

ASTHMA AND YOUR CHILD

Helping Your Child Stay Healthy & Active



Taking Control of Your Child's Asthma

Learning that your child has asthma can be overwhelming. Asthma is a chronic (ongoing) disease of the airways in the lungs. It can't be cured, but **it can be controlled**. With asthma in control, your child can enjoy a happy, active life. Then you and your child can both breathe easier.

When Asthma Is Out of Control

This is what life can be like when your child's asthma is out of control: Waking in the middle of the night to the sound of your child coughing. Frantic trips to the emergency room. Missing work because your child is home with an asthma flare-up. Fear of letting your child run and play with other kids. When asthma is out of control, your child suffers, and so do you. Children can even die of asthma. But what if your child's asthma were in control?



The Benefits of Control

A child whose asthma is in control can do all of the things other kids do. He or she can play with other kids and take part in sports. When asthma is under control, your child sleeps better. This means more energy for school and play. And with fewer missed school days, you'll miss fewer work days. When asthma is under control, it doesn't disrupt family life. Most important, **controlling asthma cuts the risk that the child will die of asthma**. This means greater safety for your child, and peace of mind for you. Controlling asthma does take some work, but the results are worth it.

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What You and Your Child Can Do

First, commit to getting your child's asthma in control. Then work with your child's healthcare provider. Together you can create a plan to control your child's asthma. The plan will cover these three keys to asthma control:

- **Keep the breathing tubes inside the lungs open.**
- **Manage flare-ups** (episodes of breathing trouble, sometimes called "asthma attacks").
- **Reduce triggers** (things that make asthma worse and can lead to a flare-up).



Asthma Symptoms

Some asthma symptoms, like wheezing or struggling to breathe, are hard to miss. But coughing or tiredness can also be due to asthma. Some children have symptoms often (**persistent** asthma). Others have symptoms once in a while (**intermittent** asthma). As you read on through this booklet, keep in mind your child's pattern of symptoms.

Mild to moderate symptoms include:

(Discuss with your child's healthcare provider what type of care is needed.)

- Coughing, especially at night
- Getting tired or out of breath easily
- Wheezing (a whistling noise when breathing out)
- Chest tightness
- Fast breathing when at rest

Severe symptoms include:

(Call 911 if you see any of these.)

- Very fast or hard breathing
- Sucking in between the ribs and above and below the breastbone (retractions)
- Being unable to walk or talk
- Lips or fingers turning blue

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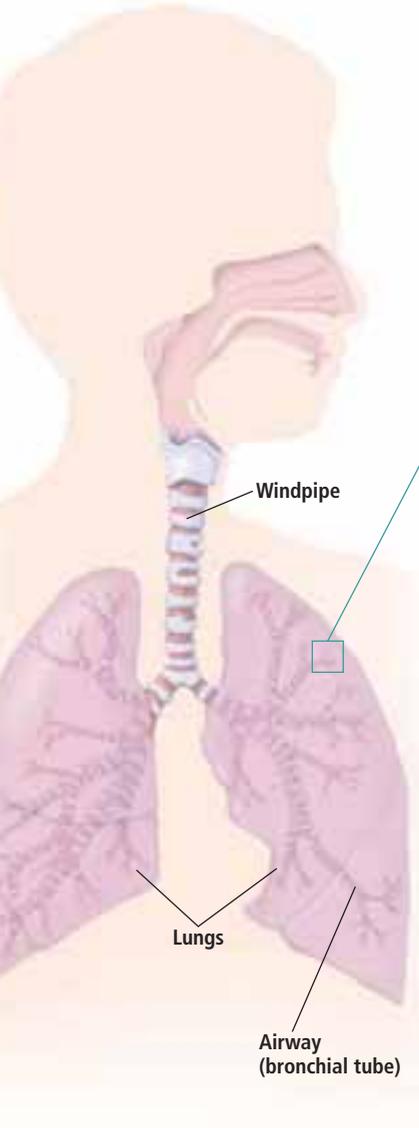
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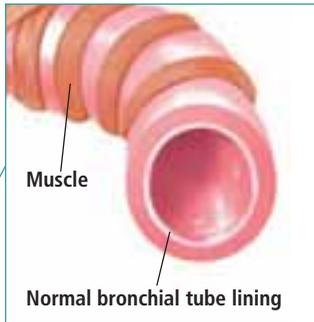
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Understanding the Lungs

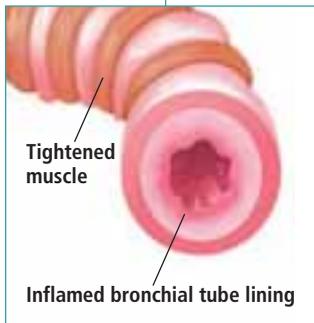
When lungs are healthy, breathing is easy. With each breath, air goes down the windpipe into the lungs. There, it flows through airways (bronchial tubes). The airways make mucus to trap and help get rid of any particles that are breathed in. Muscles that wrap around the airways control how open or closed they are. Air is breathed in and out through the same airways.



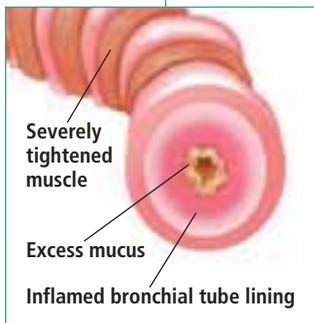
How Asthma Affects the Lungs



When airways are healthy and open, there is plenty of room for air to pass in and out of the lungs.



When asthma is uncontrolled, airways are inflamed most of the time. The lining of the airways swells and mucus forms. Muscles around the airways may be tight. Air has to go through a narrower tube. Inflammation makes airways oversensitive to things in the air that are breathed in.



When sensitive airways become irritated, they become even more swollen. The bands of muscle around the airways tighten. More mucus forms. All of this narrows the airways even more. This causes breathing trouble—an asthma flare-up.

Working Together to Control Asthma

Controlling asthma takes teamwork. In many cases, a child's primary care provider manages asthma treatment. A child with severe asthma may see a **pulmonologist** (lung doctor) or an **allergist** (allergy doctor). Nurses, a respiratory therapist, or a care manager may also be involved. This depends partly on your health insurance and the resources available in your area.

As your child grows and activities change, the treatment plan will also need to change. So stay in touch with your healthcare team.



A Treatment Plan for Your Child

A treatment plan is a program for controlling your child's asthma. It is based on your child's medical exam and medical history. Your child may also have lung function tests and allergy tests. The treatment plan covers the three keys to asthma control: **keeping airways open**, **managing flare-ups**, and **controlling triggers**. It should include a written asthma action plan (see pages 14–15) for:

- Daily maintenance.
- Managing mild to moderate symptoms.
- What to do in an emergency.

Key to Control: Keep Airways Open

One key to asthma control is to keep the airways open. “Long-term controller” medications help with this. They reduce inflammation of the airways. A child with asthma can have inflamed airways any time, not just when he or she has symptoms. So controller medications are taken daily, even when the child feels well. This helps prevent flare-ups.

Why Take Long-Term Controller Medication?

Using controllers daily has been proven to reduce the chance that a child will have to go to the emergency room or need to stay in the hospital. Most kids with asthma take long-term controller medication. Be aware that:

- These medications don’t help improve breathing right away. Other medications are used for quick relief (see page 8). Your child won’t feel controllers working, but you’ll see the effects in time.
- To do their job well, controller medications must be taken every day, in many cases twice a day. Sometimes a combination of controller medications is used.



Controller Medications Your Child May Take

Medication	How it's taken	What it's used for
Inhaled corticosteroid	Inhaler or nebulizer	Controls airway inflammation. The first choice controller medication for most kids with asthma.
Other anti-inflammatory	Inhaler or pills	Helps control airway inflammation. Used for mild asthma or along with inhaled corticosteroids.
Long-acting bronchodilator	Inhaler	Keeps muscles around the airways from becoming tight. Keep in mind: this medication is usually used in combination with an inhaled corticosteroid.

Taking Medications Daily

Your child may be confused by having to take medication when he or she feels well. And remembering to take medication each day can be hard for anyone. You can help by being firm and consistent. Try these tips:

- Develop a routine. Make taking long-term controllers part of getting ready for bed or getting ready for school.
- Set up a reward system. For example, award a point for each day your child sticks to the schedule. Your child then earns rewards based on these points.
- Make sure your child understands what long-term controllers do and don't do.
- Explain the role of these medications to any other caretakers. That way, the routine will be followed when your child is in someone else's care.



Have your child use the inhaler before brushing his teeth. This helps ensure that your child will rinse his mouth afterward.

Getting to the Right Dose

Over time, your child's healthcare provider may raise or lower the dose of controllers. The goal is to find the right amount of medication to keep asthma in control. Don't make any medication changes without the approval of your child's healthcare provider.

Using Inhaled Corticosteroids

Inhaled corticosteroids are safe for long-term use. They are not the same kind of steroids used by some athletes. Low to moderate doses of corticosteroids most often cause no side effects at all. That's because they're inhaled directly into the lungs, where they're needed. So, they have little effect on the rest of the body. The chance of side effects can be lowered even more if you:

- Make sure your child always uses a spacer if he or she uses a metered dose inhaler (see page 9).
- Have your child rinse his or her mouth and spit out the water after using the inhaler.
- Work with your child's healthcare provider to find the right dose or combination of controller medications.

Key to Control: Spot and Manage Flare-Ups

Even when asthma appears to be controlled, flare-ups may still happen. Knowing how to manage flare-ups is another key to asthma control. To do this, learn to recognize your child’s symptoms and to act quickly. That way, when your child has a flare-up, you can stop it before it gets serious.

Take Action Early

Know your child’s symptoms and triggers. This will help you spot flare-ups. Peak flow monitoring (see page 13) helps, too. When your child is starting to have symptoms, don’t delay! Your child’s action plan (page 15) tells you exactly what symptoms signal a flare-up, and what to do. The action plan may include:

- **Using quick-relief (“rescue”) medication.** This eases your child’s breathing right away. But keep in mind that quick-relief medications don’t do anything to control the cause of the flare-up.
- **Continuing or increasing controller medication.** This treats airway inflammation, which is the underlying cause of the flare-up.
- **For severe flare-ups, taking an oral corticosteroid (“burst” medication).** This medication is taken for a short time, often just a few days. It relieves severe inflammation.



Monitoring your child’s breathing can help you spot flare-ups before they get serious.

Medications Your Child May Take for Flare-Ups

Medication	How it’s taken	What it’s used for
Short-acting bronchodilator	Inhaler or nebulizer	Gives quick relief by relaxing the muscles around the airways.
Oral corticosteroid	Pills or liquid	Taken for severe asthma flare-ups. Reduces swelling and mucus in airways.

How Medication Is Taken

There are several ways to take asthma medication. Your child will most likely have at least one inhaler. Which type depends on the kind of medication he or she takes. It can also depend on your child's age and preference. Your child's inhaler technique should be checked at each appointment with the healthcare provider.



Always use a spacer if you have one.

Metered-Dose Inhaler with Spacer

A **metered-dose inhaler** (MDI) releases medication in a fine spray. A **spacer** (a holding tube or bag attached to the MDI) helps make sure more of the medication goes into the child's lungs. This makes each dose work better. It also makes side effects less likely. To use an MDI with spacer, follow the package instructions. If you have questions about inhaler technique, ask your child's healthcare provider.



Infants and toddlers are often able to use an MDI with a mask spacer.

Dry Powder Inhaler

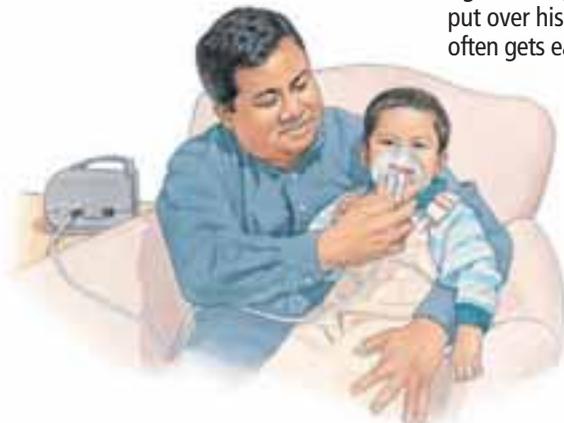
This type of inhaler releases medication in tiny grains of powder. No spacer is needed. To use this inhaler, the child must be able to take a quick, deep breath. Read the package insert to learn how to use this inhaler. Make sure to check technique with the healthcare provider.



Older children sometimes prefer to use a dry powder inhaler.

Nebulizer

A nebulizer turns medication into a fine mist. The child breathes in this mist through a mouthpiece or mask that fits closely on the face. Getting the full dose takes from 7 to 15 minutes. Nebulizers are sometimes used by infants or toddlers. They are usually not needed if a child is able to use an MDI with spacer properly.



At first, a child may fight having a mask put over his face. This often gets easier in time.

Key to Control: Reduce Triggers

Triggers are things that make your child's asthma worse. Helping your child avoid triggers is another key to asthma control. These pages cover the most common triggers, but your child may have others. Start by working to control the ones that affect your child most.

Irritants and Other Common Triggers

When a person has asthma, his or her airways are sensitive. These lung irritants affect all people with asthma.

Smoke

All kinds of smoke can trigger asthma. To protect your child:



- **If you smoke, quit. This may be the single best thing you can do to control your child's asthma.** Ask your healthcare provider for help in quitting. Contact the American Lung Association to learn about stop-smoking programs and support groups.
- Urge any members of your household who smoke to quit.
- Keep your home and car free of tobacco smoke, incense, and smoke from a fireplace.
- Keep your child out of smoky places.

Colds and Flu

To avoid cold and flu germs:



- Have your child wash his or her hands often with plain soap and water. (Use an alcohol-based hand sanitizer when you don't have access to water.)
- Have your child get a yearly flu shot.

Scents and Chemicals

Scents and chemicals can trigger asthma. To reduce these triggers:



- Use unscented pump sprays instead of aerosols.
- Switch to unscented soap, lotion, toilet paper, and cleaning products.
- Don't use air fresheners or perfume.
- If you have a gas stove, use the exhaust fan when the stove is on. Make sure pilot lights are adjusted properly. (Your utility company can help with this.)

Weather

Some types of weather can trigger asthma. Wind spreads pollen and mold. Heat traps air pollution. Cold air can be a trigger



all by itself. Of course, you can't control the weather! So how can you prevent weather from triggering a flare-up? The best way is to make sure your child takes his or her long-term controller medication. If cold air is a trigger, wearing a scarf over the nose and mouth when outside on cold days may help.

Allergy Triggers

In children with asthma, allergies can trigger flare-ups. Some common allergens are listed here. If your child is allergic to any of these triggers, try these tips. Your healthcare provider may have more suggestions.

Dust Mites

Dust mites are tiny creatures that live in house dust. Cleaning or removing things that trap dust helps to control them. Start with your child's bedroom:

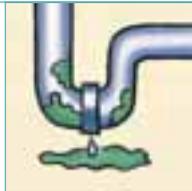


- Wash all bedding and stuffed animals weekly in hot (130°F) water.
- Vacuum every week. Using a vacuum with a HEPA (high efficiency particulate air) filter is best.
- Put allergen-impermeable covers over pillows and mattresses.

Mold

Mold thrives in damp places. To reduce mold:

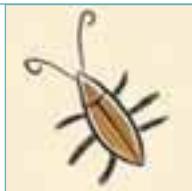
- Fix water leaks.
- Use a dehumidifier to help keep air drier. (30% to 50% humidity is ideal.)



Cockroaches

Cockroaches can cause an allergic reaction. To control cockroaches:

- Keep the kitchen clean and dry.
- Take out garbage daily.
- Store food in tightly sealed containers.
- Kill roaches with traps or boric acid, not chemical sprays.
- If you're a renter, talk to your landlord about the problem.



Animals

If your child is allergic to furry or feathered animals, restrict his or her contact with them. If you have a furry or feathered pet, you can:



- Find the pet a new home. This can be sad, but it is the best option for your child's health.
- Keep the pet outside. If this is not possible, keep the pet out of the child's bedroom. Bathe the pet weekly.

Pollen

Grasses, trees, and weeds are the plants most likely to cause allergies. If you have an air conditioner, use it during seasons when a lot of pollen is in the air. This lets you keep windows closed, so less pollen gets in. Limit your child's outdoor play when pollen counts are high.



Tackling Triggers

Thinking about the things you need to do to reduce triggers can be overwhelming. So don't think about all of your child's triggers right now. Set one or two simple, realistic goals for reducing triggers. Give yourself a deadline. Then, when you meet a goal, set a new one.

Encouraging Exercise

Your child needs exercise to be healthy and fit. So don't let fear of an asthma flare-up keep your child from being active. Many professional and Olympic athletes have asthma. They are able to perform because their asthma is in control. The same is true for your child.

What Kind of Exercise?

Kids with asthma can play baseball, basketball, soccer, or football. They can swim, run cross-country, or do gymnastics. In fact, a child with asthma can do any sport you can name. If exercise has led to asthma flare-ups in the past, you may worry. But when asthma is in good control, your child will be able to exercise without fear.

Making Exercise Safer

- Your child's healthcare provider may prescribe taking a dose of quick-relief medication before exercise. Be sure your child carries this medication and knows when and how to take it.
- Teach your child to warm up for 5 to 15 minutes before exercise. This reduces the chance of a flare-up.
- Talk to your child's gym teacher or coach. Explain when and how your child should take asthma medications. Also explain the importance of warming up. This person should know the symptoms of an asthma flare-up and what to do about it.
- Your child may need to avoid exercise outside at certain times. Depending on triggers, you may need to watch for high air pollution days, dry and windy days, or days when a lot of pollen is in the air.



Peak Flow Monitoring

A peak flow meter is a tool for testing your child's lungs. It can help warn you of a flare-up, even before there are symptoms. Your child's healthcare provider will tell you whether to use the peak flow meter, and if so, how often. He or she should also check that your child is using the peak flow meter correctly.

The Peak Flow Meter

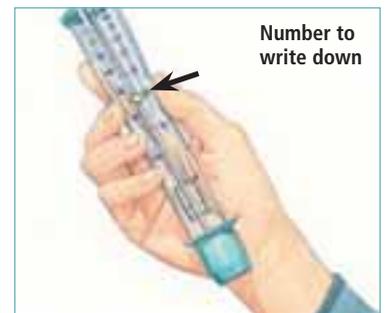
A peak flow meter measures how much air your child can quickly push out of the lungs. This helps show how open the child's airways are at that moment. Your child's peak flow meter may look different from the one shown here, but will work in a similar way.



Move the marker to zero or the lowest number on the scale. Have your child stand if possible. Ask your child to take as deep a breath as she can.



Put the mouthpiece of the meter in your child's mouth. Ask your child to blow into the mouthpiece once, as hard and fast as possible.



Check where the marker has moved on the numbered scale. Write down this number. Move the marker back to zero and repeat the test two more times. The highest of the three is your child's peak flow number.

What Is the Personal Best?

Your child's **personal best** is his or her highest peak flow number during a week or two with no symptoms. Other peak flow results are compared to the personal best. This helps show how your child is doing over time.

What Do Peak Flow Numbers Mean?

A peak flow number lower than 80% of the personal best may signal a flare-up. Keep in mind that peak flow can vary from day to day. Other factors may also affect peak flow:

- **Age.** Lungs grow as a child grows. So the personal best peak flow number should increase as the child gets older.
- **Control.** The personal best may increase once asthma is in control.
- **Cheating.** Kids with asthma may figure out how to produce a false peak flow number. A child may fake a high number to please the parents, or a low number to get attention. To help prevent this behavior, don't blame or scold your child for poor peak flow results.

Making Treatment Work

By now, you understand the basic ways to control asthma and have learned some skills. The next step is to create an action plan. This is a set of clear guidelines for what to do when your child has symptoms. The action plan is a major part of asthma treatment. With the plan in place, you can begin to see whether it's working to control your child's asthma.

Your Child's Action Plan

Fill out the action plan form on page 15 with your child's healthcare provider. You can then make extra copies of the completed form to post where it may be needed. The action plan tells you what to do when your child is in each of the three asthma zones:

- **Green = healthy.** Your child has no asthma symptoms. Peak flow is normal or near normal. With asthma in control, your child is in the green zone all or most of the time.
- **Yellow = caution.** Peak flow is lower or your child has mild symptoms. A flare-up is beginning. Quick action may prevent or stop it. If your child is often in the yellow zone, the treatment plan needs to be revised.
- **Red = danger.** Symptoms are moderate to severe and your child's peak flow is very low. This is a moderate to severe flare-up. Your child needs medical attention now!

Is Asthma in Control?

How can you tell if your child's treatment is working? If you answer "yes" to either of the questions at the right, your child's asthma may not be in control. **If the treatment isn't working, don't give up! With the right plan, asthma can be controlled.** Work with your child's healthcare provider to improve the plan. Discuss any problems that make it hard for you or your child to stick to the plan. Almost any problem can be solved.



Does your child need to use his quick-relief inhaler more than 2 times a week (other than before exercise)?



Does your child wake up at night with symptoms more than 2 times a month?

Asthma Action Plan

Name _____

Personal Best Peak Flow _____

Date _____

Green Zone

Peak flow is greater than _____ (80%).

No asthma symptoms.
Asthma doesn't get in the way of school, activities, or sleep.

Asthma-control medication(s) to take daily:

Take medication(s) _____ minutes before exercise:

Other medications:

Medical appointments:

See _____ every _____ months.

Telephone number:

() _____

Yellow Zone

Peak flow is between _____ (50%) and _____ (80%).

Yellow Zone symptoms:

- Coughing
- Wheezing
- Shortness of breath
- Chest tightness
- _____
- _____
- _____

Quick-relief medication(s). Take:

Daily asthma-control medication(s). Increase for _____ days:

Other medication(s).

Take for _____ days:

Call healthcare provider's office if in yellow zone for _____ hours.

Telephone numbers:

Office () _____

After hours () _____

Red Zone

Peak flow is less than _____ (50%).

Red Zone symptoms:

- Constant coughing or wheezing
- Symptoms that start suddenly during the night
- Trouble breathing at rest
- More severe symptoms (listed below)

Quick-relief medication(s). Take:

Daily asthma-control medication(s). Increase for _____ days:

Other medication(s).

Take for _____ days:

Call healthcare provider's office. **Call 911** if your child:

- Is breathing very hard or fast
- Is sucking in the chest and abdomen to breathe
- Is unable to walk or talk
- Has lips or fingers turning blue

Your Child Away from Home

Your child will likely spend time at the homes of family and friends, at daycare, or at school. Being away from home can help your child learn to take charge of his or her asthma. There are things you can do to smooth the way.



At School

Arrange a meeting with your child's teacher or the principal. If possible, include the school nurse and your child's gym teacher or coach. At this meeting:

- Give a copy of the action plan to your child's teacher and coach, the school nurse, and the administration. Go over the plan at the meeting.
- Demonstrate how to use asthma tools.
- Discuss possible triggers, such as class pets, mold, cleaning products, tobacco smoke, and perfumes and scented products worn by staff or other students.
- Work patiently with the school staff to solve problems that affect your child.

In Other People's Care

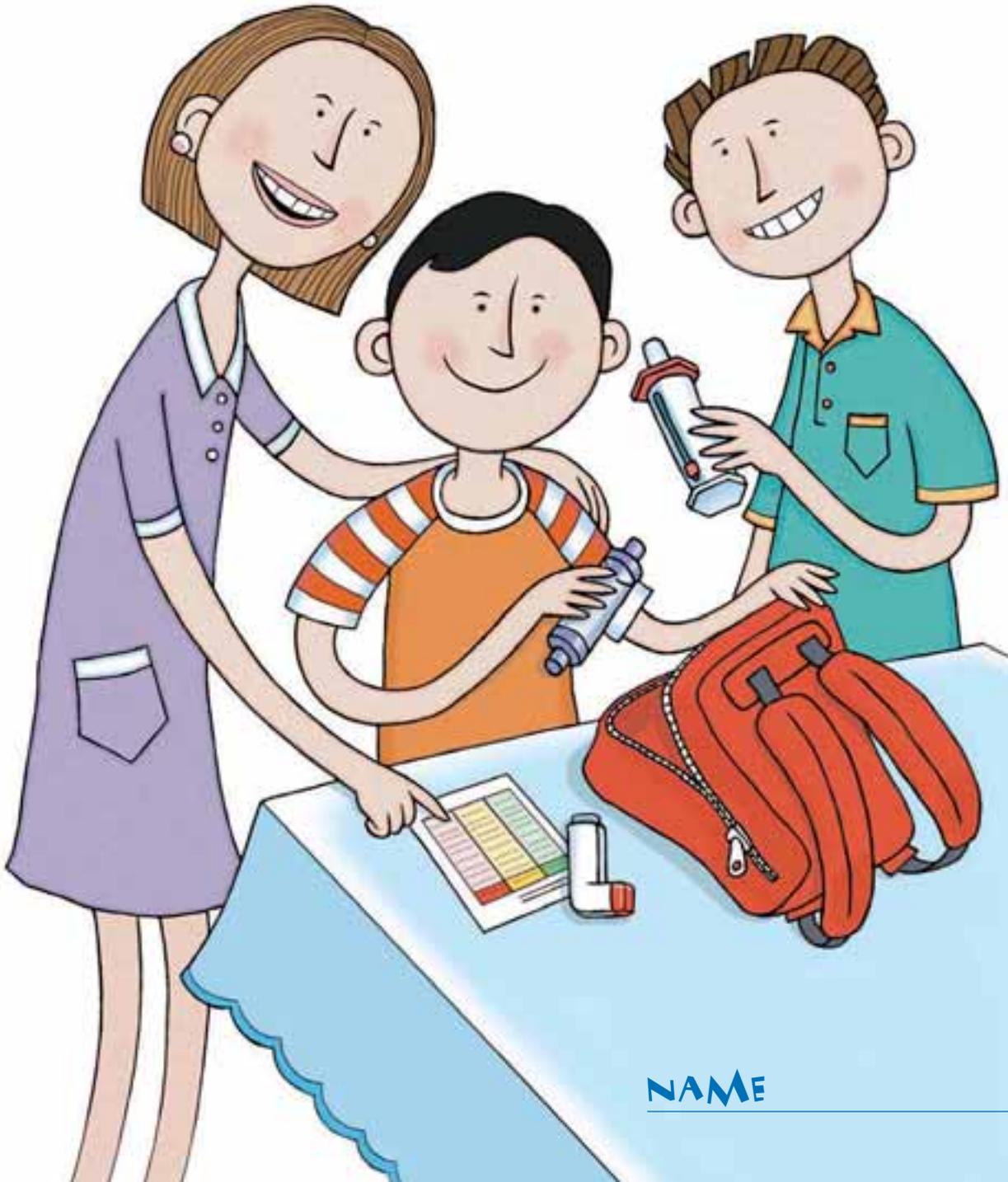
To help keep your child healthy:

- Be sure that anyone who takes care of your child has a copy of the action plan. Caretakers should also understand what different types of medications do and how and when they're used.
- Before your child visits a new friend, talk to the parents. Explain about your child's asthma and ask about triggers in the household. This is especially vital before an overnight visit.
- Teach your child to suggest playing at your home or in another safe place if he or she sees a trigger at a friend's house.

ALL ABOUT

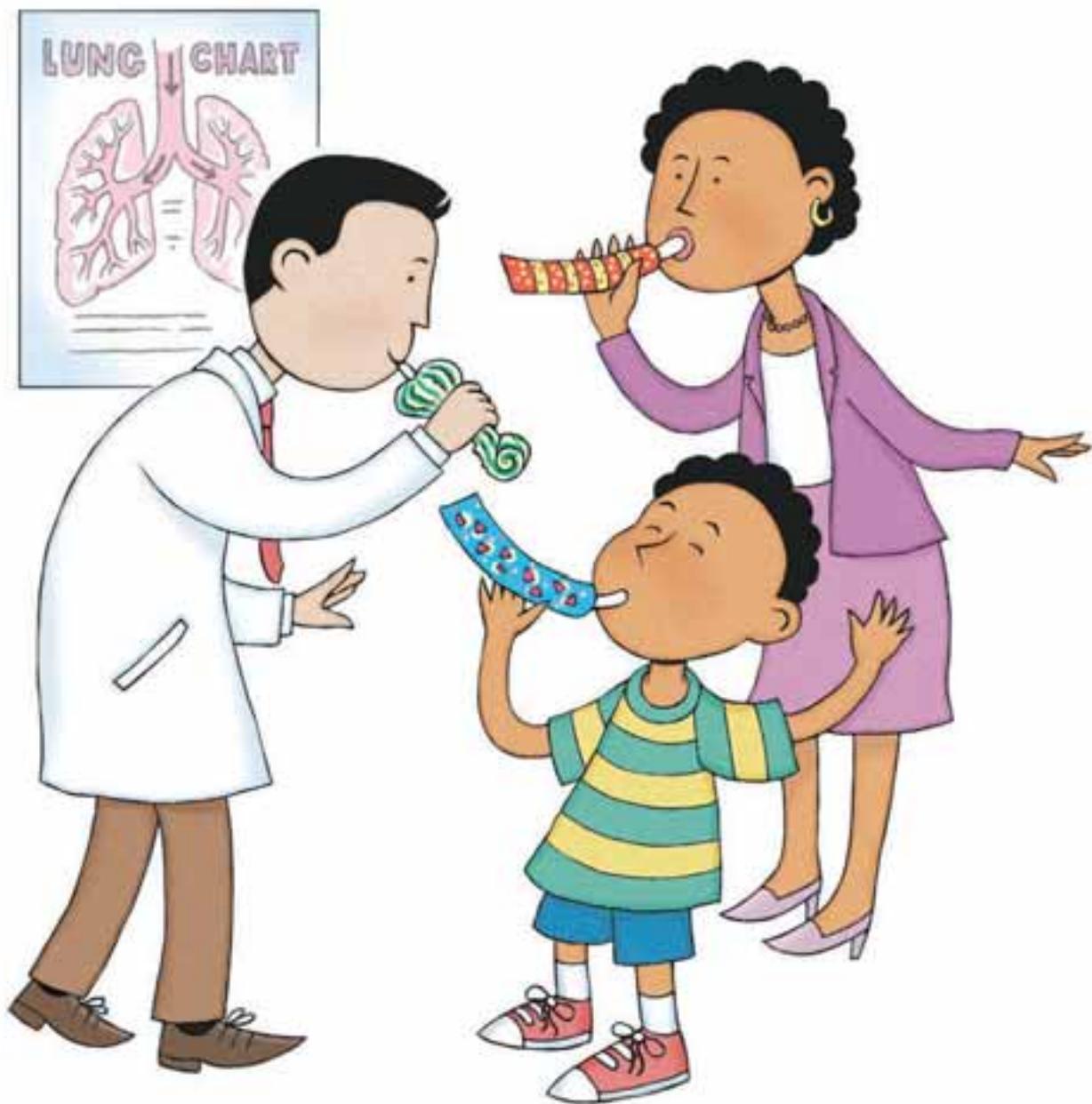
ASTHMA

WHAT I CAN DO
TO FEEL GOOD



NAME _____

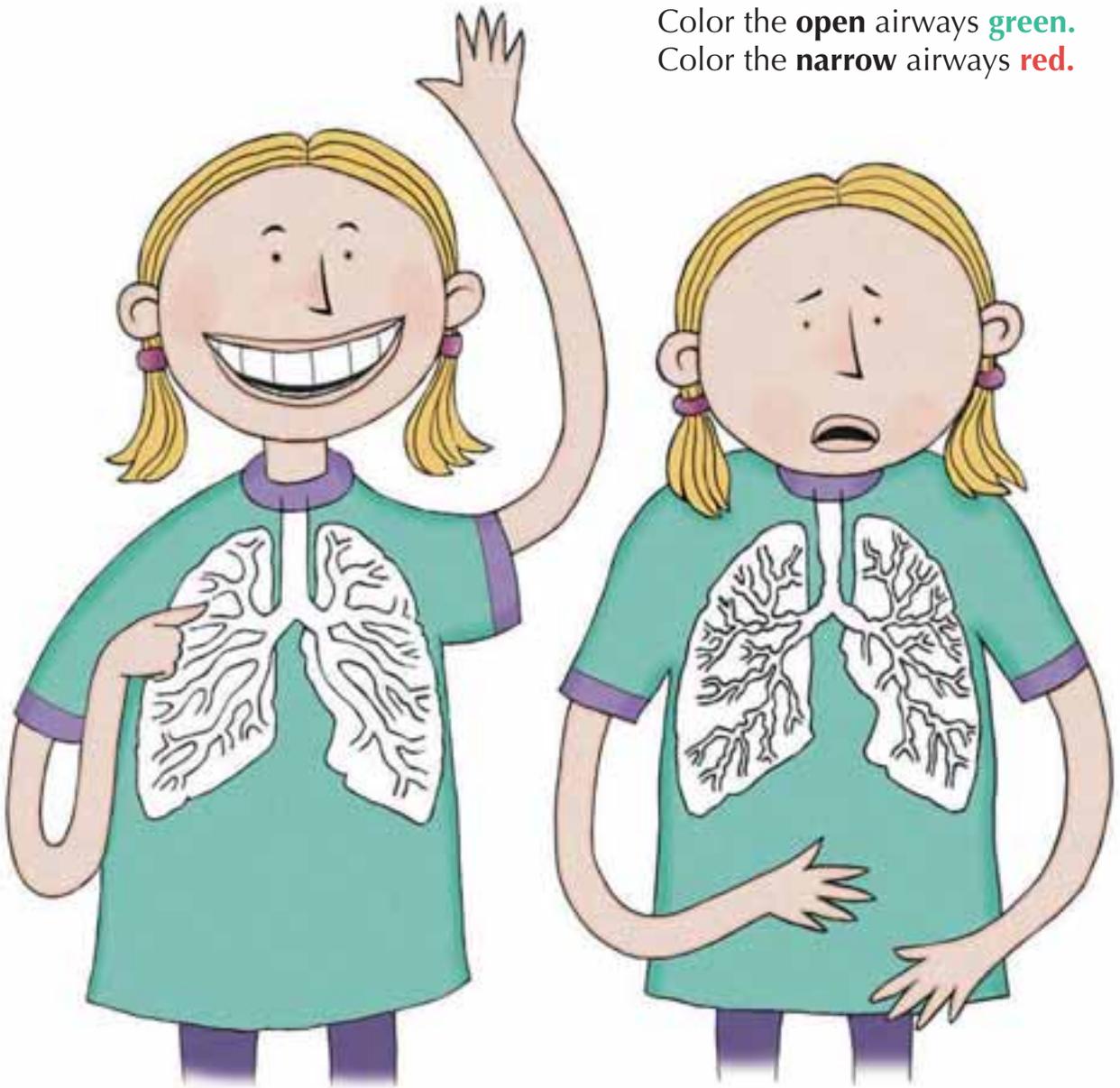
WHAT IS ASTHMA?



If you have asthma, you know how it feels to have a “flare-up.” It’s hard to breathe. You may cough a lot, or hear a whistling sound in your chest (called **wheezing**). Your chest may feel tight. You may feel tired and not want to play. Why does this happen? Use a paper horn to see how your lungs work. First, blow into the horn. Air goes in and out. That’s what healthy lungs are like. Now squeeze the middle of the horn (like the doctor in the picture). Air can’t get in and out. That’s like your lungs when you have an asthma flare-up.

INSIDE YOUR LUNGS...

Color the **open** airways **green**.
Color the **narrow** airways **red**.



Of course, lungs aren't exactly like a paper horn. Inside the lungs, air goes in and out through very small tubes. These tubes are called **airways**. Asthma makes airways a little bit **inflamed** all the time. (That means swollen and red, like your nose when you have a cold.) Air can still go in and out. You may not notice a problem. But lots of things can bother inflamed airways. Then they get even more swollen. Pushing air in and out gets harder. Less air gets into your lungs. That's a flare-up.

MY INHALERS



How do you use your inhalers?

Do you have a controller inhaler you use each day, no matter how you feel?

Do you have an inhaler that you use when you need help right away?

Draw it here:

Draw it here:



ASTHMA ZONES

Green Zone: Safe



When your lungs are fine, you're in the green zone. You feel good. Asthma doesn't get in your way. Keep using your controller inhaler. And watch for triggers that can make asthma worse.

Yellow Zone: Warning



You're starting to have a flare-up. Ask an adult for help. Use your quick-relief inhaler.

Yellow Zone Symptoms

- Coughing
- Wheezing
- Hard to breathe
- Chest tightness
- Faster breathing
- Tire easily with exercise

Red Zone: Danger!



You're having a flare-up. Tell your parents or another adult right away. Use your quick-relief inhaler.

Red Zone Symptoms

- Constant coughing or wheezing
- Symptoms that start suddenly during the night
- Trouble breathing at rest
- Breathing very hard or fast

Fill in the blanks! Use words from the list below.

When I'm in my green zone, I feel ¹. I still have to use my ² inhaler. I also have to watch out for ³. When I'm in my yellow zone, I'm starting to have a ⁴. I might wheeze or have other ⁵. Then I have to use my ⁶ inhaler. When I'm in my red zone breathing is very ⁷. I need to get ⁸ right away.

triggers
healthy

symptoms
hard

help
controller

quick-relief
flare-up

TRIGGERS



Triggers are things that make your asthma get worse. You can stay away from some of your triggers. Other triggers you can't. But the more you can keep away from your triggers, the better you'll feel.

Do you know your triggers? Circle the things in this picture that trigger your asthma. Or circle the names of your triggers.

WHAT DO YOU SAY?

Telling people what you need is part of taking care of your lungs.



"I like dogs, but being around them makes my asthma get bad. Let's go play at my house."



"Remember, coach, I need to use my inhaler before I play basketball."



What would you say?
Write it here.

FEELING GOOD

Draw a picture of how you look when you're feeling good.



I can feel good when I...

- ...use my controller inhaler each day.
- ...stay away from my triggers.

Write what else you can do here:
