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Indiana State
Department of Health

Asthma Program 
Indiana State Department of Health

Take Control of ASTHMA

Is your sleep disrupted by wheezing, coughing, shortness of breath, chest tightness or pain?
Are you using rescue inhalers to help your breathing?
Is asthma keeping you from work, school or play?

Don't let asthma rule your life ... Control your asthma and begin breathing easier today



Asthma is a Common Chronic Disease

But it doesn't have to disrupt your life

Dear Reader,

There is a good chance you know someone with asthma. Asthma can be serious and scary for a person having an attack or for someone witnessing an asthma attack. The good news is asthma does not have to be frightening — it can be controlled. It does not have to disrupt daily routines like going to work or school, cause loss of sleep, restrict activities or require visits to the emergency room.



Asthma is a chronic disease affecting the airways of the lungs. Each person with asthma has different signs and symptoms. Symptoms can include chest tightness, shortness of breath, coughing and wheezing. These symptoms are brought on by contact with an asthma trigger. Common asthma triggers are animal dander, cockroaches, dust mites, exercise, mold, pollen and tobacco smoke.

People with asthma should avoid their triggers as much as they can. If exercise is a trigger, a health care provider can suggest safe ways to stay active. Asthma is not a reason to stop being active. Regular exercise is beneficial to your well-being. If you or your loved one has asthma, you should talk with a health care provider often, work as a team to address the condition and develop an asthma action plan.

People with asthma can minimize the impact of this disease through C-O-N-T-R-O-L:

- C**are for yourself
- O**wn and use an asthma action plan
- N**ote peak flow numbers
- T**ake medicine(s)
- R**educe exposure to triggers
- O**pen airways, and
- L**ive healthy

You will find more details on asthma and how it can be controlled on the following pages. I hope this information is helpful to you or a family member or friend dealing with asthma. It is our mission to ensure all Hoosiers with asthma live active, healthy lives.

Judy Monroe, M.D.
State Health Commissioner

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Debunking Myths About Asthma

It's important to understand the truth

by Mohammadreza (Hesam) Lahsae, M.P.H.,
Epidemiologist, Asthma Program, Indiana State
Department of Health

(Answers on page 14)

What do you really know about asthma? Can you “outgrow” asthma? Is it true that asthma is “all in your head”? With asthma, can you or your child still play sports?

There are many myths about asthma and its management. Find out how much you know by taking this quiz. Then, read on to better understand and control your disease.



Mohammadreza Lahsae, M.P.H.

1. Asthma can be cured with medication. True False
2. Only children get asthma. True False
3. People with asthma should not be physically active.
 True False
4. A person can die from asthma. True False
5. Flu shots are not recommended for people with asthma.
 True False
6. Steroids used for asthma are not a safe medication for children.
 True False
7. Smoking and secondhand smoke do not trigger asthma attacks.
 True False
8. Monitoring peak flow helps control asthma.
 True False
9. Emergency room visits are necessary to control asthma.
 True False
10. Things in the workplace can trigger someone's asthma.
 True False
11. People with asthma, especially children, will outgrow the disease. True False
12. Albuterol should not be used daily to control asthma.
 True False

The Impact of Asthma

The burden of the condition affects all Hoosiers

by Marcie L. Memmer, M.P.H., CHES, Program Director,
Asthma Program, ISDH



Marcie L. Memmer, M.P.H.

Asthma is a common chronic disease, affecting about 23 million people in the United States, according to the National Center for Health Statistics, Centers for Disease Control and Prevention. Yearly, millions of visits to physicians' offices, hospitals and emergency departments are

due to asthma. Sadly, people die from the disease too.

The disease affects more than half a million Hoosiers. According to the Indiana State Department of Health's Asthma Program, asthma accounted for 8,302 hospitalizations, 24,320 emergency department visits and 85 deaths in 2005.

In Indiana, Blacks, children, females and people with an annual household income less than \$15,000 bear an unequal asthma burden resulting in higher hospitalizations, disease rates, emergency department visits and deaths.

Asthma negatively impacts health, quality of life and the economy in Indiana. According to Indiana Hospital Association data analyzed by the Asthma Program, total inpatient charges with a discharge diagnosis of asthma were \$73,482,966 for hospitalizations and \$25,002,659 for emergency room visits in 2005. Medications, medical devices, other patient services and time away from work and school make the cost of the disease greater.

People with asthma may feel too sick to do daily activities like gardening, cooking or being physically active. Also, they may miss school or work.

The good news is that living with asthma doesn't have to be a drag, challenging or even an excuse. Much is known about how to manage the disease. Asthma that is well controlled often allows a person to live a normal, healthy life. ☺

By the Numbers

Assessing the asthma disparities in Indiana

The burden of asthma in Indiana tends to be greater for women, Blacks and children. Though there is very little research to explain these disparities, it is important to address these differences and to work toward reducing them.

> Women are more likely to report they currently have asthma than men.

> More women were hospitalized and visited emergency departments for asthma than men.

> The asthma emergency department and hospitalization rates for Blacks were about three times higher than whites. Also, the asthma death rate for Blacks was nearly five times higher.*

> Children ages 0 to 4 had the highest asthma emergency department rates and third highest asthma hospitalization rates when compared to all other age groups.

*Data on Hispanics is not available at this time. ☺

Source: *The Burden of Asthma in Indiana: Second Edition, March 2008*

Living with Asthma

LaKesia Sanders weathers the insistent demand for vigilant care

by Deb Wezensky

Firsthand struggles with asthma challenge LaKesia Sanders but also allow her to provide empathetic care for her three sons Tre, Courtland and Cortney.

All three boys, ages 14, 8 and 5, have severe asthma. Sanders' 2-year-old daughter, Lauren, requires the occasional use of a nebulizer, a device to administer medication to treat respiratory illnesses.

With the daily routine of caring for four children — along with complications of allergies, multiple asthma triggers, insurance co-pays, child care needs, doctor visits and sporadic asthma attacks — life can get hectic. At times, Sanders is in the doctor's office several days a week to make sure everyone's asthma is managed.

The 32-year-old single mom copes by relying on her own experiences with asthma and a network of support and resources that help keep her family healthy.

When Sanders' military family was based in Germany, she had such great difficulties breathing that at age 12, she returned to the United States to live with her grandparents.

"I would feel like someone was squeezing me really hard around my chest," she recalls. "I would have difficulty walking up and down the stairs. I would start wheezing and coughing."

Toward the end of one school day, she collapsed in the hallway and was rushed to the hospital. The attending doctor informed Sanders' grandparents that she had severe asthma and would need continuous treatment to keep it controlled.

Sanders remembers returning to the school where she knew she'd have to walk those same halls and participate in gym class. "It was the worst feeling when I was wheezing and having difficulty breathing," she recalls. "I felt scared because I didn't know exactly what would trigger my attacks. And what if another one came while I was at school in front of my peers?"



Staying in control

Today, Sanders controls her asthma by using an inhaler when her chest feels tight. Taking a long-term control medicine daily has helped her better manage her asthma.

Once Sanders has an attack, she uses albuterol to resume freer breathing. She exercises occasionally without shortness of breath or wheezing. At times, she feels the inhaler is not enough and uses a nebulizer for breathing treatments.

With the daily routine of caring for four children — along with complications of allergies, multiple asthma triggers ... and sporadic asthma attacks — life can get hectic.

The whole family has to make adjustments due to asthma. Since dander from dogs and cats is one of Sanders' triggers, her children have difficulty understanding why they can't have a pet.

Food allergies also are a challenge for Sanders' son Cortney. He has strong allergic reactions to cow's milk, corn, wheat, peanuts ... and the list goes on, she says. Occasionally, he comes in contact with one of these foods away from home and has a severe asthma attack that lands him in the hospital.

As the seasons change, so does the family routine. In May, when asthma triggers are abundant, Sanders may run four nebulizers. The windows of her home remain closed because the spring air brings with it outside allergens. August brings the need to prepare for transferring medication, asthma action plans and nebulizers for emergency use to the children's schools.

To keep inside allergens reduced, Sanders has an added load to the usual house cleaning.

She cleans carpets as often as possible and washes bed linens in hot water. Bed covers are found on every bed. She is grateful this added expense has been offset by assistance from the Marion County Health Department.

"Our family doctor and the kids' pulmonary doctors, Raminder Sufi and Frank Wu, have been very helpful," Sanders says. In addition to providing ongoing asthma treatment, the physicians have provided Sanders with referrals for things like home inspections

and insuring that IPL is aware there are special need kids in the Sanders' home. Due to the family's reliance on medical equipment, a power outage is one of Sanders' biggest fears, she says.

At times, Sanders says, the limitations asthma places on her family seem burdensome. She encourages Tre to be in sports but also is concerned about his ability to exercise due to the severity of his asthma.

Though Sanders admits she can't protect her children from every trigger all the time, she adds there are things you can do. She wants parents to know how important it is to avoid secondhand smoke in the home and to stay away from places where it can be found.

Sanders advises families to know and understand asthma symptoms.

"Don't just ignore symptoms," she says. "Follow up with your doctor or allergist. People can die from asthma that is not followed up on." ☺

Asthma Awareness

Improve your knowledge, improve your breathing

by Mohammadreza (Hesam) Lahsaei, M.P.H., Epidemiologist, Asthma Program, Indiana State Department of Health

Don't let another day go by without learning more about asthma. Understand what asthma is, how the environment can affect this condition and how to manage it so you can breathe freely.

Start by understanding the basics about asthma. This will make it easier to speak with your doctor and create a plan to better manage your disease.

Here are some definitions you should understand:

Asthma: A chronic inflammatory disease of the airways of the lungs that can cause wheezing, shortness of breath, chest tightness and coughing.

Asthma action plan: A written plan created by you and your doctor that provides steps on how to manage your asthma or your loved one's asthma (see details on pages 8 and 9). These plans should be given to schools and child care facilities for all children with asthma.

Asthma triggers: Activities, conditions or substances that cause asthma symptoms.

Inhaler: A hand-held device used to send medicine into your body via the airways.

Long-term control medicines: Taken every day, usually over long periods of time, to prevent symptoms and asthma attacks from starting.

Nebulizer: A small, electrical machine that pumps air through liquid medicine to change it to a fine mist that is breathed in.

Peak flow meter: A hand-held device used to measure the rate at which one can push air out of the lungs. A change in peak flow can mean changes in the airways and the need to take more medicine.

Quick-relief medicines/rescue medication: Provides immediate relief by relaxing muscles in the airways during an asthma attack.

Spacer/valved holding chamber: A short tube that attaches to an inhaler that is used to get medicine directly to the airways so it works better and lessens side effects. ☺

Your Questions Answered

by Frederick E. Leickly, M.D., M.P.H., Professor of Clinical Pediatrics, Allergy/Clinical Immunology, James Whitcomb Riley Hospital for Children, Indiana University School of Medicine and President, Indiana Joint Asthma Coalition



Frederick E. Leickly, M.D.

Q: What is asthma?

A: Asthma is a chronic, inflammatory disease of the airways of the lungs. Common features are tightening of the muscle around the airways, mucus production and swollen airways.

Q: What causes asthma?

A: There are a number of theories, but we do not have all the answers yet. Parents can pass genes on to their children that increase the chances they will develop asthma. Exposure to certain things in the environment and changes within the immune system also can play a role.

Q: What are the symptoms of asthma?

A: Coughing, wheezing — a high pitched whistling sound coming from the lungs, shortness of breath and even chest pain.

Q: How is asthma diagnosed?

A: A combination of things is used, including a history of symptoms and airflow rates determined by specific tests.

Q: How is asthma treated?

A: There are two main types of medicines used to treat asthma: quick-relief medicines and long-term controller medicines. Everyone with asthma must have a quick-relief medication and have it available for immediate use. People with one of the persistent forms of asthma also need to take one or more long-term controller medicines. All treatments require education on how and when medicines should be used and environmental control measures to keep away from those things that trigger an asthma

attack. Be sure to follow your doctor's advice, even when your asthma becomes more controlled.

Q: Can asthma be cured?

A: Cured? No. Controlled? Yes. It is also important to note that asthma symptoms can change over time, but if you start to have fewer symptoms, do not assume you have 'outgrown' asthma. Even if symptoms change, your lungs still have the tendency to respond this way, and you should stay prepared.

Q: What is the relationship between allergies and asthma?

A: When a person has allergies, his or her body makes antibodies to fight substances — allergens like pollen and pet dander — that generally are harmless to most other people. The body can respond to these allergens in a variety of ways, including anaphylactic shock; allergic rhinitis or nasal allergy; atopic dermatitis, a form of eczema; hives; swelling; vomiting; diarrhea and asthma. If asthma is one of the ways your body responds to an allergen, you have both allergies and asthma or allergic asthma. Though many people with asthma have an allergen trigger, it is possible to have asthma without having allergies. For these people, exercise and irritants in the air, like pollution or tobacco smoke, trigger asthma.

Q: How does having asthma affect day-to-day activities?

A: Exercise, school, work and sleep can be affected. One goal of asthma therapy is to maintain normal activity, which is possible with proper asthma control. If your asthma limits what you can do, please, talk with your doctor. ☺



One Day at a Time

These five simple — but critical — steps can help you control asthma

by Marti Michel, MSN, RN, CNS, CPNP, AE-C, Clinical Nurse Specialist, Riley Hospital for Children at Methodist Hospital, Clarian Health

Asthma is a chronic disease. You have asthma every day — even when you have no symptoms. So it is important to follow these steps to take care of your asthma each and every day.

1. Be sure to follow the advice of your health care provider. Your doctor, nurse or respiratory therapist, is your partner in taking care of your asthma. Regular visits to your health care provider are important to develop a management plan and make sure the plan works to keep your asthma under control. You should understand basic asthma facts and know what triggers your asthma, how to avoid or reduce exposure to triggers, and what asthma medicines to take and how to use them correctly.

2. Create a personal plan that helps manage your asthma. Your health care provider also may give you a written self-management plan called an Asthma Action Plan. These are especially important for children, and copies should be given to schools and child care facilities. An Asthma Action Plan should list triggers, early warning signs and what to do when asthma symptoms worsen.

3. Know your warning signs. Your early warning signs are important and can tell you

when your asthma is not under control. Asthma attacks usually begin slowly. Knowing your early warning signs helps you to take action early and keep an asthma episode from getting worse. A peak flow meter is a tool that can alert you to changes in your asthma. It measures how open your airways are and how well you can move air out of your lungs.

4. Pay attention to how well your treatment plan is working. Another way to monitor your asthma is to track how often you need to use your quick-relief medicine. If you need your quick-relief medicine to treat symptoms — excluding prior to exercise — more than two times per week, your asthma is not under good control. If you wake up at night because of asthma symptoms more than twice a month, you should talk with your health care provider about your plan.

5. Be proactive; limit complications. You also should check with your health care provider in the fall about getting a flu shot. Because you have asthma, you are at higher risks of complications from influenza. By taking simple steps every day to control asthma, you can avoid attacks and live an active, healthy life. ☺

Work-Related Asthma

Your job environment could trigger respiratory issues

Asthma sometimes is triggered by things in the workplace. Work-related asthma may develop for the first time in a previously undiagnosed adult, existing asthma may be triggered by workplace exposures, or childhood asthma may recur due to the workplace environment.

Occupational asthma should be considered if symptoms worsen on workdays and improve when away from work.

Workers in any setting can have work-related asthma.

According to the American Academy of Allergy, Asthma and Immunology, workers exposed to common substances that cause occupational asthma include:

- > Health care professionals, especially those who wear powdered natural rubber latex gloves
- > Spray painters, insulation installers, and plastics, foam and rubber industry workers
- > Bakers and pastry makers
- > Cosmetologists and hairdressers
- > Housekeepers and janitors
- > Workers handling two-part adhesives or paints
- > Textile and carpet workers
- > Animal handlers, veterinarians and scientists working with laboratory animals ☺





Keep Your Baby Healthy

Prevent asthma by not smoking while pregnant or around children

Asthma is just one of the many conditions, like premature birth and Sudden Infant Death Syndrome, that can be impacted by smoking while pregnant or around young children, says Judith Ganser, M.D., M.P.H., Medical Director of Maternal and Children's Special Health Care at the Indiana State Department of Health.

Various studies have shown in utero exposure to tobacco smoke increases the likelihood for wheezing in an infant. Children exposed after birth to tobacco

smoke in the home also have an increased risk of wheezing and asthma by age 5.

Once a child has developed asthma, exposure to environmental tobacco smoke increases the severity of asthma, creates the need for more asthma medicines and increases the risk of emergency room visits and hospitalizations.

National Guidelines from the National Heart, Lung and Blood Institute recommend that anyone who has asthma and women who are pregnant not smoke and not be exposed to environmental tobacco smoke. ☺

Asthma and Pregnancy

Keep your unborn baby breathing freely

by Judith Ganser, M.D., M.P.H.,
Medical Director, Maternal and
Children's Special Health Care,
Indiana State Department of Health



Judith Ganser, M.D.

It is very important to keep asthma under control while pregnant. Poorly controlled asthma can lead to serious medical problems for pregnant women and their fetuses.

Although pregnant women may feel nervous about taking medications, uncontrolled asthma can mean the fetus is not receiving the right amount of oxygen.

For some women, asthma worsens during pregnancy, and for others, their asthma improves. Health care providers should closely monitor asthma severity during prenatal visits and may need to adjust asthma medications. With appropriate asthma management, a woman with asthma can have a healthy pregnancy and healthy baby. ☺



Care Away from Home

Make sure your child's asthma is managed at school or daycare

by Trisha Jenkinson Dane, M.P.H., CHES, Health Educator, Asthma Program, ISDH

Here are a few tips to make sure your child has the support and care to manage his or her asthma while at school:

- > Provide an Asthma Action Plan to the school/child care.
- > Keep an extra inhaler or nebulizer at the school/child care, and provide medication forms to the school nurse or appropriate staff.

Indiana law allows students to carry and use their inhalers at school if correct forms from a doctor are given to the school each year.



Trisha Jenkinson Dane

- > Speak with your child's caregivers, teachers, coaches and/or the school nurse about his/her triggers. Make sure they each have a copy of the Asthma Action Plan.

- > Speak to an administrator about steps taken by the school or child care to reduce asthma triggers, such as prohibiting pets that have fur or feathers and reducing school bus and other vehicle idling.

- > Talk with your child's doctor about managing exercise-induced asthma. Children with asthma should still be able to participate in physical activities and sports. ☺



Asthma Action Plan



Condition		Medications and Action Steps		
G R E E N Z O N E	All Clear	Medicine	Amount (dose)	When
	<ul style="list-style-type: none"> No asthma symptoms Able to do usual activities Peak Flow Reading _____ <p style="text-align: center;">(80% or more of best)</p>	Quick Relief Medicine should not be needed except before exercise and exposure to a known trigger		
	Good Control	Before exercise and exposure to a known trigger take: _____		
		(15 minutes before exercise or exposure)		
Y E L L O W Z O N E	Asthma Symptoms	Continue taking Green Zone Medicines and ADD:		
	<ul style="list-style-type: none"> Coughing, wheezing, tightness in chest, shortness in breath Usual activities somewhat limited Peak Flow Reading _____ to _____ <p style="text-align: center;">(50-79% of best)</p>	Medicine	Amount (dose)	When
	Caution	If symptoms persist after one hour or worsen add:		
		Continue with Yellow Zone action for _____ hours Call physician within _____ hours Notify parent and physician when oral steroids are used		
R E D Z O N E	Danger!	Continue taking Yellow Zone Medicines and ADD:		
	<ul style="list-style-type: none"> Very short of breath, trouble walking / talking Usual activities severely limited Quick-relief medication has not helped Peak Flow Reading _____ <p style="text-align: center;">(50% of best)</p>	Medicine	Amount (dose)	When
	Medical Alert!!	Start oral steroids if not already		
		Medicine	Amount (dose)	When
		Call physician right away! If symptoms do not improve within 15 minutes and physician can not be reached - go to the hospital or call 911 right away		
Danger Signs	<ul style="list-style-type: none"> *Difficulty walking / talking from shortness of breath >>> *Bluish / grayish color to palms or lower inner eyelid >>> 		Go to the hospital now Or call 911	

Physician's
Signature: _____

Date: _____

Parent / Guardian
Signature: _____

Date: _____

Based on the National Heart, Lung, and Blood Institute's "Guidelines for the Diagnosis and Management of Asthma" 2007



An Asthma Action Plan

Get in your 'zone' — understanding green, yellow and red zones

by Marti Michel, M.S.N., RN, CNS, CPNP, AE-C,
Clinical Nurse Specialist, Riley Hospital for Children,
Methodist Hospital, Clarian Health

The green zone is where you want to be every day. You don't have any symptoms and asthma isn't interfering with work, play or sleep. The medicine you take routinely is your long-term controller medicine. You should avoid your triggers.

The yellow zone is your caution zone. You may be coughing, wheezing or feel short of breath. The yellow zone plan guides you to treat symptoms and regain control. Based on your symptoms and recognizing your early warning signs, you know when to start using your quick relief medicines, what to watch for and when to call your health care provider.

The red zone signals an asthma flare-up. You are having more severe symptoms which interfere with daily activities and sleep. The red zone plan guides you in recognizing your danger signs of worsening asthma and handling severe symptoms including getting emergency help.

You can actively work with your doctor to make a plan to deal with your asthma. Together, you can decide how to best manage your asthma so you can live a healthier lifestyle.

The Asthma and Allergy Foundation of America recommends that your asthma action plan describes how to:

- Know and avoid contact with your asthma triggers
 - Take your medicines as prescribed by a doctor
 - Monitor your asthma and know early signs that it may be worsening
 - Know what to do when your asthma is getting worse
- See the Asthma Action Plan example on page 8. 🔄

Growing Up With Asthma

Zachary Neal doesn't let asthma control his life

by Deb Wezensky

Zachary Neal tries to limit his contact with grass and the pungent boughs of Christmas trees. This is a tall order for an active 10-year-old with asthma, who enjoys playing football in the Ben Davis Youth League and looks forward to that latest video game under the tree.



Since Zachary was a baby, his parents, Manie and Tonya Neal, made many trips to the emergency room as they struggled to get his asthma under control. His persistent wheezing and habitual colds were the initial symptoms pointing to the eventual diagnosis of asthma. Breathing treatments at the hospital became all too familiar before Zachary's asthma was managed.

Over the years, the family learned to control exposure to triggers so that Zach enjoys many of the same freedoms as his friends.

"I still play sports and all the normal things kids do," he says. "I take my inhaler a couple minutes before I do any physical activity ... also, when I feel short of breath."

Zachary is able to keep his asthma under control with the support of his family and proper inhaler use. Before managing his asthma, he says he felt like "I needed to open up my chest to bring in more air. My lungs felt tight."

His older sister, McKenzie, also has asthma, and through her experience, she has helped him know what to expect. Another sister, Te-Amber, who is away at college, asks Zachary whether he remembers on his own to take his medications with him when he leaves the house. And his parents make sure he always has medication on hand to prevent asthma attacks.

Though asthma does have an effect on Zachary, he knows when to seek help managing his asthma. When his breathing gets more difficult, he tells an adult so proper actions are taken, allowing his breathing to normalize.

His doctor, Rick Reifenberg at Southwest Health Center, helped him to use his inhaler properly. "I would breathe in at the wrong time and wouldn't get the full dose," Zachary says. "Now it's very easy for me to do since he showed me how get the full dose in each puff."

A positive, proactive attitude helps Zachary live a healthy, active life. "We try not to make my asthma too a big deal in our family. But it does make everyone aware of the damage it can cause — that keeps everyone on their toes."

He is conscious not to over exert himself and is patient in understanding his limitations. There are times when he just has to slow down and "take a few puffs on my inhaler."

Zachary shares his tips for living with asthma: "Take your inhaler faithfully. Try not to let asthma take over your life," he says. "Just be aware and be proactive about your asthma." 🔄



ASTHMA TRIGGERS:

Coping with Respiratory Infections

Stop the spread of germs as a defense against asthma flare-ups

by Debbie Koehl, MS, RRT, AE-C, Program Coordinator, Pulmonary Rehab and Patient Education, Clarian Health, Methodist Hospital

Avoiding Allergens

Reduce those tickly, drippy, sneezing, itchy, irritating annoyances

by Steven Wise, M.D., Allergist, Private practice — Allergy, Asthma, and Clinical Immunology Associates, Volunteer Faculty and Clinical Assistant Professor of Medicine, Indiana University Medical Center

What's an allergen? An allergen is a harmless substance that causes an abnormal reaction in people with allergies. They can result in itchy eyes, runny nose, wheezing, skin rash or asthma.

Dust mites, pollen, mold, cockroaches and pet dander are all common allergens.

Avoiding allergens can be a very important part of asthma treatment. But let's face it: This approach can be challenging. Patients often will say to me, "Doc Wise, there's no way I can avoid pollen. I want to be outside."

When you get down to it, the goal of care is not just to make you healthy but also happy.

An important thing to remember is this is not an all or nothing process. Think of your immune system like a bucket of water that fills to the top, and when it tips over, you develop allergic symptoms. Every exposure adds water, but avoiding triggers can remove water.

Here are some tips to help you cope with allergens:

- > First, make sure you really are allergic to the allergen before making changes. See an allergist for skin testing, or have a blood test.
- > To deal with pollen, keep windows closed and run air conditioning, particularly when it's nice out. Change or clean the filter

on the air conditioning intake monthly to keep it filtering at good capacity. Take a shower after playing or working outside.

- > To minimize exposure to house dust mites, place zip-up encasings on the mattress and pillows. The cloth-like versions are more comfortable than the vinyl encasings. Wash bedding that is placed around encasings in hot water.

- > Molds are more difficult to avoid. You will have regular exposure, both indoors and outdoors. Avoid heavy exposures such as working in mulch piles or raking piles of leaves. If you have a damp basement, get a dehumidifier.

- > If you are allergic to pets and are unable to give them up or keep them outside, keep the animals out of the bedroom. Washing your pet weekly may help. A hepa-filtered air cleaner in the bedroom also may decrease allergen counts.

- > Make sure you minimize exposure to pests, such as cockroaches, by getting rid of any food or water sources. ☺



Steven Wise, M.D.



Debbie Koehl

Coughing? Rapid breathing? Fever? Scratchy or sore throat? These could be signs of a respiratory infection.

Getting a respiratory infection can trigger asthma. This is especially true with viral respiratory infections in children younger than 10.

Children have smaller airways that are more easily affected. Common viruses are respiratory syncytial virus, rhinovirus as well as the influenza virus.

Adults should be aware that viral infections can cause their asthma to flare up, too. Bacterial infections in both children and adults also can trigger asthma. People with asthma who get a respiratory infection often have a cough that hangs around after other symptoms have gone away.

Avoidance and prevention are key to staying healthy. Both adults and children with asthma should talk with their health care providers about getting flu vaccines as recommended by the Guidelines for the Diagnosis and Management of Asthma.

Getting the flu vaccine will not reduce the frequency or severity of asthma, but it will decrease the risk of complications from the flu that, along with asthma, can be severe.

Last, but not least, practice good hygiene by frequently washing your hands and keeping your environment clean. As we all know, this helps to stop the spread of germs. ☺

Control the 4 most common types of triggers — allergens, irritants, exercise and respiratory infections.

Staying Active

Don't let exercise-induced asthma prevent you from enjoying the benefits of sports

by Trisha Jenkinson Dane, M.P.H.,
CHES, Health Educator, Asthma
Program, ISDH

If you or a loved one ever has had difficulty breathing, you know it's challenging to remain calm until normal breathing resumes. This alarming experience may occur when exercise-induced asthma disrupts an otherwise enjoyable activity.

However, given proper diagnosis and treatment — along with continued management under the care of your doctor — asthma can be controlled.

The airways of someone with exercise-induced asthma, EIA, are sensitive to changes in heat and moisture. During exercise, people often breathe through their mouths and in larger amounts. This makes the air reaching the lungs cooler and dryer than normal, which triggers symptoms.

Although someone with exercise-induced asthma may need to be more careful about exercise, it should not stop people from being physically active.

Tips for controlling exercise-induced asthma include:

- > Use some inhalers before exercise to prevent attacks. Consult a doctor first.
- > Warm up and cool down.
- > Wear a scarf or cold-air mask over the mouth on chilly days.
- > Consider indoor activities on Ozone Action Days, high pollen or mold count days, or days with very high or low temperatures.
- > Choose your activities well. Those with constant effort like running may cause more symptoms. Activities with short bursts of energy followed by rest or less intense activities, such as walking, may cause fewer symptoms. ☺



Breathe Cleaner Air

Take steps to protect your airways from more irritation

by Lara Lasky, M.P.H., Life Scientist, U.S. Environmental Protection Agency,
Region 5

Why some people have asthma and others don't is not yet fully understood. Genetics play a part, and exposure to tobacco smoke and infections also may be risk factors for developing asthma.

Once you develop asthma, there are triggers, such as irritants, that can worsen your condition. Asthma irritants are airborne substances that, when inhaled, cause asthma attacks.

Here are some of the most common types of asthma irritants and ways you can prevent them from aggravating sensitive airways, according to the U.S. Environmental Protection Agency:

Tobacco smoke

Tobacco smoke is a strong asthma irritant, whether it is direct intake or secondhand from someone else's cigarette, cigar or pipe.

Choose not to smoke in your home or car, and don't allow others to do so. Do not allow others to smoke near your children or other people with asthma.

Air pollutants

Small particles and ozone come from car and factory exhaust, smoke and road dust.

Watch for the Air Quality Index during your local weather report. On days when pollution is at its worst, it is good to stay indoors and avoid strenuous exercise outside.



Lara Lasky, M.P.H.

Nitrogen dioxide

Nitrogen dioxide can be a byproduct of fuel-burning appliances, such as gas stoves, gas or oil furnaces, fireplaces and wood stoves.

Properly ventilate a room where fuel-burning appliances are used, and use only appliances that vent to the outside. For instance, use an exhaust fan over a gas stove. Make sure the doors on wood-burning stoves fit tightly.

Chemical fumes and strong odors

Another type of asthma irritant is the fumes and strong odors that emanate from certain chemicals. These chemical irritants include some common items, such as cleaning solutions and perfume.

If you are sensitive to these items, avoid coming in contact with them, and consider using natural cleaning products. ☺



Nebulizer



Inhaler with Spacer



Medications for Asthma

Proper treatment allows for a more active lifestyle

by Kelly Henderson, PharmD, RPh, Director of Pharmacy Services,
MDwise, Inc.

Tired of feeling out of breath? Worried that your day may be disrupted by an asthma attack? Take control of your asthma so you experience symptoms less often. You should be able to live an active and normal life.

Medications are an important part of asthma care. Make it a priority to know about your asthma medications and how they should work. To get the best results, tell your doctor how well the medications control your asthma.

Your doctor then will advise which combination of the following types of medications is best for you.

Types of medication

Long-term controllers: The most important asthma medication is called a controller. The best controller is an inhaled corticosteroid (ICS). These medications prevent the airways in the lungs from swelling shut. They prevent the airways from overreacting to triggers in the environment.

ICS are given directly to the lung. This prevents side effects caused by these medications when given in pill form.

Quick-relievers: Everyone with asthma should have a reliever. A common example of a reliever medication is albuterol. Relievers relax the muscles in the airway and stop your chest from feeling tight. They also stop coughing and wheezing. If a reliever is

needed more than two times a week, tell your doctor. Your controller medications may need adjusted. Or you may not be taking your controller medication correctly.

Delivery methods

Powders: Some of these medications come in easy-to-take power form. You suck the medication out of the device with a fast deep breath.

Aerosols/"sprays": Some of these medications are inhaled as an aerosol/mist or puff of medication.

Liquids that are aerosolized: These medications start out as a liquid and are put into the cup of a machine called a nebulizer. The nebulizer pushes air through the liquid and creates an aerosol/mist. The medication then is inhaled into the lungs via a mask or tube.

Inhalers/"MDIs"/"puffers": These medications start out in a canister. The canister is pressed, and a dose of medication is released quickly. It comes out so fast it is difficult to get the medication down into the lungs. It is important to use these medications with a device called a spacer. Spacers have masks that go around the nose and mouth. Spacers also come without masks. The canister attaches to the spacer. The canister is pressed down, and a dose of medication is released into the spacer. You slowly breathe in this medication from the spacer. ☺

Using Your Inhaler

Start breathing easier with proper technique

Get the most from your asthma medications. With the proper technique, you get more of the inhaler's medicine into your body. This is a key part of controlling your asthma.

Below are some general steps, but please talk with your doctor or pharmacist if you are not sure about how to use your inhaler. Have your doctor or pharmacist watch you use your inhaler for proper technique.

Using your metered-dose inhaler:

- > Remove the cap and shake well.
- > If using a spacer, insert inhaler into rubber end.
- > Breathe out.
- > If using a spacer, place mouthpiece in mouth. If not, hold the inhaler about two inches away from your mouth.

- > Press down on the inhaler as you start to breathe in slowly through your mouth.
- > Hold your breath for 10 seconds and then exhale.

Using your dry powder inhaler:

- > You may need to snap a thumb piece into position or twist the inhaler, since these inhalers have different steps for preparing the medicine. If you are unsure, speak with your doctor or pharmacist.
- > Breathe out.
- > Place mouthpiece in mouth and breathe in quickly and deeply.
- > Hold your breath for 10 seconds and then exhale. ☺



Steroids for Children

Asthma patients require a different version for treatment

by Greta Achenbach, RN, MSN, AE-C, Clinical Nurse Specialist, Riley Hospital for Children

The use of steroids in sports made headlines around the world in recent years.

However, inhaled corticosteroids used to treat asthma are quite different than the steroids that gained a more infamous reputation among athletes.

Inhaled corticosteroids are the most effective long-term control medications prescribed for persistent asthma in children.

The most recently published asthma guidelines say inhaled corticosteroids are

safe, and their benefits far outweigh potential risks.

Though slowed growth is a common concern of parents whose children are treated with inhaled corticosteroids, studies show that if growth is slowed, it is only minimal — at an average rate of less than one-half inch. This occurs temporarily, for about one year, then returns to a normal rate.

Inhaled corticosteroids were developed to be taken safely on a daily basis to control asthma by preventing airway swelling and inflammation. They are not quick-relief or rescue medications and do not provide immediate relief of symptoms.

The goal for every child with asthma is to keep his or her asthma under good control with the least amount of medication possible. Parents should schedule routine physician visits to monitor asthma control, encourage good inhaler technique — using a spacer if appropriate — and ensure daily asthma medicines are taken as prescribed. ☺

Got Questions?

Registered nurses and respiratory therapists are available to answer your asthma or lung health questions by calling the Lung Helpline from the American Lung Association at (800) 548-8252 or the Lung Line from the National Jewish Medical Center at (888) 222-LUNG.



Asthma and Coexisting Conditions

Talk with your doctor about conditions that may come with asthma

by Girish Vitalpur, M.D., Assistant Professor of Clinical Pediatrics, Allergy/Clinical Immunology, James Whitcomb Riley Hospital for Children, Indiana University School of Medicine

Additional health issues may infringe on your quality of life beyond your asthma alone. Don't ignore the signals your body sends.

Asthma control often requires the diagnosis and management of coexisting conditions that each can complicate asthma. The conditions include:

Allergic rhinitis, also known as hay fever or nasal allergies, affects up to 80 percent of people with asthma. The environmental allergies affecting the nose also can affect the lungs as asthma. Allergy tests can help identify these triggers and guide treatment. Sensitivity to animals, dust mites, molds and pollens can worsen asthma. Management may include environmental controls and medications. In addition, immunotherapy or allergy shots can help change the immune system and decrease sensitivity to the allergen.

Sinusitis or sinus infection involves a bacterial infection of the sinus cavities around the nasal passages. This can be hard to tell apart from a common cold and allergies. Cold symptoms lasting for more than 10 days may involve sinusitis. Sinus infections can trigger postnasal drip, which can lead to a cough.

Moreover, the nasal and sinus inflammation associated with sinusitis can worsen asthma.

Gastroesophageal reflux disease (GERD) has been found in as many as 64 percent of people with asthma, but many do not have noticeable symptoms.

Typical GERD symptoms include heartburn, stomach pain and bad breath. Treatment for GERD can include diet, lifestyle changes and medications, which in turn can improve asthma symptoms.

Vocal cord dysfunction (VCD) involves abnormal movements of the vocal cords that trigger symptoms closely associated with asthma, such as shortness of breath, neck and chest tightness, trouble breathing in and cough. VCD can coexist with asthma but also can be misdiagnosed as asthma. Diagnosing VCD can involve lung function testing, assessing response to asthma medications and directly examining the vocal cords.

Aspirin sensitivity, obesity and exposure to smoking also can complicate asthma. An allergist can help identify and address these conditions. ☺



Girish Vitalpur, M.D.

Answers

To Quiz on page 3

1. False. There is no cure for asthma. It can be controlled with medications and by avoiding one's triggers.

2. False. Asthma is a chronic disease that can affect people at any age.

3. False. Physical activity and sports should not be a problem for people with asthma. They can live a normal, healthy life.

4. True. People with asthma can die from the disease. Many deaths due to asthma are preventable. In 2005, 85 Hoosiers died from asthma.

5. False. People with asthma are at a higher risk of complications from influenza. It is recommended and safe for people with asthma to get a flu shot.

6. False. Corticosteroids are safe and effective for the long-term treatment of asthma in both adults and children. They are not the same steroids used to build muscle mass.

7. False. Smoking and exposure to secondhand smoke are well-known asthma triggers. Tobacco smoke irritates the lungs' airways, which can worsen asthma symptoms.

8. True. Monitoring breathing with a peak flow meter helps people know how open their lungs' airways are and if they are having problems with their asthma.

9. False. People with well-controlled asthma should not have to go to the emergency room for treatment.

10. True. Work-related asthma may develop for the first time in a previously undiagnosed adult, existing asthma may be triggered by workplace exposures, or childhood asthma may recur due to things in the workplace.

11. False. Once people have asthma, it does not go away. One can go through periods of time with fewer or no symptoms and attacks, but symptoms can return at any time.

12. True. Albuterol is a quick-relief medication and should not be used daily to control asthma. Someone using albuterol daily should speak to a doctor. ☺

A Team Effort

The Indiana Joint Asthma Coalition reduces the burden of asthma for all Hoosiers

by Janet G. McCabe, J.D., Executive Director, Improving Kids' Environment and Vice President, Indiana Joint Asthma Coalition

Asthma affects more than half a million Hoosiers, placing a growing burden on society in terms of personal health, quality of life, health care costs and loss of productivity.



By collaborating, individuals, agencies and organizations can reduce the burden of asthma in Indiana.

The Indiana Joint Asthma Coalition, or INJAC, is a voluntary organization formed in 2003 under the leadership of the Indiana State Department of Health and the Indiana Department of Environmental Management. Its first task was to develop Indiana's first Asthma Plan, a comprehensive strategy to reduce the burden of asthma in Indiana.

Five years later, INJAC still is going strong with continued active leadership from ISDH. It has become an effective and welcome forum for people and agencies working on asthma issues to track the state's progress toward the goals in the State Plan, collaborate on initiatives, and keep one another informed about trends and opportunities to assist Hoosiers dealing with the burden of asthma.

INJAC operates through five workgroups:

> The Data and Surveillance Workgroup compiles data on asthma prevalence, hospitalizations and quality of life for Hoosiers with asthma.

> The Public Education Workgroup increases public awareness of asthma and improves the knowledge and skills of patients.

> The Children and Youth Workgroup focuses on asthma activities related to schools and early care settings.

> The Environmental Quality Workgroup considers ways to identify and reduce environmental conditions that can trigger or exacerbate asthma attacks.

> The Health Care Provider Workgroup ensures health care providers use best practice guidelines for treating asthma patients.

Meetings are open to anyone interested, and more information about INJAC and all the Workgroup activities is available at www.asthma.in.gov. 



Kristin Hobson rides 100 miles for a benefit.

Knocking Down Barriers

Kristin Hobson learns to control her asthma in order to enjoy the activities she loves

by Deb Wezensky

Kristin Hobson constantly struggled to keep up with her peers in physical education classes, but she didn't complain. Instead, she worked harder to fit in.

It was during a sports physical exam in the eighth grade she found out why she had a hard time with certain activities. Her primary care provider diagnosed her with asthma.

At the time, Hobson was too young to fully understand what it meant to have asthma. But she quickly realized if she wanted to keep up with her friends, she had to learn to manage her condition.

True to form, Hobson did everything she could to knock down any barriers that would keep her from joining in physical activities. She followed her health care provider's recommendations. She took her medications as prescribed. And she limited her exposure to asthma triggers like pollen.

"I'm not always successful in avoiding them," Hobson admits. "It's not practical to avoid 100 percent of your triggers. You just have to know what triggers your asthma and try to stay away from them."

Even with her best efforts to avoid asthma irritants, Hobson says, her asthma sometimes flares up, and she needs to use her rescue inhaler.

On days when she experiences asthma flare-ups, Hobson modifies her activity and doesn't work out as hard. For instance, on high pollen count days, she doesn't ride her bike outside. Instead, she will hit the gym for an indoor cycling class, or she may walk along the Broad Ripple canal or the Monon Trail.

Slow and steady

Easing into more intense physical activity takes patience. Hobson got involved one sport at a time.

With her doctor's advice, she started at a low to moderate intensity and eventually worked up to a higher intensity. Her intelligent approach to exercise, along with consistently following her doctor's asthma treatment plan, has paid off.

At age 26, Hobson swims three days a week with a masters swim team and rides her road bike two to three days a week.

Last summer, Hobson completed a century bike ride, pedaling 100 miles around scenic Lake Tahoe with the Leukemia and Lymphoma Society's Team in Training program. Not resting on her laurels, she now has completed two other century rides in Indiana.

Her "seize-the-day" attitude shows in her smile. "Every day that I can swim and ride, I'm thankful I have controlled asthma," she says.

Her advice to others with the condition?

"If you have asthma or think you have asthma, see your health care provider who can help you get control over your asthma," she says. "Follow their advice, whether it is taking a medicine, removing a trigger or monitoring your peak flow numbers.

"Don't let asthma keep you from being active," she adds.

Hobson's life is a testament it is possible. 

Helpful Resources to Control Your Asthma

5-Star Environmental Recognition Program for Early Child Care Providers is a program for childcare providers that meet standards for a healthy environment and asthma-friendly policies. Call (800) 988-7901 or log on www.idem.IN.gov/childcare.

Allen County Asthma Coalition provides educational programs, assistance for Head Start programs and families, and community outreach. Call (260) 415-9294.

Allergy & Asthma Network Mothers of Asthmatics (AANMA) provides consumer and physician information, educational resources and research information. Call (800) 878-4403 or log on www.aanma.org.

American Academy of Allergy Asthma & Immunology (AAAAI) provides patient information, professional education and physician referral services. To find a local allergist, call (800) 822-2762 or log on www.aaaai.org.

American Lung Association of Indiana (ALA-I) provides general information on lung diseases and risk factors. Provides several services and programs for people with asthma, including support groups. Call (317) 819-1181 or log on www.lungin.org.

Asthma Alliance of Indianapolis provides educational programs, environmental

assessments and support for community events. Call (317) 221-2473 or log on www.asthmaindy.org.

Asthma and Allergy Foundation of America provides patient information, certifies products as asthma and allergy friendly, and creates educational programs. Call (800) 7-ASTHMA or log on www.aafa.org.

Breatheasyville is a Web-based tool to help reduce environmental asthma triggers in schools, homes and outdoors. Log on www.in.gov/isdh/programs/asthma/breatheasyville/index.html.

Environmental Protection Agency (EPA) provides general information on asthma, indoor asthma triggers and available community programs and materials. Call (202) 343-9370 or log on www.epa.gov/asthma/index.html.

Improving Kids' Environment works to improve children's health by reducing environmental threats. Call (317) 902-3610 or log on www.ikecoalition.org.

Indiana Chronic Disease Management Program provides patient-education materials on asthma management. Call (866) 311-3101 or log on www.indianacdmprogram.com/Provider/asthma.htm.

Indiana Family Helpline connects

individuals to local resources for various health issues and social services. Call (800) 433-0746.

Indiana Joint Asthma Coalition implements programs to reduce the burden of asthma in Indiana. Call (317) 233-1325 or visit www.asthma.in.gov.

Indiana State Department of Health Asthma Program provides general information, state asthma publications, data and statistics, and information on statewide asthma activities. Call (317) 233-1325 or visit www.asthma.in.gov.

Indiana Tobacco Quitline from Indiana Tobacco Prevention and Cessation has trained Quit Coaches, who provide free one-on-one phone counseling to help Indiana smokers quit. Call (800) QUIT-NOW.

Partnership for a Healthier Johnson County provides presentations and educational materials to the community. Call (317) 346-3733 or log on www.partnershipjc.org.

Rx for Indiana assists individuals in applying for programs to help pay for medicines. Call (877) 793-0765 or log on www.rxforindiana.org.

Smog Watch provides daily outdoor air quality forecasts for Indiana. Call (800) 631-2871 or log on www.in.gov/apps/idem/smog.

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