Asthma

Asthma (AZ-ma) is a chronic (long-term) lung disease that inflames and narrows the airways. Asthma causes recurring periods of wheezing (a whistling sound when you breathe), chest tightness, shortness of breath, and coughing. The coughing often occurs at night or early in the morning.

Asthma affects people of all ages, but it most often starts in childhood. In the United States, more than 22 million people are known to have asthma. Nearly 6 million of these people are children.

Overview

The airways are tubes that carry air into and out of your lungs. People who have asthma have inflamed airways. This makes the airways swollen and very sensitive. They tend to react strongly to certain substances that are breathed in.

When the airways react, the muscles around them tighten. This causes the airways to narrow, and less air flows to your lungs. The swelling also can worsen, making the airways even narrower. Cells in the airways may make more mucus than normal. Mucus is a sticky, thick liquid that can further narrow your airways. This chain reaction can result in asthma symptoms. Symptoms can happen each time the airways are irritated.

Asthma

Figure A shows the location of the lungs and airways in the body.

Figure B shows a cross-section of a normal airway.

Figure C shows a cross-section of an airway during asthma symptoms.

Sometimes symptoms are mild and go away on their own or after minimal treatment with an asthma medicine. At other times, symptoms continue to get worse. When symptoms get more intense and/or additional symptoms appear, this is an asthma attack. Asthma attacks also are called flareups or exacerbations. It's important to treat symptoms when you first notice them. This will help prevent the symptoms from worsening and causing a severe asthma attack. Severe asthma attacks may require emergency care, and they can cause death.

Outlook

Asthma can't be cured. Even when you feel fine, you still have the disease and it can flare up at any time.

But with today's knowledge and treatments, most people who have asthma are able to manage the disease. They have few, if any, symptoms. They can live normal, active lives and sleep through the night without interruption from asthma.

For successful, comprehensive, and ongoing treatment, take an active role in managing your disease. Build strong partnerships with your doctor and other clinicians on your health care team.

What Causes Asthma?

The exact cause of asthma isn't known. Researchers think a combination of factors (family genes and certain environmental exposures) interact to cause asthma to develop, most often early in life. These factors include:

- An inherited tendency to develop allergies, called atopy (AT-o-pe)
- Parents who have asthma
- Certain respiratory infections during childhood
- Contact with some airborne allergens or exposure to some viral infections in infancy or in early childhood when the immune system is developing

If asthma or atopy runs in your family, exposure to airborne allergens (for example, house dust mites, cockroaches, and possibly cat or dog dander) and irritants (for example, tobacco smoke) may make your airways more reactive to substances in the air you breathe.

Different factors may be more likely to cause asthma in some people than in others. Researchers continue to explore what causes asthma.

The "Hygiene Hypothesis"

One theory researchers have for what causes asthma is the "hygiene hypothesis." They believe that our Western lifestyle—with its emphasis on hygiene and sanitation—has resulted in changes in our living conditions and an overall decline in infections in early childhood.

Many young children no longer experience the same types of environmental exposures and infections as children did in the past. This affects the way that the immune systems in today's young children develop during very early childhood, and it may increase their risk for atopy and asthma. This is especially true for children who have close family members with one or both of these conditions.

Who Is At Risk for Asthma?

Asthma affects people of all ages, but it most often starts in childhood. In the United States, more than 22 million people are known to have asthma. Nearly 6 million of these people are children.

Young children who have frequent episodes of wheezing with respiratory infections, as well as certain other risk factors, are at the highest risk of developing asthma that continues beyond 6 years of age. These risk factors include having allergies, eczema (an allergic skin condition), or parents who have asthma.

Among children, more boys have asthma than girls. But among adults, more women have the disease than men. It's not clear whether or how sex and sex hormones play a role in causing asthma.

Most, but not all, people who have asthma have allergies.

Some people develop asthma because of exposure to certain chemical irritants or industrial dusts in the workplace. This is called occupational asthma.

What Are the Signs and Symptoms of Asthma?

Common asthma symptoms include:

- Coughing. Coughing from asthma is often worse at night or early in the morning, making it hard to sleep.
  Wheezing. Wheezing is a whistling or squeaky sound that occurs when you breathe.
- Chest tightness. This may feel like something is squeezing or sitting on your chest.
  Shortness of breath. Some people who have asthma say they can't catch their breath or they feel out of breath. You may feel like you can't get air out of your lungs.
- Not all people who have asthma have these symptoms. Likewise, having these symptoms doesn't always mean that you have asthma. A lung function test, done along with a medical history (including type and frequency of your symptoms) and physical exam, is the best way to diagnose asthma for certain.
- The types of asthma symptoms you have, how often they occur, and how severe they are may vary over time. Sometimes your symptoms may just annoy you. Other times they may be troublesome enough to limit your daily routine.

- Severe symptoms can threaten your life. It's vital to treat symptoms when you first notice them so they don't become severe.
- With proper treatment, most people who have asthma can expect to have few, if any, symptoms either during the day or at night.

What Causes Asthma Symptoms To Occur?

A number of things can bring about or worsen asthma symptoms. Your doctor will help you find out which things (sometimes called triggers) may cause your asthma to flare up if you come in contact with them. Triggers may include:

- Allergens found in dust, animal fur, cockroaches, mold, and pollens from trees, grasses, and flowers
  Irritants such as cigarette smoke, air pollution, chemicals or dust in the workplace, compounds in home décor products, and sprays (such as hairspray)
- Certain medicines such as aspirin or other nonsteroidal anti-inflammatory drugs and nonselective beta-blockers
- Sulfites in foods and drinks
- Viral upper respiratory infections such as colds
- Exercise (physical activity)
- Other health conditions—such as runny nose, sinus infections, reflux disease, psychological stress, and sleep apnea—can make asthma more difficult to manage. These conditions need treatment as part of an overall asthma care plan.
- Asthma is different for each person. Some of the factors listed may not affect you. Other factors that do affect you may not be on the list. Talk to your doctor about the things that seem to make your asthma worse.

How Is Asthma Diagnosed?

Your primary care doctor will diagnose asthma based on your medical history, a physical exam, and results from tests. He or she also will figure out what your level of asthma severity is—that is, whether it's intermittent, mild, moderate, or severe. Your severity level will determine what treatment you will start on.
You may need to see an asthma specialist if:

- You need special tests to be sure you have asthma
- You've had a life-threatening asthma attack
- You need more than one kind of medicine or higher doses of medicine to control your asthma, or if you have overall difficulty getting your asthma well controlled

- You're thinking about getting allergy treatments

Medical History

Your doctor may ask about your family history of asthma and allergies. He or she also may ask whether you have asthma symptoms, and when and how often they occur. Let your doctor know if your symptoms seem to happen only during certain times of the year or in certain places, or if they get worse at night.

Your doctor also may want to know what factors seem to set off your symptoms or worsen them. For more information on what causes asthma symptoms to occur, see"What Are the Signs and Symptoms of Asthma?"

Your doctor may ask you about related health conditions that can interfere with asthma management. These conditions include a runny nose, sinus infections, reflux disease, psychological stress, and sleep apnea.

Physical Exam

Your doctor will listen to your breathing and look for signs of asthma or allergies. These signs include wheezing, a runny nose or swollen nasal passages, and allergic skin conditions such as eczema.

Keep in mind that you can still have asthma even if you don't have these signs on the day that your doctor examines you.

Diagnostic Tests

Lung Function Test

Your doctor will use a test called spirometry (spi-ROM-eh-tre) to check how your lungs are working. This test measures how much air you can breathe in and out. It also measures how fast you can blow air out. Your doctor also may give you medicines and then test you again to see whether the results have improved.

If the starting results are lower than normal and improve with the medicine, and if your medical history shows a pattern of asthma symptoms, your diagnosis will likely be asthma.

Other Tests

Your doctor may order other tests if he or she needs more information to make a diagnosis. Other tests may include:

- Allergy testing to find out which allergens affect you, if any.
- A test to measure how sensitive your airways are. This is called a bronchoprovocation test. Using spirometry, this test repeatedly measures your lung function during physical activity or after you receive increasing doses of cold air or a special chemical to breathe in.

- A test to show whether you have another disease with the same symptoms as asthma, such as reflux disease, vocal cord dysfunction, or sleep apnea.
- A chest x ray or an EKG (electrocardiogram). These tests will help find out whether a foreign object or other disease may be causing your symptoms.

Diagnosing Asthma in Young Children

Most children who have asthma develop their first symptoms before 5 years of age. However, asthma in young children (aged 0 to 5 years) can be hard to diagnose. Sometimes it can be difficult to tell whether a child has asthma or another childhood condition because the symptoms of both conditions can be similar.

Also, many young children who have wheezing episodes when they get colds or respiratory infections don't go on to have asthma after they're 6 years old. These symptoms may be due to the fact that infants have smaller airways that can narrow even further when they get a cold or respiratory infection. The airways grow as a child grows older, so wheezing no longer occurs when the child gets a cold.

A young child who has frequent wheezing with colds or respiratory infections is more likely to have asthma if:

- One or both parents have asthma
- The child has signs of allergies, including the allergic skin condition eczema
- The child has allergic reactions to pollens or other airborne allergens
- The child wheezes even when he or she doesn't have a cold or other infection

A lung function test along with a medical history and physical exam is the most certain way to diagnose asthma. However, this test is hard to do in children younger than 5 years. Thus, doctors must rely on children's medical histories, signs and symptoms, and physical exams to make a diagnosis. Doctors also may use a 4 to 6 week trial of asthma medicines to see how well a child responds.

How Is Asthma Treated and Controlled?

Asthma is a long-term disease that can't be cured. The goal of asthma treatment is to control the disease. Good asthma control will:

- Prevent chronic and troublesome symptoms such as coughing and shortness of breath
- Reduce your need of quick-relief medicines (see below)
- Help you maintain good lung function
- Let you maintain your normal activity levels and sleep through the night

- Prevent asthma attacks that could result in your going to the emergency room or being admitted to the hospital for treatment

To reach this goal, you should actively partner with your doctor to manage your asthma or your child's asthma. Children aged 10 or older—and younger children who are able—also should take an active role in their asthma care.

Taking an active role to control your asthma involves working with your doctor and other clinicians on your health care team to create and follow an asthma action plan. It also means avoiding factors that can make your asthma flare up and treating other conditions that can interfere with asthma management.

An asthma action plan gives guidance on taking your medicines properly, avoiding factors that worsen you asthma, tracking your level of asthma control, responding to worsening asthma, and seeking emergency care when needed.

Asthma is treated with two types of medicines: long-term control and quick-relief medicines. Long-term control medicines help reduce airway inflammation and prevent asthma symptoms. Quick-relief, or "rescue," medicines relieve asthma symptoms that may flare up.
Your initial asthma treatment will depend on how severe your disease is. Followup asthma treatment will depend on how well your asthma action plan is working to control your symptoms and prevent you from having asthma attacks.

Your level of asthma control can vary over time and with changes in your home, school, or work environments that alter how often you are exposed to the factors that can make your asthma worse. Your doctor may need to increase your medicine if your asthma doesn't stay under control.

On the other hand, if your asthma is well controlled for several months, your doctor may be able to decrease your medicine. These adjustments either up or down to your medicine will help you maintain the best control possible with the least amount of medicine necessary.

Asthma treatment for certain groups of people, such as children, pregnant women, or those for whom exercise brings on asthma symptoms, will need to be adjusted to meet their special needs.

Follow an Asthma Action Plan

You can work with your doctor to create a personal written asthma action plan. The asthma action plan shows your daily treatment, such as what kind of

medicines to take and when to take them. The plan explains when to call the doctor or go to the emergency room.

If your child has asthma, all of the people who care for him or her should know about the child's asthma action plan. This includes babysitters and workers at daycare centers, schools, and camps. These caretakers can help your child follow his or her action plan.

Avoid Things That Can Worsen Your Asthma

A number of common things (sometimes called asthma triggers) can set off or worsen your asthma symptoms. Once you know what these factors are, you can take steps to control many of them.

For example, if exposure to pollens or air pollution makes your asthma worse, try to limit time outdoors when the levels of these substances are high in the outdoor air. If animal fur sets off your asthma symptoms, keep pets with fur out of your home or bedroom.

If your asthma symptoms are clearly linked to allergies, and you can't avoid exposure to those allergens, then your doctor may advise you to get allergy shots for the specific allergens that bother your asthma. You may need to see a specialist if you're thinking about getting allergy shots. These shots may lessen or prevent your asthma symptoms, but they can't cure your asthma.

Several health conditions can make asthma more difficult to manage. These conditions include runny nose, sinus infections, reflux disease, psychological stress, and sleep apnea. Your doctor will treat these conditions as well.

Medicines

Your doctor will consider many things when deciding which asthma medicines are best for you. Doctors usually use a stepwise approach to prescribing medicines. Your doctor will check to see how well a medicine works for you; he or she will make changes in the dose or medicine, as needed.

Asthma medicines can be taken in pill form, but most are taken using a device called an inhaler. An inhaler allows the medicine to go right to your lungs.

Not all inhalers are used the same way. Ask your doctor and other clinicians on your health care team to show you the right way to use your inhaler. Ask them to review the way you use your inhaler at every visit.

Long-Term Control Medicines

Most people who have asthma need to take long-term control medicines daily to help prevent symptoms. The most effective long-term medicines reduce airway inflammation.

These medicines are taken over the long term to prevent symptoms from starting. They don't give you quick relief from symptoms.

Inhaled corticosteroids. Inhaled corticosteroids are the preferred medicines for long-term control of asthma. These medicines are the most effective long-term control medicine to relieve airway inflammation and swelling that makes the airways sensitive to certain substances that are breathed in.

Reducing inflammation helps prevent the chain reaction that causes asthma symptoms. Most people who take these medicines daily find they greatly reduce how severe symptoms are and how often they occur.

Inhaled corticosteroids are generally safe when taken as prescribed. They're very different from the illegal anabolic steroids taken by some athletes. Inhaled corticosteroids aren't habit-forming, even if you take them every day for many years.

But, like many other medicines, inhaled corticosteroids can have side effects. Most doctors agree that the benefits of taking inhaled corticosteroids and preventing asthma attacks far outweigh the risks of side effects.

One common side effect from inhaled corticosteroids is a mouth infection called thrush. You can use a spacer or holding chamber to avoid thrush. A spacer or holding chamber is attached to your inhaler when taking medicine to keep the medicine from landing in your mouth or on the back of your throat.

Work with your health care team if you have any questions about how to use a spacer or holding chamber. Rinsing your mouth out with water after taking inhaled corticosteroids also can lower your risk of thrush.

If you have severe asthma, you may have to take corticosteroid pills or liquid for short periods to get your asthma under control. If taken for long periods, these medicines raise your risk for cataracts and osteoporosis (OS-te-o-po-RO-sis). A cataract is the clouding of the lens in your eye. Osteoporosis is a disorder that makes your bones weak and more likely to break.

Your doctor may have you add another long-term control asthma medicine to lower your dose of corticosteroids. Or, your doctor may suggest you take calcium

and vitamin D pills to protect your bones.
Other long-term control medicines. Other long-term control medicines include:

- Inhaled long-acting beta2-agonists. These medicines open the airways and may be added to low-dose inhaled corticosteroids to improve asthma control. An inhaled long-acting beta2-agonist shouldn't be used alone.
- Leukotriene modifiers. These medicines are taken by mouth. They help block the chain reaction that increases inflammation in your airways.
- Cromolyn and nedocromil. These inhaled medicines also help prevent inflammation and can be used to treat asthma of mild severity.
- Theophylline. This medicine is taken by mouth and helps open the airways.

If your doctor prescribes a long-term control medicine, take it every day to control your asthma. Your asthma symptoms will likely return or get worse if you stop taking your medicine.
Long-term control medicines can have side effects. Talk to your doctor about these side effects and ways to monitor or avoid them.

Quick-Relief Medicines

All people who have asthma need a quick-relief medicine to help relieve asthma symptoms that may flare up. Inhaled short-acting beta2-agonists are the first choice for quick relief.

These medicines act quickly to relax tight muscles around your airways when you're having a flareup. This allows the airways to open up so air can flow through them.

You should take your quick-relief medicine when you first notice your asthma symptoms. If you use this medicine more than 2 days a week, talk with your doctor about how well controlled your asthma is. You may need to make changes in your asthma action plan.

Carry your quick-relief inhaler with you at all times in case you need it. If your child has asthma, make sure that anyone caring for him or her and the child's school has the child's quick-relief medicines. They should understand when and how to use them and when to seek medical care for your child.

You shouldn't use quick-relief medicines in place of prescribed long-term control medicines. Quick-relief medicines don't reduce inflammation.

Track Your Asthma

To track your asthma, keep records of your symptoms, check your peak flow number using a peak flow meter, and get regular asthma checkups.

Record Your Symptoms

You can record your asthma symptoms in a diary to see how well your treatments are controlling your asthma.

Asthma is "well controlled" if:

- You have symptoms no more than 2 days a week and they don't wake you from sleep more than 1 or 2 nights a month.
- You can carry out all your normal activities.
- You take quick-relief medicines no more than 2 days a week.
- You have no more than one asthma attack a year that requires you to take corticosteroids by mouth.
- Your peak flow doesn't drop below 80 percent of your personal best number.
- If your asthma isn't well controlled, contact your doctor. He or she may need to change your asthma action plan.

Use a Peak Flow Meter

This small, hand-held device shows how well air moves out of your lungs. You blow into the device and it gives you a score, or peak flow number. Your score shows how well your lungs are working at the time of the test.

Your doctor will tell you how and when to use your peak flow meter. He or she also will teach you how to take your medicines based on your score.

Your doctor and other clinicians on your health care team may ask you to use your peak flow meter each morning and keep a record of your results. It may be particularly useful to record peak flow scores for a couple of weeks before each medical visit and take the results with you.

When first diagnosed with asthma, it's important to find out your "personal best" peak flow number. To do this, you record your score each day for a 2- to 3-week period when your asthma is under good control. The highest number you get during that time is your personal best. You can compare this number to future numbers to make sure your asthma is under control.

Your peak flow meter can help warn you of an asthma attack, even before you notice symptoms. If your score falls to a number that shows that your breathing is getting worse, you should take your quick-relief medicines the way your asthma

action plan directs. Then you can use the peak flow meter to check how well the medicine worked.

Get Asthma Checkups

When you first begin treatment, you will see your doctor about every 2 to 6 weeks. Once your asthma is under control, your doctor may want to see you anywhere from once a month to twice a year.

During these checkups, your doctor or nurse will ask whether you've had an asthma attack since the last visit or any changes in symptoms or peak flow measurements. You will also be asked about your daily activities. This will help them assess your level of asthma control.

Your doctor or nurse also will ask whether you have any problems or concerns with taking your medicines or following your asthma action plan. Based on your answers to these questions, your doctor may change the dose of your medicine or give you a new medicine.

If your control is very good, you may be able to take less medicine. The goal is to use the least amount of medicine needed to control your asthma.

Emergency Care

Most people who have asthma, including many children, can safely manage their symptoms by following the steps for worsening asthma provided in the asthma action plan. However, you may need medical attention. Call your doctor for advice if:

- Your medicines don't relieve an asthma attack.
- Your peak flow is less than half of your personal best peak flow number.
- Call 9–1–1 for an ambulance to take you to the emergency room of your local hospital if:
- You have trouble walking and talking because you're out of breath.
- You have blue lips or fingernails.

At the hospital, you will be closely watched and given oxygen and more medicines, as well as medicines at higher doses than you take at home. Such treatment can save your life.

Asthma Treatment for Special Groups

The treatments described in this section generally apply to all people who have asthma. However, some aspects of treatment differ for people in certain age groups and those who have special needs.

Children

It's hard to diagnose asthma in children younger than 5 years old. Thus, it's hard to know whether young children who wheeze or have other asthma symptoms will benefit from long-term control medicines. (Quick-relief medicines tend to relieve wheezing in young children whether they have asthma or not.)

Doctors will treat infants and young children who have asthma symptoms with long-term control medicines if the child's asthma health assessment indicates that the symptoms are persistent and likely to continue after 6 years of age.

Inhaled corticosteroids are the preferred treatment for young children. Montelukast or cromolyn are alternative options. Treatment may be given for a trial period of 1 month to 6 weeks. The treatment usually is stopped if benefits aren't seen during that time and the doctor and parents are confident the medicine was used properly. Inhaled corticosteroids can possibly slow the growth of children of all ages. If this slowed growth occurs, it usually is apparent in the first several months of treatment, is generally small, and doesn't get worse over time.

Poorly controlled asthma also may reduce a child's growth rate.

Most experts think the benefits of inhaled corticosteroids for children who need them to control their asthma far outweigh the risk of slowed growth.

Older Adults

Doctors may need to adjust asthma treatment for older adults who take certain other medicines, such as beta blockers, aspirin and other pain relievers, and anti-inflammatory medicines. These medicines can prevent asthma medicines from working properly and may worsen asthma symptoms.

Be sure to tell your doctor about all of the medicines you take, including over-the-counter medicines.

Older adults may develop weak bones from using inhaled corticosteroids, especially at high doses. Talk to your doctor about taking calcium and vitamin D pills and other ways to help keep your bones strong.

Pregnant Women

Pregnant women who have asthma need to control the disease to ensure a good supply of oxygen to their babies. Poor asthma control raises the chance that a baby will be born early and have a low birth weight. Poor asthma control can even risk the baby's life.

Studies show that it's safer to take asthma medicines while pregnant than to risk having an asthma attack.

Talk to your doctor if you have asthma and are pregnant or planning to get pregnant. Your level of asthma control may get better or it may get worse while you're pregnant. Your health care team will check your asthma control often and adjust your treatment as needed.

People Whose Asthma Symptoms Occur With Physical Activity

Physical activity is an important part of a healthy lifestyle. Adults need physical activity to maintain good health.

Children need it for growth and development.

In many people, however, physical activity may set off asthma symptoms. If this happens to you or your child, talk to your doctor about the best ways to control asthma so you can stay active.

The following medicines may help to prevent asthma symptoms due to physical activity:

- Short-acting beta2-agonists (quick-relief medicine) taken shortly before physical activity can last 2 to 3 hours and prevent exercise-related symptoms in most people who take them.
- Long-acting beta2-agonists can be protective up to 12 hours. However, with daily use, they will no longer give up to 12 hours of protection. Also, frequent use for physical activity may be a sign that asthma is poorly controlled.
- Leukotriene modifiers. These pills are taken several hours before physical activity. They help relieve asthma symptoms brought on by physical activity in up to half of the people who take them.
- Cromolyn or nedocromil. These medicines are taken shortly before physical activity to help control asthma symptoms.
- Long-term control medicines. Frequent or severe symptoms due to physical activity may indicate poorly controlled asthma and the need to either start or increase long-term control medicines that reduce inflammation. This will help prevent exercise-related symptoms.
- Easing into physical activity with a warmup period also may be helpful. You also may want to wear a mask or scarf over your mouth when exercising in cold weather.

If you use your asthma medicines as your doctor directs, you should be able to take part in any physical activity or sport you choose.

People Having Surgery

Asthma may add to the risk of having problems during and after surgery. For instance, having a tube put into your throat may cause an asthma attack.
Tell your surgeon about your asthma when you first consult him or her. The surgeon can take steps to lower your risks, such as giving you asthma medicines before or during surgery.

Can Asthma Be Prevented?

Currently, there isn't a way to prevent asthma from starting in the first place. However, you can take steps to control the disease and prevent its symptoms.

- Learn about your asthma and how to control it.
- Follow your written asthma action plan.
- Use medicines as your doctor directs.
- Identify and avoid things that make your asthma worse (as much as you can).
- Keep track of your asthma symptoms and level of control.
- Get regular checkups for your asthma.

Living With Asthma

Asthma is a long-term disease that requires long-term care. Successful asthma treatment requires you to take an active role in your care and follow your asthma action plan.

Learn How To Manage Your Asthma

Partner with your doctor to develop an asthma action plan. This plan will help you to properly take your medicines, identify your asthma triggers, and manage your disease if asthma symptoms worsen. Children aged 10 or older—and younger children who can handle it—should be involved in developing and following their asthma action plan.

Most people who have asthma can successfully manage their symptoms at home by following their asthma action plans and having regular checkups. However, it's important to know when to seek emergency medical care.

Learn how to use your medicines correctly. If you take inhaled medicines, you should practice using your inhaler at your doctor's office. If you take long-term control medicines, take them daily as your doctor prescribes.

Record your asthma symptoms as a way to track how well your asthma is controlled. Also, you may use a peak flow meter to measure and record how well your lungs are working.

Your doctor may ask you to keep records of your symptoms or peak flow results daily for a couple of weeks before an office visit and bring these records with you to the visit.

These steps will help you keep track over time of how well you're controlling your asthma. This will help you spot problems early and prevent or relieve asthma attacks. Recording your symptoms and peak flow results to share with your doctor also will help him or her decide whether to adjust your treatment.

Ongoing Care

Have regular asthma checkups with your doctor so he or she can assess your level of asthma control and adjust your treatment if needed. Remember, the main goal of asthma treatment is to achieve the best control of your asthma using the least amount of medicine. This may require frequent adjustments to your treatments.
If it's hard to follow your plan or the plan isn't working well, let your health care team know right away. They will work with you to adjust your plan to better suit your needs.

- Get treatment for any other conditions that can interfere with your asthma management.
- Watch for Signs That Your Asthma Is Getting Worse
- Your asthma may be getting worse if:
- Your symptoms start to occur more often, are more severe, and/or bother you at night and cause you to lose sleep.
- You're limiting your normal activities and missing school or work because of your asthma.
- Your peak flow number is low compared to your personal best or varies a lot from day to day.
- Your asthma medicines don't seem to work well anymore.
- You have to use your quick-relief inhaler more often. If you're using quick-relief medicine more than 2 days a week, your asthma isn't well controlled.
- You have to go to the emergency room or doctor because of an asthma attack.
- If you have any of these signs, see your doctor. He or she may need to change your medicines or take other steps to control your asthma.

- Partner with your health care team and take an active role in your care. This can help control asthma so it doesn't interfere with your activities and disrupt your life.

Key Points

- Asthma is a chronic (long-term) lung disease that inflames and narrows the airways and makes them more reactive to certain substances breathed in. The exact cause of asthma isn't known.
- Asthma affects people of all ages, but it most often starts in childhood. In the United States, more than 22 million people are known to have asthma. Nearly 6 million of these people are children.
- Asthma causes recurring periods of wheezing (a whistling sound when you breathe), chest tightness, shortness of breath, and coughing. The coughing often occurs at night or early in the morning.
- Sometimes symptoms are mild and go away on their own or after minimal treatment with an asthma medicine.
- Other times, the symptoms continue to get worse. When symptoms get more intense and/or additional symptoms appear, this is an asthma attack.
- It's important to treat asthma symptoms when you first notice them. This will help prevent the symptoms from worsening and causing a severe attack. Severe asthma attacks may require emergency care, and they can cause death.
- Your doctor will diagnose asthma based on your medical history, a physical exam, and results from tests. Asthma is difficult to diagnose in children younger than 5 years old.
- There's no cure for asthma. Asthma is a long-term disease that requires long-term care. Successful asthma treatment requires you to take an active role in your care. Learn how to manage your asthma, get ongoing care, and watch for signs that your asthma is getting worse.
- The goal of asthma treatment is to control the disease by following the asthma action plan you create with your doctor, taking asthma medicines as prescribed, learning what things make your asthma worse and taking steps to avoid exposure to them, tracking your level of asthma control, and responding quickly to worsening symptoms.
- Asthma is treated with two types of medicines: long-term control medicines and quick-relief medicines. You use a device called an inhaler to take many of these medicines. This device allows the medicine to go right to your lungs.

- The amounts and types of medicine you need to treat your asthma depend on how well controlled your asthma is when you're closely following your asthma action plan. This may change over time.
- Call 9–1–1 for an ambulance to take you to the emergency room of your local hospital if you have trouble walking and talking because you're out of breath or you have blue lips or fingernails.
- Track your asthma by recording your symptoms, using a peak flow meter, and getting regular asthma checkups. Let your doctor know if your asthma is getting worse.
- Most people who have asthma are able to manage the disease. They have few, if any, symptoms and can live normal, active lives.