# SELINSGROVE AREA SCHOOL DISTRICT



# Signs of an asthma emergency include:

- **Rapid wors**ening of shortness of breath or wheezing
- No improvement even after using a quick-relief inhaler, such as albuterol
- Shortness of breath when you are doing minimal physical activity

# **SEALS Health News**



#### NOVEMBER





Asthma is a condition in which your airways narrow and swell and produce extra mucus. This can make breathing difficult and trigger coughing, wheezing • and shortness of breath. For some people, asthma is a minor nuisance. For oth- • ers, it can be a major problem that interferes with daily activities and may lead to a lifethreatening asthma attack.

Asthma can't be cured, but its symptoms can be controlled. Because asth-

ma often changes over time, it's important that you work with your doctor to track your signs and symptoms and adjust treatment as needed. Symptoms Asthma symp-

toms vary from person to person. You may have infrequent asthma attacks, have symptoms only at

certain times — such as when exercising — or have symptoms all the time. Asthma signs and symptoms include:

- Shortness of breath
- Chest tightness or pain
- Trouble sleeping caused by shortness of breath, coughing or wheezing
- A whistling or wheezing sound when exhaling (wheezing is a common sign of asthma in children)
- Coughing or wheezing



ened by a respiratory virus, such as a cold or the flu

Signs that your asthma is probably worsening include:

- Asthma signs and symptoms that are more frequent and bothersome
- Increasing difficulty ٠ breathing
- The need to use a quick-relief inhaler more often

For some people, asthma signs and symptoms flare up in certain situations: Exercise-induced asthma, which may be worse when the air is cold and dry

> Occupational asth*ma*, triggered by workplace irritants such as chemical fumes, gases or dust

Allergy-induced asthma, triggered by airborne substances, such as pollen, mold spores,

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attacks that are wors- cockroach waste or particles of skin and dried saliva shed by pets (pet dander)

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with asthma also have alleraies

Women account for nearly 65% of asthma deaths overall

# Asthma

## Causes

It isn't clear why some people get asthma and others don't, but it's probably due to a combination of environmental and genetic (inherited) factors.

## Asthma triggers

Exposure to various irritants and substances that trigger allergies (allergens) can trigger signs and symptoms of asthma. Asthma triggers are different from person to person and can include:

 Airborne substances, such as pollen, dust mites, mold spores, pet dander or particles of cockroach waste

 Respiratory infections, such as the common cold

- Physical activity (exerciseinduced asthma)
- Cold air
- Air pollutants and irritants,

such as smoke

- Certain medications, including beta blockers, aspirin, ibuprofen (Advil, Motrin IB, others) and naproxen (Aleve)
- Strong emotions and stress
- Sulfites and preservatives added to some types of foods and beverages, including shrimp, dried fruit, processed potatoes, beer and wine
- Gastroesophageal reflux disease (GERD), a condition in which stomach acids back up into your throat

## **Risk factors**

A number of factors are thought to increase your chances of developing asthma. These include:

- Having a blood relative (such as a parent or sibling) with asthma
- Having another allergic condition, such as atopic dermatitis or allergic rhinitis (hay fever)
- Being overweight
- Being a smoker
- Exposure to secondhand smoke



• Exposure to exhaust fumes or other types of pollution

Exposure to occupational triggers, such as chemicals used in farming, hairdressing and manufacturing

## Complications

Asthma complications include:

- Signs and symptoms that interfere with sleep, work or recreational activities
- Sick days from work or school during asthma flare-ups
- Permanent narrowing of the bronchial tubes (airway remodeling) that affects how well you can breathe
- Emergency room visits and hospitalizations for severe asthma attacks
- Side effects from long-term use of some medications used to stabilize severe asthma

Proper treatment makes a big difference in preventing both shortterm and long-term complications caused by asthma.

# What's the difference between vocal cord dysfunction and asthma?

Both asthma and vocal cord dysfunction can make breathing difficult. Signs and symptoms of either condition can include coughing, wheezing, throat tightness and hoarseness, but they're two separate disorders.

Vocal cord dysfunction is the abnormal closing of the vocal cords when you breathe in or out. It's also called laryngeal dysfunction, paradoxical vocal cord movement disorder or paradoxical vocal cord motion. Like asthma, vocal cord dysfunction can be triggered by breathing in lung irritants, having an upper respiratory infection or exercising. However, unlike asthma, vocal cord dysfunction isn't an immune system reaction and doesn't involve the lower airways. Treatment for the two conditions also is different.

Your doctor may suspect vocal cord dysfunction rather than asthma if:

- It's harder to breathe in than breathe out when symptoms flare up.
- Asthma medications don't seem to ease your symptoms.
- Results of breathing (pulmonary function) tests or other tests for asthma are normal or only show mild changes.

Because they have similar triggers and symptoms, it's common for vocal cord dysfunction to be misdiagnosed as asthma. This can lead to use of asthma medications that don't help and cause side effects. Some people have both vocal cord dysfunction and asthma, and require treatment for both conditions.

Treatment for vocal cord dysfunction may involve special breathing exercises called panting maneuvers, speech therapy, biofeedback and avoidance of irritants.

# Is there a connection between asthma and acid reflux?

Asthma and acid reflux often occur together. It isn't clear why, or whether one causes the other. But we do know that acid reflux can worsen asthma and asthma can worsen acid reflux — especially severe acid reflux, a condition known as gastroesophageal reflux disease (GERD).

Asthma and acid reflux can occur together in children as well as in adults. In fact, about half the children with asthma also have GERD.

When asthma and acid reflux do occur together medications may not work as well to control signs and symptoms of either condition, such as coughing, shortness of breath, wheezing and chest pain.

Treating acid reflux may help ease symptoms. You may be able to control acid reflux with over-the-counter medications — for example, a proton pump inhibitor, such as omeprazole (Prilosec OTC). Avoiding reflux triggers, such as fatty foods, alcohol and tobacco, also may help. If that's not enough, prescription medications may be needed. If you have asthma and think you might have acid reflux, talk to your doctor about the best treatments.



UNDERSTANDING

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# Prevention

While there's no way to prevent asthma, by working together, you and your doctor can design a step-by-step plan for living with your condition and preventing asthma attacks.

- $\Rightarrow$  Follow your asthma action plan. With your doctor and health care team, write a detailed plan for taking medications and managing an asthma attack. Then be sure to follow your plan.
- ⇒ Asthma is an ongoing condition that needs regular monitoring and treatment. Taking control of your treatment can make you feel more in control of your life in general.
- ⇒ Get vaccinated for influenza and pneumonia. Staying current with vaccinations can prevent flu and pneumonia from triggering asthma flare-ups.
- ⇒ Identify and avoid asthma triggers. A number of outdoor allergens and irritants — ranging from pollen and mold to cold air and air pollution — can trigger asthma attacks. Find out what causes or worsens your asthma, and take steps to avoid those triggers.
- ⇒ Monitor your breathing. You may learn to recognize warning signs of an impending attack, such as slight coughing, wheezing or shortness of breath. But because your lung function may decrease before you notice any signs or symptoms, regularly measure and record your peak airflow with a home peak flow meter.
- ⇒ Identify and treat attacks early. If you act quickly, you're less likely to have a severe attack. You also won't need as much medication to control your symptoms.
- ⇒ When your peak flow measurements decrease and alert you to an oncoming attack, take your medication as instructed and immediately stop any activity that may have triggered the attack. If your symptoms don't improve, get medical help as directed in your action plan.
- ⇒ Take your medication as prescribed. Just because your asthma seems to be improving, don't change anything without first talking to your doctor. It's a good idea to bring your medications with you to each doctor visit, so your doctor can double-check that you're using your medications correctly and taking the right dose.



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of uncontrolled asthma patients surveyed believed their asthma was under control, when results from the Asthma Control Test revealed it was not, suggesting a false sense of confidence in their ability to manage their asthma

# TREATMENT

Prevention and long-term control are key in stopping asthma attacks before they start. Treatment usually involves learning to recognize your triggers, taking steps to avoid them and tracking your breathing to make sure your daily asthma medications are keeping symptoms under control. In case of an asthma flare-up, you may need to use a quickrelief inhaler, such as albuterol.

## Medications

The right medications for you depend on a number of things — your age, symptoms, asthma triggers and what works best to keep your asthma under control.

Preventive, long-term control medications reduce the inflammation in your airways that leads to symptoms. Quick-relief inhalers (bronchodilators) quickly open swollen airways that are limiting breathing. In some cases, allergy medications are necessary.

Long-term asthma control medications, generally taken daily, are the cornerstone of asthma treatment. These medications keep asthma under control on a day-today basis and make it less likely you'll have an asthma attack. **Types of longterm control medications include:** 

Inhaled corticosteroids. These antiinflammatory drugs include fluticasone (Flonase, Flovent HFA), budesonide (Pulmicort Flexhaler, Rhinocort), flunisolide (Aerospan HFA), ciclesonide (Alvesco, Omnaris, Zetonna), beclomethasone (Qnasl, Qvar), mometasone (Asmanex) and fluticasone furoate (Arnuity Ellipta).

You may need to use these medications for several days to weeks before they reach their maximum benefit. Unlike oral corticosteroids, these corticosteroid medications have a relatively low risk of side effects and are generally safe for long-term use.

Leukotriene modifiers. These oral medications — including montelukast (Singulair), zafirlukast (Accolate) and zileuton (Zyflo) help relieve asthma symptoms for up to 24 hours.

In rare cases, these medications have been linked to psychological reactions, such as agitation, aggression, hallucinations, depression and suicidal thinking. Seek medical advice right away for any unusual reaction.

Long-acting beta agonists. These inhaled medications, which include salmeterol (Serevent) and formoterol (Foradil, Perforomist), open the airways.

Some research shows that they may increase the risk of a severe asthma attack, so take them only in combination with an inhaled corticosteroid. And because these drugs can mask asthma deterioration, don't use them for an acute asthma attack.



*Combination inhalers.* These medications such as fluticasone-salmeterol (Advair Diskus), budesonide-formoterol (Symbicort) and formoterol-mometasone (Dulera) contain a long-acting beta agonist along with a corticosteroid. Because these combination inhalers contain long-acting beta agonists, they may increase your risk of having a severe asthma attack.

*Theophylline.* Theophylline (Theo-24, Elixophyllin, others) is a daily pill that helps keep the airways open (bronchodilator) by relaxing the muscles around the airways. It's not used as often now as in past years.

Quick-relief (rescue) medications are used as needed for rapid, short-term symptom relief during an asthma attack — or before exercise if your doctor recommends it. Types of quick-relief medications include:

Short-acting beta agonists. These inhaled, quick-relief bronchodilators act within minutes to rapidly ease symptoms during an asthma attack. They include albuterol (ProAir HFA, Ventolin HFA, others) and levalbuterol (Xopenex).

Short-acting beta agonists can be taken using a portable, hand-held inhaler or a nebulizer — a machine that converts asthma medications to a fine mist — so that they can be inhaled through a face mask or a mouthpiece.

*Ipratropium (Atrovent).* Like other bronchodilators, ipratropium acts quickly to immediately relax your airways, making it easier to breathe. Ipratropium is mostly used for em-

> physema and chronic bronchitis, but it's sometimes used to treat asthma attacks.

Oral and intravenous corticosteroids These medications . — which include prednisone and methylprednisolone relieve airway inflammation caused by severe asthma. They can cause serious side effects when used long term, so they're used only on a short-term basis to treat severe asthma symptoms.

If you have an asthma flare-up, a quick-relief inhaler can ease your

symptoms right away. But if your long-term control medications are working properly, you shouldn't need to use your quick-relief inhaler very often.

Keep a record of how many puffs you use each week. If you need to use your quickrelief inhaler more often than your doctor recommends, see your doctor. You probably need to adjust your long-term control medication.

Allergy medications may help if your asthma is triggered or worsened by allergies. These include:

Allergy shots (immunotherapy). Over time, allergy shots gradually reduce your immune system reaction to specific allergens. You generally receive shots once a week for a few months, then once a month for a period of three to five years.

*Omalizumab (Xolair).* This medication, given as an injection every two to four weeks, is specifically for people who have allergies and severe asthma. It acts by altering the immune system.

# Selinsgrove Area School District

## Stay healthy

Taking care of yourself can help keep your symptoms under control, including:

- Get regular exercise. Regular exercise can strengthen your heart and lungs, which helps relieve asthma symptoms.
- Maintain a healthy weight. Being overweight can worsen asthma symptoms, and it puts you at higher risk of other health problems.
- \* Control heartburn and gastroesophageal reflux disease (GERD). It's possible that the acid reflux that causes heartburn may damage lung airways and worsen asthma symptoms. If you have frequent or constant heartburn, talk to your doctor about treatment options. You may need treatment for GERD before your asthma symptoms improve.



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Information brought to you by: CDC, Mayo Clinic



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# Lifestyle Changes to make when living with Asthma

Although many people with asthma rely on medications to prevent and relieve symptoms, you can do several things on your own to maintain your health and lessen the possibility of asthma attacks.

## Avoid your triggers

Taking steps to reduce your exposure asthma triggers is a key part of asthma control, including:

- Use your air conditioner. Air conditioning reduces the amount of airborne pollen from trees, grasses and weeds that finds its way indoors. Air conditioning also lowers indoor humidity and can reduce your exposure to dust mites. If you don't have air conditioning, try to keep your windows closed during pollen season.
- Decontaminate your decor. Minimize dust that may worsen nighttime symptoms by replacing certain items in your bedroom.
   For example, encase pillows, mattresses and box springs in dustproof covers. Remove carpeting and install hardwood or linoleum flooring. Use washable curtains and blinds.
- Maintain optimal humidity. If you live in a damp climate, talk to your doctor about using a dehumidifier.
- Prevent mold spores. Clean damp areas in the bath, kitchen and around the house to keep mold spores from developing.

- Get rid of moldy leaves or damp firewood in the yard.
- Reduce pet dander. If you're allergic to dander, avoid pets with fur or feathers. Having pets regularly bathed or groomed also may reduce the amount of dander in your surroundings.
- Clean regularly. Clean your home at least once a week. If you're likely to stir up dust, wear a mask or have someone else do the cleaning.
- Cover your nose and mouth if it's cold out. If your asthma is worsened by cold or dry air, wearing a face mask can help.