



KEEP YOUR LUNGS HEALTHY

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DEFEND AGAINST CHRONIC LUNG DISEASES

With each breath in, your lungs take in life-giving oxygen. The oxygen then travels through your blood to every cell in your body. With each breath out, your lungs release carbon dioxide, the waste produced when your cells burn energy. If something goes wrong with your breathing, it can impact your whole body and your daily life.

Many different symptoms can signal a lung problem. You may have coughing, wheezing, or shortness of breath. Your chest can feel tight, like someone is squeezing or sitting on it. You may find it hard to take a deep breath. You might become short of breath easily or feel tired all the time.

Sometimes these symptoms are temporary. They can be caused by things like stress, allergies, or infections. But if you have lung symptoms that last for more than a few weeks, it's important to talk to your doctor. These symptoms could indicate a chronic lung disease.

Your risk for chronic lung diseases may be higher if you inherit certain genes from your parents. But many people who develop a chronic lung disease have no genetic risk factors. Exposure to certain environmental factors, like cigarette smoke, dust, and pollution, can also increase your risk.

The good news is that you can take steps to help prevent many chronic lung diseases. If they do develop, catching them and starting treatment early can improve your quality of life. Researchers are also testing better ways to identify and treat these conditions.

BLOCKED AIR FLOW

The most common types of chronic lung problems are called obstructive lung diseases. Asthma and chronic obstructive pulmonary disease (COPD) are the most common of these.

In obstructive lung diseases, "air flow is the problem," explains Dr. Andrew Lipton, medical director of the lung function lab at NIH. "It's hard for air to come into or go out of the lungs."

In asthma, swelling in the lungs makes the airways narrower than normal. They also become very sensitive to things like dust and pollen. Asthma most often develops in childhood.

Asthma can impact your day-to-day life. An asthma attack can make it hard to breathe for hours or days. An attack can even lead to a trip to the hospital and can sometimes be fatal.

But "if you take your medications [as prescribed]," says Dr. Kathryn Blake, an asthma researcher at Nemours Children's Health, "most people can be virtually symptom-free."

Managing symptoms can help kids and adults do the things they love, like sports, she adds. But many teens and young adults with asthma don't use their medications correctly. Confusion about when to take medications can play a role, Blake says. Or teens may forget when they are busy. Other factors like peer pressure can add difficulty.

"Teenagers don't want to be seen as being different," she says. "They don't want to stand out. They would rather limit their activities than take out and use their inhaler."

Blake and her team are testing whether regular video chats with a pharmacist can help teens take their asthma medications more regularly.

"It's kind of like having a tutor," she says. "It's just someone there to help you along and figure out what issues are impeding your care."

Some kids will grow out of asthma, Blake says. But many don't. If you don't treat your asthma, the symptoms are likely to get worse over time.

In COPD, the tubes that carry air in and out of the lungs become partly blocked. Smoking is the main risk factor for the disease. But about 1 out of every 4 people who develop COPD has never smoked.

COPD gets worse with time. But treatments can slow its progression and make you feel better. Medications can help some people breathe more easily. Others may benefit from oxygen therapy or rehabilitation programs. NIH-funded researchers are studying whether treating COPD earlier can help people live longer. They're also working on new drugs that may stop COPD from getting worse.

RESTRICTED BREATHING

Another group of lung diseases are called interstitial lung diseases. In these diseases, lung tissue may become inflamed or stiff, or scarred by damage. This prevents your lungs from

fully expanding when you breathe. “These things all reduce the volume of the lungs,” explains Lipton.

Treating interstitial lung diseases can be tricky, because the cause can't always be found, explains Dr. Kevin Flaherty, a pulmonary disease expert at the University of Michigan. “But if we can find the cause, then we can target it,” he says. For example, treating another disease that is causing scarring in the lungs may help.

Unfortunately, the cause of a common interstitial lung disease, called idiopathic pulmonary fibrosis or IPF, isn't known. People over age 50, men, and those who smoke are more likely to get it. Some people live for years with the disease. But for others, the condition quickly worsens. Drugs are available that can slow lung scarring over time. But researchers are searching for better treatments.

More than a decade ago, an NIH-funded study found that suppressing the immune system didn't help people with IPF. The study also tested an antioxidant used to treat certain lung diseases. But it also did not appear to have any benefit.

Recently, researchers looked at biological samples from the patients in that study. They found genetic differences between the patients that may have affected whether the treatment worked. Patients with a certain genetic change seem to have benefited from the treatment. Those without that genetic change showed no benefit or harmful effects from the treatment.

NIH is now funding a clinical trial to see if patients with certain genetic factors can benefit from the antioxidant treatment. If it works, this would be the first personalized treatment for IPF, Flaherty explains.

For now, there are many things you can do to lower your risk of developing a chronic lung disease.

If you have lung symptoms, talk to your doctor. Many tests for chronic lung diseases are simple. Some can even be done at your regular doctor's office. Treating these diseases early can help you stay healthier for longer.

PROTECT YOUR LUNG HEALTH

QUIT SMOKING, OR DON'T START.

Get free help at smokefree.gov, 1-800-QUIT-NOW (1-800-784-8669), or text QUIT to 47848.

AVOID SECONDHAND TOBACCO SMOKE.

Stay away from places where smoking is allowed. Ask any friends and family members who smoke to do it outside.

BE PHYSICALLY ACTIVE.

Physical activity can help strengthen your heart and lungs so they work better. Talk to your doctor about what level of physical activity is right for you.

LIMIT EXPOSURE TO AIR POLLUTION.

Check the Air Quality Index before outdoor activities. Make sure your home is aired out and cleaned regularly.

STAY UP TO DATE ON VACCINES

Stay up to date on vaccines against diseases that harm the lungs. These can include flu, COVID-19, and pneumonia.

USE PROTECTIVE GEAR

Use protective gear if your work exposes you to dust, silica, allergens, chemical fumes, or other pollution sources.

MAKE GOOD SLEEP A PRIORITY.

Poor sleep can cause lung disease symptoms to worsen. Sleep is also critical to overall health.

ADDITIONAL MHBP RESOURCES TO ASSIST YOU

MHBP has extensive resources to assist you with conditions that affect your lungs.

MHBP has a Lifestyle and Condition Coaching Program that provides you with personalized support that helps you manage conditions, including Tobacco Cessation, Exercise Management, Nutrition Management, and Weight Management.

MHBP offers the AccordantCare Program for patients or parents of children with certain rare or complex medical conditions. This comprehensive patient care program is offered to members with specialty conditions that can affect the lungs, including Cystic Fibrosis, Pulmonary Arterial Hypertension, Chronic Inflammatory Demyelinating Polyradiculoneuropathy, Sickle Cell Disease, and Myasthenia Gravis.

MHBP also has AbleTo, an 8-week personalized web-based video conferencing treatment support program- designed to address the unique emotional and behavioral health needs of individuals learning to live with conditions, including those affecting respiratory system. Members work with the same therapist and coach each week to set reasonable goals toward healthier lifestyles.

Contact MHBP at mhbppostal.com or call 833-497-2416 for more information about any of these programs.

SOURCES:

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