SEVERE ASTHMA

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WHAT IS SEVERE ASTHMA?

SIGNS, SYMPTOMS, TRIGGERS, AND MORE

By Kendall K. Morgan
Reviewed by Neha Pathak, MD, WebMD Medical Editor

About 25 million Americans—approximately 1 in every 12 adults and children—have asthma. For most of them, their asthma responds well to treatment with inhaled medications, including long-term controllers to reduce swelling and prevent symptoms and quick relievers to temper symptoms as they happen. But, for up to 10% of people with asthma, these treatments aren't enough to control asthma and its symptoms.

"There are two aspects to consider when it comes to severe asthma," says Reynold A. Panettieri Jr., MD, director of the Rutgers Institute for Translational Medicine in New Jersey and a member of the Asthma and Allergy Foundation of America's Medical Scientific Council. "One is the amount of medications that's necessary to control the symptoms. If the disease is under control with maximum therapy, that would still be considered severe asthma but controllable. If symptoms persist or require frequent bursts of oral steroids, then asthma is uncontrolled and that too is severe asthma."

If your symptoms—including coughing, wheezing, trouble breathing, chest tightness, and asthma attacks—are persistent and hard to control despite treatment, these are signs your asthma may be severe. Severe asthma is often unpredictable and affects daily life.

There's no specific cause of severe asthma, Panettieri explains. The condition is defined instead by the severity and frequency of symptoms, the need for maximum therapy including oral steroids, and potentially life-threatening asthma attacks. It's more likely for people who don't take their treatments as prescribed or aren't able to avoid their asthma triggers, such as dust or mold. But, even if you do everything right, you may still suffer from severe asthma along with the side effects of its treatment.

"The more steroids you take, the more adverse effects you'd have—hypertension, mood swings, there's a whole variety [of side effects]," Panettieri says. "You have to weigh the symptoms [of severe asthma] versus the consequences of therapy."

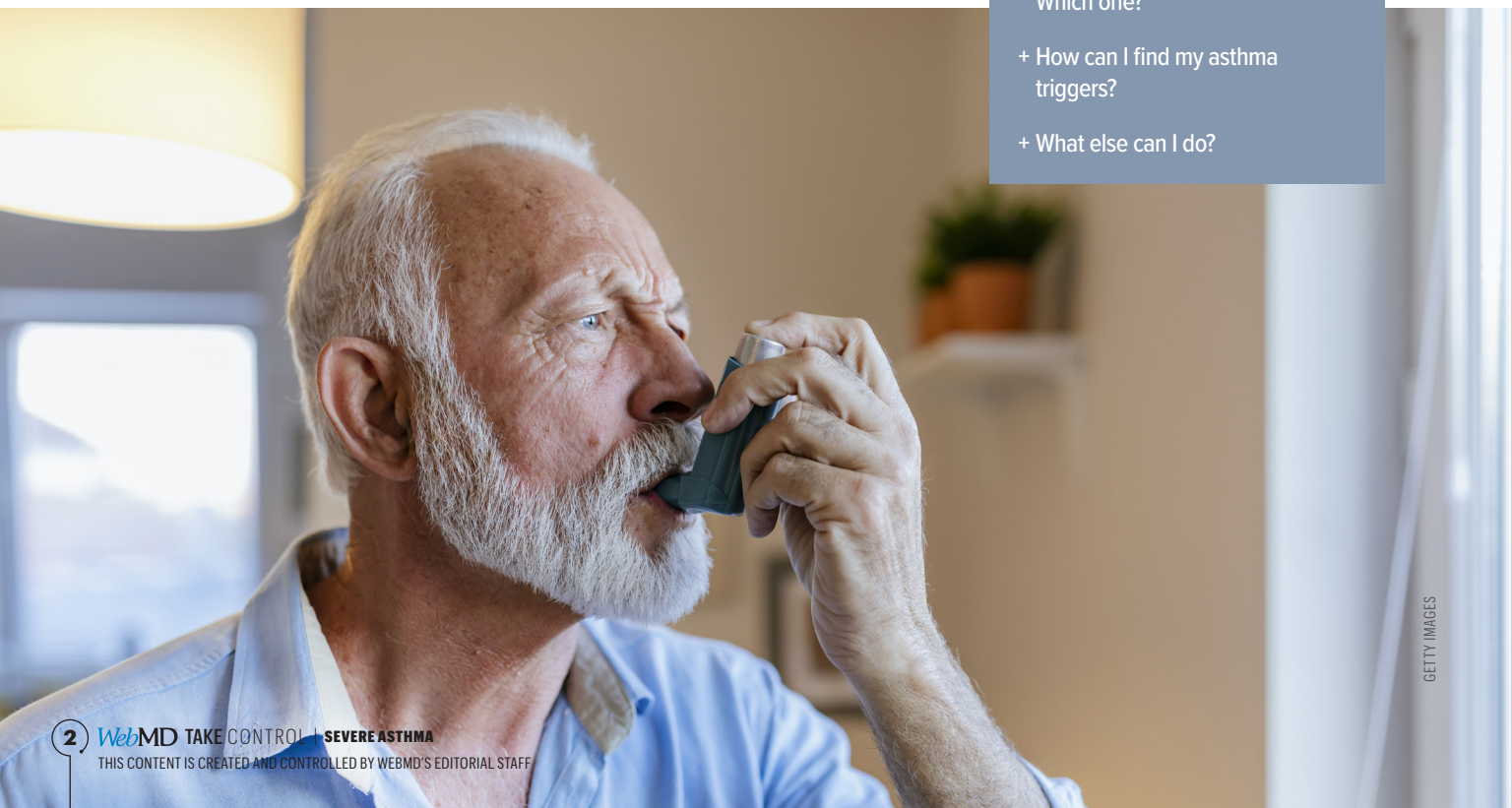
But, there's reason for hope. While they don't work for everyone, there are now biologic medications that can help people control severe asthma without the side effects of oral steroids.

"If we go back about 10 years, the outlook for severe asthma was pretty grim," Panettieri says. "It was the same old therapy. We are now in a revolution in therapy for severe asthma, mostly driven by biologics."

ASK YOUR DOCTOR

If you are suffering with severe asthma, talk to an expert about questions you may have.

+ Are there blood tests I should get to understand my asthma and how to treat it?
+ Are there any other tests I should get?
+ Should I try a biologic? Which one?
+ How can I find my asthma triggers?
+ What else can I do?



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PARTNER WITH AN A-PLUS ALLERGIST

WORK WITH THIS SPECIALIST TO HELP MANAGE YOUR SEVERE ASTHMA

By Kendall K. Morgan
Reviewed by Neha Pathak, MD, WebMD Medical Editor

You might think of an allergist as someone who treats hay fever or food allergies. But allergists also diagnose and treat asthma, including severe asthma. By helping to figure out what you're allergic to, they can help you to find what triggers your asthma symptoms. Lily C. Pien, MD, an allergist who sees patients with asthma at the Cleveland Clinic in Ohio, says this can be especially helpful when you have severe asthma.

"If somebody has difficult-to-treat asthma, has had it for a while, and [especially] if they are unable to identify triggers, an allergist can be very helpful," Pien says.

Allergic asthma is the most common type of asthma. In people with allergies and asthma, inflammation inside the nose (allergic rhinitis) can make asthma harder to control.

"If somebody also has hay fever or allergic rhinitis symptoms, they may be triggering asthma at the same time," Pien says.

FIND YOUR TRIGGERS

Common triggers of allergic asthma include pollen, pets, mold, dust mites, and cockroaches. Allergies happen when your immune system sees an allergen as harmful. It responds by making a type of antibody called immunoglobulin E. If there's too much of these inflammatory antibodies, your airways may swell and trigger an asthma attack.

Allergic asthma is especially likely if you are in an environment where the substances, called allergens, that trigger your allergies are present. Because allergens often are microscopic, it's not always obvious what's causing allergies. An allergist can give you skin tests to help you find out what's really causing your allergy symptoms and making the asthma worse. An allergist also may order blood tests.

When you have this type of asthma, it's always a good idea to avoid your triggers as much as you can. Air purifiers can help to lower the amount of allergens inside your home, too. Pien says that treating your allergies also can help reduce the amount of allergen that reaches your airways, where it can cause asthma symptoms.

"When nasal symptoms are controlled, it's less likely you'll breathe through the mouth," she says. "This would decrease the amount of allergen exposure to your airways. The nose acts as a filter."

FIND AN ALLERGIST

An allergist also can help if you're thinking about taking a biologic medicine to treat your severe asthma. Biologics are antibodies that target inflammation to help control asthma. While it's not always required, having an allergy test result "helps to build a profile of the person and the type of asthma," she says. Pien recommends looking for an allergist who has asthma listed among their areas of interest.

"Some allergists treat more food allergies," she says. "Others might focus more on skin allergies. They may not be the best allergist to see [for your severe asthma]."

A DAY IN MY LIFE

HOW I LIVE SUCCESSFULLY WITH SEVERE ASTHMA

By Crys Stripling
Reviewed by Neha Pathak, MD, WebMD Medical Editor

I grew up in Jamaica and remember playing freely as a child. Things changed when I moved to the U.S. in middle school and noticed a change in my breathing. Perhaps it was the different environment or that I was becoming more active, but my breathing became much more difficult. I had shortness of breath and it made playing with the other kids and doing activities like sports and ballet extremely difficult.

Back then in the late 1980s, some doctors didn't look at asthma as severe unless you had constant wheezing. I was on a rescue inhaler, but my asthma was getting worse. It was a pain to carry my inhaler around all the time, so I just stopped being as active.

It wasn't until I was an adult and I saw an allergist, a pulmonologist, and got a full workup that I learned how serious my asthma was. My doctors told me I had severe asthma. Here I was, just out of college and facing a stark reality: I had a lifelong condition and it would require ongoing care. Some days, I would be so sick and my breathing so bad that I'd need high doses of steroids to help with the inflammation in my lungs.

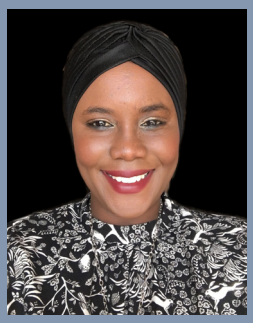
Once diagnosed, I went on a daily maintenance therapy. I use a combination inhaler with two medications—a steroid for inflammation and a bronchodilator, which helps open my airways. It was day and night compared to what I thought was breathing normally. That's the sad part, really. I had gotten used to breathing the way I did and just accepted it as normal.

For my type of severe asthma there are two triggers—cells that attack my body and create excess mucus and allergies, mostly during the spring. Once my doctors and I understood the root cause of my asthma, it was easier to treat. For the cells that cause mucus, I do an IV therapy every 8 weeks that helps decrease the number of bad cells. For my allergies, I take a daily over-the-counter antihistamine. My form of asthma is very serious and can be fatal if not controlled. My lungs don't process asthma the way that most people are familiar with, such as wheezing. I think everyone still associates wheezing with a more serious asthma attack and that's not always the case.

Living successfully with severe asthma means you have to make some changes in your life. I have to be aware of the air quality and pay attention to my triggers. I have an air purifier in my bedroom and my husband and I use special AC filters to reduce allergens.

You may also have to understand that not everyone will get the severity of your condition. While my close friends and family understand my limitations, others may not get why I may have to call out sick for something as "simple" as asthma. I tell people—imagine breathing through a plastic coffee stir stick. That's what it feels like. When I am having an attack, it's not a game.

I just had a baby, and I didn't know what to expect. I've always heard about the rule of thirds and that your asthma can either get worse, get better, or stay the same once you're pregnant. Fortunately for me, it got a little better. Overall, with the exception of a few bad days where I'll need a treatment, I do well. You can live a full, active life when your asthma is under control.



TIPS FROM CRYS

+ **KNOW THE FACTS**
  Take asthma seriously because it can be fatal if not managed properly.
+ **STAY ON TOP OF YOUR CARE**
  Get regular checkups to monitor your asthma and to make sure it's being properly controlled. Your doctor may need to make some adjustments.
+ **DO WHAT THE DOCTOR ORDERS**
  Take the medications you're prescribed.

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THE BENEFITS OF BIOLOGICS

HOW THIS THERAPY OPTION MAY HELP

By Kendall K. Morgan

Reviewed by Neha Pathak, MD, WebMD Medical Editor

Asthma is most often treated by breathing in medicines using an inhaler. Those treatments help to keep airways open. But, for people whose asthma is more severe, there are now several newer medicines that may help.

"I often joke that there's not going to be severe asthma patients in the future—they are all treated so well with newer biologics," says Brian Modena, MD, an associate professor of allergy and clinical immunology at National Jewish Health in Denver. "I've seen patients who were on steroids multiple times a year get put on biologics and their life changes completely. Are there people that don't respond? Yes, but they are in the minority."

TREATMENT OPTIONS

Monoclonal antibodies are one type of biologic. They work by targeting substances or cells that cause inflammation and asthma attacks. You take them through an IV or as a shot, usually about once a month.

As of June 2021, five biologics were approved to treat asthma in the U.S. One of them targets immunoglobulin E, a type of antibody that plays a role in allergies and is important in allergic asthma. Other biologics work instead by targeting cells called eosinophils in different ways. Eosinophils are a type of white blood cell involved in inflammation and many cases of severe asthma. Another biologic works in still another way, by targeting inflammatory chemicals known as cytokines.

TREATMENT DECISIONS

In most cases, biologics are used one at a time along with the inhaled medicines more commonly used to control asthma. The goal over time is to get asthma under better control and reduce the need for oral steroids, which come with many side effects. So, how do doctors decide which biologic to use?

"It's hotly debated how to choose," Modena says.

Biologics generally will work best if blood tests show you have high eosinophils, he says. They are also more likely to work if you've had multiple asthma attacks in the last year. Doctors may take into account other conditions, your preferences, and other factors, in choosing which one to try first.

FIND A SPECIALIST

The list of biologic options for treating severe asthma is also expected to grow, Modena says, with a few others already on the way. If you are suffering from severe asthma, he recommends finding a doctor who specializes in its treatment. They'll be up on the latest treatment options including biologics and can help you understand your options.

"There are really good therapies available and several years of data [on their use]," Modena says. "If you have severe asthma, you should speak to a specialist rather than live with poorly controlled asthma."

IS YOUR ASTHMA UNCONTROLLED?

Life with asthma may feel like you're caught in a cycle of managing your symptoms, adding medications, and isolating yourself from people or places to avoid triggering a flare-up.

But through all that, what if you're still experiencing ongoing symptoms and frequent flare-ups? This cycle could be a sign that your asthma may not be as controlled as you think.

According to the American Lung Association, **uncontrolled asthma** may be defined by the frequency of your symptoms. For example:

Having asthma symptoms or using your rescue inhaler MORE THAN 2X PER WEEK

Waking up at night with symptoms MORE THAN 2X PER MONTH

Refilling your rescue inhaler MORE THAN 2X PER YEAR

If you said yes to one or more than one of these, your asthma may be uncontrolled.

IT'S TIME TO TRY TO BREAK THE CYCLE.

The tools below can help you understand your level of control and help facilitate a conversation with your doctor.

1 ASSESS YOUR LEVEL OF CONTROL WITH AIRQ™ THEN TALK TO YOUR DOCTOR

Take this short survey while waiting for your appointment. When you're done, talk to the doctor about the results.

2 TRACK YOUR RESCUE INHALER USAGE

Sign up today to claim a Propeller device, a sensor and mobile app that is designed to track your rescue inhaler usage and helps you understand your symptoms better. This information can help you have a more informed conversation with your doctor about your personal level of asthma control.

You'll also get emails about controlling your asthma, more tips for talking to your doctor, and more.

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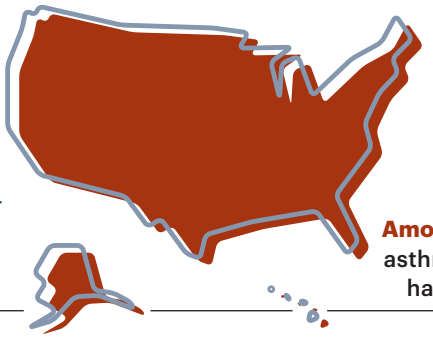
STATS & FACTS

By Sonya Collins
Reviewed by Neha Pathak, MD, WebMD Medical Editor

25 million
Number of people in the U.S. who have asthma.



5% to 10%
Amount of people with asthma in the U.S. who have severe disease.

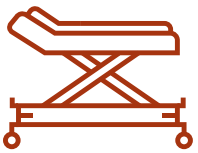
$56 billion

Estimated economic cost of asthma.

$.50 for every $1
Amount of asthma health care costs in the U.S. that go to hospital stays.

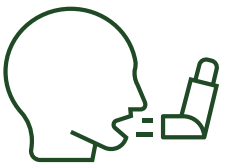
10.4 in 10,000
Estimated amount of adults who have severe asthma worldwide.

1 in 6



Number of people with asthma who rely on the ER—rather than their regular doctor—for asthma care.

50%



Amount of asthma health care costs in the U.S. that go to severe asthma.

1.6 million

Number of emergency room (ER) visits for asthma in a year.

1 in 4
Number of adults with asthma who miss work due to the condition each year.

439,000

Number of asthma-related hospital stays each year.

SOURCES: American Lung Association, *Journal of Allergy and Clinical Immunology*, American College of Allergy, Asthma and Immunology, *Asthma Research and Practice*, *Respiratory Research*, CDC, *Journal of Asthma and Allergy*