced in persons with asthma. Peak flow testing can help track the progress of a person's asthma treatment and can help predict when an asthma attack may occur.

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## ASTHMA TRIGGERS

Triggers include:

- cold air
- tobacco smoke and wood smoke
- perfume
- paint
- hair spray
- any strong odors or fumes
- exercise
- allergens such as dust mites, pollen, molds, pollution, and animal dander
- pet saliva
- common cold, influenza, and other respiratory illnesses

Certain chemicals found in insecticides and fire retardants are thought to trigger asthma. Smoking makes asthma and other lung problems worse.

## TREATMENTS FOR ASTHMA

Asthma patients often take more than one type of medication. Many treatments will reduce the swelling and inflammation in the air tubes.

Medications generally fall into two categories:

**Bronchodilators** are medications that relax the airways. These are usually inhaled using an inhaler or a nebulizer. These medicines can be used to treat acute asthma and are also helpful in the long-term management of asthma. A long-acting bronchodilator may be added for patients receiving corticosteroids who continue to have asthma symptoms.

**Corticosteroids**, medicines that decrease inflammation, may be prescribed in either inhaled, oral, or intravenous form. Inhaling the steroids helps decrease the dose required, delivers the corticosteroid directly to the airways, and helps reduce the risk of adverse effects associated with steroid medicines. They are generally used to prevent asthma attacks.

All patients should have access to a “rescue inhaler.” This device administers a fast-acting medication that opens up the bronchial tubes (a bronchodilator), reduces airway narrowing, and relieves symptoms.

In addition to a rescue inhaler, patients may use a long-acting inhaler to prevent asthma attacks (a corticosteroid). This inhaler isn’t used to stop an asthma attack. A patient needs to take these preventive medicines all the time, even if he or she feels well. Asthma is a problem that does not go away. It is a chronic disease, like diabetes or heart problems.



# Adult Asthma

Some asthma drugs may cause irregular heart beats. A patient who experiences this should report it to a physician.

Older people are more likely to have other health problems, such as high blood pressure or heart problems, and may be taking medications for these problems. Some of these drugs may interact with asthma medications. For example, some find that their asthma gets worse when they take certain blood pressure drugs such as beta-adrenergic blockers or ACE inhibitors. In addition, sleeping pills, tranquilizers, and other sedative drugs may also cause problems for older people with asthma because these medications cause a person to breath more slowly and less deeply.

## ASTHMA AND COPD

Asthma symptoms are similar to other lung diseases especially chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis. Asthma can affect people at any age, whereas COPD more often affects seniors.

Asthma and COPD can both cause chest symptoms, such as shortness of breath, coughing, and wheezing. Patients with asthma are more likely, however, to have episodic chest symptoms, nighttime chest symptoms, and chest symptoms after exposure to allergic triggers. Patients with COPD are more likely to have a daily morning cough that produces mucus and persistent chest symptoms throughout the day. Similar to asthma, patients with COPD have some long-term lung inflammation. However, in contrast to asthma, the inflammation is not triggered by allergies and does not always respond well to anti-inflammatory medication, which can be used to treat asthma.

## NUTRITION CONSIDERATIONS

Patients with asthma must pay attention to calcium intake because a common asthma treatment is corticosteroids, usually in the inhaled form. This medication, given orally and also in higher doses, as is recommended for people over 65, can increase a person's risk of developing osteoporosis.

The suggested calcium intake for adults at risk for osteoporosis is 1,500 mg per day. Up to 2,500 mg of calcium per day is generally considered safe. On an average day, men in the U.S. over 65 years of age ingest an average of 600 mg and women 480 mg. Along with reduced intake, this age group also tends to absorb calcium at a lower rate. It is very important for older adults to make certain that their calcium consumption is adequate. An obvious solution is to eat and drink more dairy products. Other foods that contain calcium include tofu, broccoli, collards, turnip greens, and raisins. Calcium supplements are also available, but should be used with caution, since they can interfere with medications and can have side effects. Drinking milk is not only a good way to increase calcium, but also increases fluid intake, which is another important dietary measure because fluids reduce asthma symptoms by thinning the mucus in the lungs. Milk can also cause increased mucus production.

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## THE AIDE'S ROLE IN CARING FOR ASTHMA PATIENTS

### **Be Aware**

Often you may be providing care to a patient whose primary diagnosis is something other than asthma. It is important to review the assignment sheet to determine if the patient has asthma. Once you establish that a patient has asthma, you will better know how to care for the patient. For example, you certainly wouldn't wear perfume when visiting the patient. If you use personal care products, they must be non-aerosol. In the event that you smoke, you would have to ensure no smoke residue remains on hands or clothing before visiting the patient. Do not use chemical cleaners for household chores. Laundry soap and softeners should be fragrance free.

### **Know How to Respond**

A patient could suffer an asthma attack during your visit. You should know if the patient has a rescue inhaler and where it is. The patient may ask you to get the inhaler during an attack. While it is not your responsibility to respond to the attack, understanding what is happening and understanding the treatments will help you care for the patient. In an emergency situation, e.g., the patient is having severe breathing problems, feels faint, or is becoming cyanotic, call 911.

### **Relieve Anxiety**

At times, patients with breathing problems are anxious. Asthma medication can sometimes increase anxiety. It's important, therefore, for you to be sensitive to this and offer encouragement and reassurance. Taking time to listen to a patient's fears sometimes is enough to ease their anxiety.

### **Document and Report**

An important part of the aide's role is to report patient concerns to the nurse. If there are obvious asthma triggers in the home, inform the nurse. If the patient is having trouble understanding how to use an inhaler, nebulizer, or medications, report and document the details. Also report and document any breathing problems or asthma symptoms.

### **Enforce Education**

Remind your patients with asthma who own pets to take extra precautions. Don't hug or kiss pets or come into contact with litter boxes. Always wash hands after handling or touching a pet. Wash and brush the pet regularly. Brushing should take place outside of the home, preferably by someone other than the asthma patient. If visitors have pets, they need to be aware that they could carry pet dander, which could trigger an attack.

Remind the patient that all visitors have to be aware of and avoid asthma triggers. Recommend keeping windows closed and using furnace filters and dust-free covers for bedding. Also encourage the patient to use non-aerosol personal care products, get flu shots, and drink plenty of fluids and eat foods high in calcium.

**CASE STUDY**

Susan visits Mr. Smythe twice a week to provide personal care. He is 84 years old and has heart failure with a history of asthma. He is being treated for cellulitis on a lower extremity.

Susan arrives at Mr. Smythe's house at 2 p.m. After greeting him and reviewing the aide assignment sheet, Susan assists with Mr. Smythe's personal care. After his shower, Susan notices he seems a bit quiet and withdrawn, so she asks if anything is bothering him.

He tells Susan that he had an asthma attack yesterday. While the attack was minor and he treated it successfully with his inhaler, he is frustrated and worried. He never knows when an attack will occur and worries that one day the inhaler won't work and he'll die. He feels helpless and is just getting too old to carry the burden.

Susan decides to try and identify some asthma triggers for Mr. Smythe to help him prevent attacks. She asks about his day yesterday. He says it started out normally. His niece stopped by in the morning to make his breakfast. She was a little later than usual because she had to take her cat to the vet. The rest of the day was quiet except for the cleaning lady who came in the afternoon. He says she was new from the agency and that the cleaner she used smelled terrible and gave him a headache.

Susan makes some notes regarding this information. She then tries to reassure Mr. Smythe by telling him that as long as he keeps his inhaler handy and continues to use it correctly, that he can control his asthma. She reminds him that he's been successful in the past and will be in the future. She explains some possible asthma triggers and how Mr. Smythe can avoid them.

He seems to perk up a bit with this information and simple encouragement. He asks that Susan talk with the nurse and see if there isn't something else, such as medication, that he could use to help with his asthma. Susan agrees and calls the nurse before leaving Mr. Smythe.

**THINK ABOUT IT**

1. Can you identify factors that may have triggered Mr. Smythe's attack?
2. What should Susan recommend that Mr. Smythe do to avoid these triggers in the future?
3. What should she tell the nurse?
4. What do you think the nurse will recommend?
5. Have any of your patients had similar experiences?





DIRECTIONS: READ EACH QUESTION CAREFULLY. THEN, DETERMINE THE BEST ANSWER. CHECK THE CORRESPONDING BOX ON YOUR ANSWER SHEET.

1. What is not a symptom of asthma?
  - a. Shortness of breath
  - b. Wheezing
  - c. Watery eyes
  - d. Cough
  
2. Asthma is
  - a. Triggered by milk products
  - b. Curable with the proper medication
  - c. Not a serious disease
  - d. An inflammation of the breathing tubes
  
3. A home health aide should
  - a. Ignore patients when they express concerns related to asthma attacks
  - b. Instruct patients in how to use their inhaler or nebulizer
  - c. Know the symptoms and triggers of asthma
  - d. Offer advice on medication for asthma
  
4. What is a trigger for an asthma attack?
  - a. Pet dander
  - b. Exercise
  - c. Cold air
  - d. All of the Above
  
5. Patients with asthma
  - a. May require more calcium and fluids in their diet
  - b. Will suffer rapid weight loss
  - c. May have itchy palms
  - d. None of the above
  
6. Asthma is a serious but not deadly disease.
  - a. True
  - b. False

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POST-TEST, PAGE 2

7. Asthma is similar to what other lung disease?
  - a. Arthritis
  - b. Chronic bursitis
  - c. Chronic obstructive pulmonary disease
  - d. All of the above
  
8. To protect privacy, a home health aide should not inquire if a patient has asthma.
  - a. True
  - b. False
  
9. Asthma
  - a. Can occur at any age
  - b. Only affects children under the age of 6
  - c. Deaths have been decreasing in all age groups
  - d. None of the above
  
10. An aide should report
  - a. If the patient is having trouble breathing
  - b. If the patient seems overly anxious
  - c. If the patient has questions regarding medication use
  - d. All of the above

— END —



NAME \_\_\_\_\_ DATE \_\_\_\_\_

**DIRECTIONS: READ EACH QUESTION IN THE POST-TEST CAREFULLY. THEN, DETERMINE THE BEST ANSWER. CHECK THE CORRESPONDING BOX ON THIS ANSWER SHEET. DO NOT WRITE ON THE POST-TEST.**

**MULTIPLE CHOICE ANSWER SHEET**

- |     |                            |                            |                            |                            |
|-----|----------------------------|----------------------------|----------------------------|----------------------------|
| 1.  | <input type="checkbox"/> a | <input type="checkbox"/> b | <input type="checkbox"/> c | <input type="checkbox"/> d |
| 2.  | <input type="checkbox"/> a | <input type="checkbox"/> b | <input type="checkbox"/> c | <input type="checkbox"/> d |
| 3.  | <input type="checkbox"/> a | <input type="checkbox"/> b | <input type="checkbox"/> c | <input type="checkbox"/> d |
| 4.  | <input type="checkbox"/> a | <input type="checkbox"/> b | <input type="checkbox"/> c | <input type="checkbox"/> d |
| 5.  | <input type="checkbox"/> a | <input type="checkbox"/> b | <input type="checkbox"/> c | <input type="checkbox"/> d |
| 6.  | <input type="checkbox"/> a | <input type="checkbox"/> b |                            |                            |
| 7.  | <input type="checkbox"/> a | <input type="checkbox"/> b | <input type="checkbox"/> c | <input type="checkbox"/> d |
| 8.  | <input type="checkbox"/> a | <input type="checkbox"/> b |                            |                            |
| 9.  | <input type="checkbox"/> a | <input type="checkbox"/> b | <input type="checkbox"/> c | <input type="checkbox"/> d |
| 10. | <input type="checkbox"/> a | <input type="checkbox"/> b | <input type="checkbox"/> c | <input type="checkbox"/> d |

**INSTRUCTOR'S COMMENTS/SIGNATURE**

Signature \_\_\_\_\_ RN \_\_\_\_\_ Date \_\_\_\_\_

