



The Differences Between COPD and Asthma

by Linda Ruiz

“Some of the symptoms of chronic obstructive pulmonary disease (COPD) and asthma are alike,” says Lawrence Martin, MD. “They can include shortness of breath, cough, wheezing, chest tightness, and congestion.”

This may be one of the reasons many patients think they have asthma. But if you are over 40 and have a history of smoking, you could have COPD. You should learn the difference between the two diseases. There are some similarities in the treatment of COPD and asthma. But there are also important differences in treatment that you should know about. Also, some people with COPD may have asthma, too. If so, it also needs to be treated.

So how can you tell if you have COPD, asthma, or both? Learning more about both diseases is a good first step.

Some Definitions

COPD is a term that refers to two lung diseases, *chronic bronchitis* and *emphysema*.

Both are marked by airflow obstruction. These conditions usually occur at the same time.

A person with *chronic bronchitis* usually has a cough that produces mucus on most days of the month. This cough will occur at least three months a year, for two years in a row. The airways (bronchial tubes) get tight and narrow. Airway muscle gets tight.

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Raymond G. Slavin, MD, is Professor of Internal Medicine and Director of the Division of Allergy and Immunology at Saint Louis University School of Medicine.

Frank Sciruba, MD, is Associate Professor of Medicine at the University of Pittsburgh School of Medicine and Medical Director of the Emphysema/COPD Research Center and the Pulmonary Physiology Laboratory in the Division of Pulmonary, Allergy and Critical Care Medicine.

Airways swell and fill with mucus. Then, less air is able to get in and out of the lungs.

Emphysema involves damage to the air sacs (alveoli) in the lungs. “This can’t be reversed. The lung tissue is permanently damaged,” notes Dr. Slavin. As air sacs are destroyed, the lungs cannot transfer as much oxygen to the blood. This causes shortness of breath. “The lungs also lose their ability to stretch. This traps air in the lungs. That makes it hard for the person to breathe out.”

Remember, COPD includes both chronic bronchitis and emphysema. Most patients have both of these conditions.

When a person has **asthma**, his or her airways are inflamed, or swollen. The lungs become very sensitive to certain things called triggers. During an asthma attack, airways

become much more narrow. This impairs airflow, making it hard to breathe.

Risk Factors for COPD

“COPD is almost always related to **smoking**,” says Frank Sciruba, MD. “First- or secondhand smoke may lead to asthma symptoms in some people. But smoking does not cause asthma.”

“COPD is almost always caused by years of smoking,” adds Dr. Martin. There is, however, a rare form of COPD that is caused by a person’s **genes**. This is called alpha₁-antitrypsin deficiency.

In addition to smoking, a person’s **age** is an important clue. “Asthma symptoms can start at any age. They most often start in childhood or the teenage years. But COPD

Comparing Asthma and COPD

	Asthma	COPD
Wheezing	Common	Less common; may occur with flare-ups
Nighttime shortness of breath or cough	Common	Uncommon
Cough with mucus production	Variable	Common
Allergies	Frequent	Infrequent
Smoking history	Less common	Almost always
Family history of asthma	Frequent	Less frequent

Adapted from National Institutes of Health. NAEPP Working Group Report: Considerations for diagnosing and managing asthma in the elderly. February 1996. NIH Publication 96-3662.

How Do the Treatments for Asthma and COPD Differ?

Many of the same drugs are used for asthma and COPD. Yet, the order in which they are used is different. **For COPD:** Expert guidelines recommend that bronchodilators are used as the first therapy for the disease. Bronchodilators are often used along with other drugs to treat COPD. **For asthma,** expert guidelines recommend that inhaled corticosteroids are used first.

symptoms rarely show up before age 40,” notes Dr. Slavin.

The Main Difference

“People with severe COPD will likely be short of breath all of the time. More so when

they exert themselves. People with asthma are often free of symptoms between attacks,” Dr. Scirba explains. “In other words, asthma symptoms change from day to day. COPD symptoms tend to be more stable with intermittent periods of worsening.”

(See Table, Comparing Asthma and COPD.)

The big difference between the two conditions is reversing reduced airflow, explains Dr. Slavin. “We think many forms of asthma can be reversed. This means that symptoms can be controlled with the right treatment. “When treated, asthma should not cause any symptoms,” says Dr. Slavin. “But this is not the case for most people with COPD.”

Doctors can tell if treatment works with a simple lung function test called spirometry. In those with COPD, lung function is abnormal all of the time. In asthma, lung function can change. It may be normal when the person’s asthma is under control.



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Why the Right Diagnosis Is So Important

“Telling the difference between asthma and COPD is vital for several reasons,” says Dr. Slavin.

The goals of treatment are different:

- **Asthma:** The goals are to reduce symptoms and reverse the course of the disease.
- **COPD:** Although some of the lung damage is often permanent, drugs may help to manage COPD. But the only thing that has been shown to slow the course of the disease is to quit smoking.

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COPD and asthma can occur together:

Each can make the other’s symptoms worse.

- **Asthma:** Like all smokers, those with asthma who smoke are more likely to get COPD.
- **COPD:** “It is important to know if someone with COPD also has asthma,” stresses Dr. Slavin. “To improve a person’s overall health, it is very important to identify and treat both diseases.” 🌿

TIP

It’s important to make sure that COPD and asthma are treated the right way. COPD and asthma can occur together. Each disease can make the other’s symptoms worse.

Asthma Triggers

“Asthma symptoms come and go as the person is exposed to triggers,” says Dr. Slavin. Triggers are substances or events that make breathing worse in people with asthma. They include:

- Pollen
- Animal hair or dander
- Air pollution
- Mold
- Dust mites
- Viral infections
- Cockroach waste

Non-allergic triggers also may cause symptoms. They include:

- Smoke
- Exercise
- Cold air
- Chemical fumes or strong smells, such as some perfumes
- Intense emotions
- Certain food additives, like sulfites (used as a preservative in food and alcohol)

Triggers are often different from one person to the next. “When the trigger is removed, asthma symptoms often go away,” Dr. Slavin explains. It is important to avoid triggers to keep airway inflammation to a minimum. If a person with COPD gets asthma symptoms after being exposed to such triggers, he or she should tell a doctor. It may mean that the person also has asthma.