

## Asthma, Adult

### What is it?

An asthma episode or attack is a flare-up of asthma symptoms. The air passages become inflamed and swollen. The muscles around these airways tighten. More mucus is produced. All of this causes the airways in the lungs to get narrower. This makes breathing difficult.

### What is the cause?

You may have a cold or other upper respiratory infection. If you have allergies, an attack may be triggered by exposure to a lot of pollen, dust, or animals. Sinus infections are another common cause. Sometimes an attack is brought on by exposure to smoke, paint fumes, or other irritants to the lungs.

### What are the symptoms?

Symptoms of an asthma attack can include:

- A frequent harsh, dry cough.
- Wheezing. This is a high-pitched whistling sound when breathing out.
- Stridor. This is a high-pitched whistling sound when breathing in.
- Chest pain or tightness.
- Waking out of sleep.
- Shortness of breath even while resting.

You may be frightened or anxious when you have an attack.

### How is it treated?

We will give you medicines to help open the air passages. These are called rescue medicines. They work by relaxing the tightened muscles around the air passages. Use them for as long as you have symptoms. Use as directed for cough or wheeze. We may have you check how much your breathing is affected during an attack. You can do this using a device called a peak flow meter. This will help you know when to use the rescue medicine.

We may give you steroid medicines to take for a longer time. These medicines treat the inflammation inside of the airways. If you have a bacterial infection in the sinuses or elsewhere, antibiotic medicines may be needed.

If the attack is severe, we may need to treat you in the hospital. There we can give you oxygen, if needed. We can also give you medicines that help shorten and ease an attack.

### What can I expect?

With treatment, we expect your asthma symptoms will improve. It may take one to several days for you to return to normal. You should see improvement in your cough or wheeze after taking the rescue medicine. The improvement may only be temporary. You may need to use it several times per day.

### What to watch for.

Let us know if you do not improve as expected. We want to know if the rescue medicine does not help or last as long as the prescription suggests. Call us if you are vomiting or can't sleep because of the cough or wheeze. Let us know if your shortness of breath gets worse.

### Other Types of Asthma:

#### Exertional Asthma

##### What is it?

Exercise-induced asthma means your air passages react to exercise. The air passages become inflamed. The muscles surrounding the air passages tighten. Both the tightening and the inflammation cause the airways to get narrower for a time. This can make it difficult to breathe. Also, thick mucus is created in the air passages. This blocks them even more.

Another name for this problem is exercise-induced bronchospasm.

##### What are the symptoms?

You may have a tight feeling in the chest or shortness of breath. You may wheeze, making a raspy or whistling sound when you breathe out. You may feel anxious. You may only have a dry cough. The problem may affect how well you can perform a sport.

These symptoms happen only while you are exercising or right after you exercise. You may have similar, milder symptoms after hard laughter. Once the wheezing or coughing starts, it may continue for an hour or more after the exercise is finished. You may have symptoms again later at night.

You may have more problems when you have a cold. Cold air, heavy pollen, tobacco smoke, or air pollution also may make your exercise asthma worse.

##### How is it treated?

Exercise-induced asthma usually can be treated with medicine that you breathe into your lungs before you start exercising. If you smoke, stop. Avoid breathing smoke.

Make sure you are in good condition for exercising. Warm up for at least 10 minutes before beginning exercise. We may suggest that you swim or exercise indoors when the weather is cold. If this is not possible, cover your mouth and nose with a scarf or ski mask. Cool down after exercise. For example, if you have been running, do not suddenly stop. Jog and then walk for a bit.

#### Mild Intermittent Asthma

##### What is it?

Asthma is a disease in which the linings of the air passages of the lungs are easily inflamed. The air passages over-react to a variety of things. When the air passages react, more inflammation occurs. The muscles around the air passages tighten. Both the tightening and the inflammation cause the air passages to get narrower for a time. This can make it difficult to breathe. Also, thick mucus is created in the air passages. This blocks them even more.

Asthma is called "mild intermittent" if you wheeze only occasionally, or with a cold or exercise. You may need to use an inhaled medicine once or twice a month. People with this mild form of asthma only rarely wake up at night wheezing.

## What are the symptoms?

You may have a tight feeling in the chest, shortness of breath, or fast breathing. You may wheeze. This is a raspy or whistling sound when you breathe. You may breathe fine while at rest, but find that exercise sometimes makes you wheeze. A chronic cough may be your only symptom.

## How is it treated?

You must understand asthma to learn how to control it. You can learn to feel when you are getting worse. Without help, you can learn how to adjust medications. Most important, you can learn how to avoid the things that make your asthma worse. For example, you should avoid pollen, dust, and cigarette or other smoke. For some people, animal dander from animal skin, fur, or feather is a trigger. We may suggest skin testing to find out what allergies you may have.

When your asthma is mild, you may need to use an inhaled medicine only when you have symptoms. This is called a rescue inhaler. It can help you feel better immediately. It is important that you understand what your medicines are for. This will help you know how and when to use them. If you are a smoker, STOP. There is nothing more important you can do than stop smoking. Ask us for help.

## Mild Persistent Asthma

### What is it?

Asthma is a disease in which the linings of the air passages of the lungs are inflamed. This causes the air passages to over-react to a variety of things. When the air passages react, more inflammation occurs. The muscles around the air passages tighten. Both the tightening and the inflammation cause the air passages to narrow. This can make it difficult to breathe. The inflammation also creates thick mucus in the air passages, which blocks them even more.

Asthma is called "mild persistent" if you have symptoms more often than twice a week, but not as much as every day, and you wake up at night with wheezing no more than twice a month.

## What are the symptoms?

An asthma attack usually begins abruptly. You may experience a tight feeling in the chest. Other symptoms may be shortness of breath or fast breathing. You may wheeze. This means you make a raspy or whistling sound when you breathe out. You may breathe normally while at rest, but find that any exercise makes you wheeze. A frequent dry cough may be your only symptom. Symptoms either stop on their own or with treatment.

## How is it treated?

You must understand asthma to learn how to control it. You can learn to feel when you are getting worse. With our help you can learn how to adjust your medicines. Most importantly, you can learn how to avoid the things that make your asthma worse. For example, you may need to avoid pollen, animal dander, and cigarette or other smoke.

When your asthma is mild, you may need to use an inhaled medicine only when you have symptoms. This is called a rescue inhaler. It is called that because it can help you feel better immediately. It is important that you understand what your medicines are for. Knowing this helps tell you how to use them.

In some cases, people with mild persistent asthma may need to take medicine every day to control their symptoms.

In summer, watch the local weather report for air quality warnings. You may need to stay indoors on days when air pollution is bad or pollen counts are high.

If you are a smoker, STOP. There is nothing more important you can do than stop smoking. Ask us for help.

## Moderate Persistent Asthma

### What is it?

Asthma is a disease in which the linings of the air passages of the lungs are inflamed. This causes the air passages to be over-reactive to a variety of things. When the air passages react, more inflammation occurs. The muscles around the air passages tighten. Both the tightening and the inflammation cause the air passages to narrow for a time. This can make it difficult to breathe. The inflammation also creates thick mucus in the air passages, which blocks them even more.

Asthma is called "moderate" if you need to use your rescue inhaler daily. You have flares where your asthma seems worse for several days. You wake up at night with wheezing more than once a week.

## What are the symptoms?

You may experience a tight feeling in the chest. Other symptoms may be shortness of breath or fast breathing. You may wheeze. This means you make a raspy or whistling sound when you breathe. You may breathe fine while at rest, but find that any exercise makes you wheeze. A chronic cough may be your only symptom.

## How is it treated?

You must understand asthma to learn how to control it. You can learn to feel when you are getting worse. With our help you can learn how to adjust medications. Most important, you can learn how to avoid the things that make your asthma worse. For example, you should avoid pollen, dust, and cigarette or other smoke. For some people, animal dander from fur or feathers is a trigger. If dander triggers your asthma, you need to avoid it. We may suggest skin testing to learn what you are allergic to. We may suggest allergy shots to reduce your allergic reactions. When your asthma is moderate, you may need to be on two different types of medicine. One type we call a rescue medicine. It is called this because it can help you feel better right away. You use it when you are having an asthma attack or your asthma is getting worse. The other type is called a preventive or maintenance medicine. It will not help with an asthma attack but it will help prevent them. It is important that you understand what your medicines are for.

Knowing this will tell you how and when to use them. We may

teach you to use a peak flow meter to measure how well the medicines are working. We may also teach you to use a spacer. This is a device that makes it easier to use inhalers.

If you are a smoker, STOP. There is nothing more important you can do than stop smoking. Ask us for help.

### **Severe Persistent Asthma** **What is it?**

Asthma is a disease in which the linings of the air passages of the lungs are inflamed. This causes the air passages to be over-reactive to a variety of things. When the air passages react, more inflammation occurs. The muscles around the air passages tighten. Both the tightening and the inflammation cause the air passages to narrow for a time. This can make it difficult to breathe. The inflammation also creates thick mucus in the air passages, which blocks them even more.

Asthma is called "severe" if you have symptoms almost all the time. You wake up with wheezing often. You find it difficult to be very active because of your asthma.

### **What are the symptoms?**

You may experience a tight feeling in the chest. Other symptoms may be a dry cough, shortness of breath, or fast breathing. You may wheeze. This means you make a raspy or whistling sound when you breathe. You may find that any exercise makes you wheeze. You often have times when symptoms are much worse.

### **How is it treated?**

You must understand asthma to learn how to control it. You can learn to recognize when you are getting worse. With our help you can learn how to adjust medications. Most important, you can learn how to avoid the things that make your asthma worse. For example, you should avoid pollen, dust, and cigarette or other kinds of smoke. For some people, animal dander from fur or feathers is a trigger.

In summer, watch the local weather report for air quality warnings. You may need to stay indoors on days when air pollution is bad or pollen counts are high.

### **Instructions:**

#### **Avoid exposure to cigarette smoke.**

Family members who smoke should not smoke in the house or in the car. Smoking and being exposed to smoke can make your condition worse.

#### **Avoid exposure to household dust, animal dander, and molds.**

There are ways to avoid these:

- Use less carpet in your home. Use throw rugs that can be washed easily, with non-skid pads under them.
- Do not use feather pillows.

- Do not keep pets with fur or feathers. If removal of a pet is not possible, keep the pet out of the child's bedroom. Keep the pet off of furniture and carpets.
- Keep bedroom windows closed during pollen season.
- Put stuffed toys in the dryer on an air cycle regularly, to get rid of dust.
- Do not use fabric softener sheets in the dryer.
- Cover mattresses with a vinyl or nylon zippered cover.
- Keep the air and surfaces in your home as dry as possible to avoid molds. A dehumidifier can help.

### **Avoid exposure to things that make your problem worse.**

Common things that can cause irritation are:

- Pet dander
- Pollen
- Certain foods and food dyes
- Wood smoke from a fireplace or wood stove
- Cigarette smoke
- Cold air
- Damp, moldy areas
- Perfumes
- Paint

### **Several things can be done to allergy-proof the bedroom:**

- Remove stuffed toys, banners, throw pillows, and other dust collectors.
- Remove all feather or down pillows or comforters.
- Remove all mold from windows and walls.
- Do not allow any pets in the room.
- Remove carpeting if possible. If not, special sprays can be used to kill dust mites.
- Enclose all pillows, mattresses, and box springs in hypoallergenic coverings.
- Damp dust and vacuum frequently.
  
- Wash all bedding and washable stuffed toys weekly. If your water heater is normally set at 120 F or below, turn it up to over 130 F for washing bedding. Turn it down again when done.
- Avoid heavy curtains and blinds-use window shades instead.
- Use air conditioners to prevent high heat and humidity. Use an air conditioner with a HEPA filter, or use a special HEPA air cleaner in the bedroom.
- Use a dehumidifier to decrease humidity to less than 50 percent. This can control molds and dust mites.
- Change the filter on your furnace at least at the beginning of the winter season.

### To use an inhaler:

- Remove the cap and shake the inhaler. Hold the inhaler with the nozzle down and the mouthpiece close to your mouth.
- Exhale as much air as you can.
- Put the mouthpiece in your mouth. Do not close your lips on it.
- Take a slow, deep breath while squeezing the canister and mouthpiece together to release the medication.
- Hold your breath for a few seconds.
- Exhale slowly, keeping your lips together.
- If you use a second dose, wait the prescribed time and then repeat.
- Remove and wash the mouthpiece every day.
- Store the inhaler with the dust cover on.
- If you have been instructed to use more than one puff, wait one full minute before using the inhaler again. To check how much medicine is left, take the canister out of the mouthpiece and float it in a glass of water. If it floats on top it is empty. It should be replaced.

### Precautions:

#### Call 911 if:

**You are too short of breath to talk, you can speak only one or two words between breaths, or your lips or nails look blue.**

#### Call Your Physician if:

**You wake at night with wheezing more than twice a week.**

**Your temperature is higher than 101 F.**

#### Seek Immediate Medical Attention if:

- The medicine effects seem to be wearing off too soon.
- The symptoms seem worse.
- You have difficulty breathing, or you are short of breath more often.

### Instructions:

Drink at least 6 glasses of clear liquids a day.

- Clear liquids include:
  - water
  - clear broth (no milk-based soups)
  - Jell-O
  - Popsicles
  - apple and grape juice
  - herbal tea

Avoid milk, regular teas, and coffee.

We recommend that you receive allergy shots.

You may continue or resume your normal level of activity.

### Precautions:

#### Call 911 if:

Your child has difficulty breathing.

#### Call Your Physician if:

- The symptoms are not better in 7 days.
- The wheezing is getting worse.
- Wheezing causes night waking more than twice a week.
- You are using your rescue inhaler more than 2 times a day.
- You have a productive cough and are bringing up secretions (phlegm).
- Your child is using the rescue inhaler more than 2 times a day.

#### Seek Immediate Medical Attention if:

- The wheezing is not better after using the asthma medicine.
- Your baby is too short of breath to suck or feed.
- Your child is short of breath.
- Your child's cry is quieter and shorter.