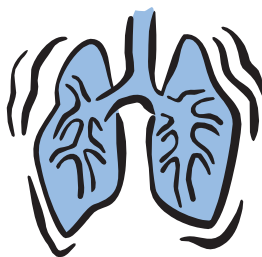


Your Asthma Book

5th Edition

Including

- *What is Asthma?*
- *Symptoms*
- *Triggers*
- *Asthma Medications*
- *Asthma Self-Care Plan*
- *Resources*



BREATHE
CALIFORNIA
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The Clean Air and Healthy Lungs People
Since 1917



Breathe California of Sacramento-Emigrant Trails, has been a champion in fighting for clean air, healthy lungs and the elimination of lung disease in the Sacramento Region since 1917. As an independent nonprofit focused on our communities, we are committed to local, grassroots prevention and education programs. We are the same organization we've been since 1917, and we're still the Clean Air and Healthy Lungs People!

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Table of Contents

What is Asthma?	1
Asthma Symptoms	1
What Causes Asthma?	2
Who Gets Asthma?	2
Asthma is Not	2
What Triggers Asthma?	3
How Bad is Your Asthma?	9
How to Work With Your Doctor	9
Pregnancy and Asthma	11
Asthma Medications	12
How to Take Asthma Medications	15
The Peak Flow Meter: An Early Warning Tool	21
Asthma Treatment	22
Asthma Self-Care/Asthma Action Plan	24
Frequently Asked Questions	26
Other Things That Can Make Your Asthma Worse	27
Resources	28



What is Asthma?

Asthma is a long term disease that affects the lungs. Some people with asthma only have occasional symptoms (problems). Others have symptoms most of the time. Their symptoms could be very mild, or they could be life-threatening.

During an asthma episode or attack, the airways in the lungs swell up (become inflamed, narrow or blocked). This makes it harder for the air to get through. You get a tight feeling in your chest. It may feel like it's hard to get enough air, as if you were breathing through a straw that is pinched in the middle.

Asthma Symptoms

Asthma symptoms can include:

- Coughing
- A tight feeling in the chest
- Wheezing (as air whistles through narrowed passages)
- Shortness of breath
- Difficulty breathing

You may have symptoms every day or only once in a while. If you learn to recognize your symptoms when they start, you can act quickly and take steps to make your attack less severe.

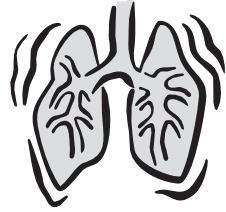
You and your health care provider can work together to make a plan to control your asthma symptoms.

Not all people with asthma have the same symptoms. You may have one of the following:

1. A dry cough at night or wheezing when you have a cold
2. Chest tightness when you exercise
3. Episodes of wheezing and difficulty breathing
4. Allergy symptoms, such as a scratchy throat, itchy eyes, or a runny nose

What Causes Asthma?

Asthma is caused when the airways (your breathing tubes) get swollen (inflamed). This swelling can make the inside of your airways produce more mucus or phlegm. This swelling also makes your airways and the surrounding muscles tighten. Your airways become narrower, making it harder for you to breathe. The process is called “bronchospasm”.



Who Gets Asthma?

Anyone can have asthma. Some people are more likely to have asthma, including:

- People with allergies or eczema
- Children whose parents have asthma, nasal allergies, or eczema
- Children who were born prematurely
- Children whose parents smoke*

*To protect yourself and your child, **do not smoke**. Keep your home smoke-free. For a list of Stop Smoking programs, see page 30, ask your health care provider, or call 1-877-3BREATHE.

Asthma is Not...

Contagious. You cannot “catch” asthma from someone else.
An emotional illness. If you have asthma, strong emotions, such as stress, may trigger an episode, and relaxing can help you when your asthma flares-up.

What Triggers Asthma?

People with asthma have more sensitive airways. Their asthma may be triggered by things that do not bother people without asthma.

Triggers are things that can make you wheeze, cough or have problems breathing. Common triggers include:

- Irritants
- Allergens: pollens, animal dander, cockroaches, dust or molds
- Infections
- Poor air quality
- Exercise
- Smoke

You can help control your asthma by knowing what your triggers are, and avoiding them.

Indoor Triggers

Avoid irritants:

- **Do NOT smoke** or be around people who are smoking.
- Keep your home smoke-free, including the bathroom and garage.
- If someone must smoke, ask him or her to go outside.
- Do not use fireplaces, wood burning stoves, or incense.
- Avoid household chemical products with strong odors, such as hair spray, perfumes, deodorizers, glue, paint, etc.
- Do not let anyone smoke in your car.
- Avoid areas where people are smoking.



Avoid allergy triggers:

You may be allergic to things in your home, including:

- Pet dander (the shedding skin of your pet)
- Dust mites (microscopic insects that live in bedding and carpets)
- Mold (growth in damp areas, such as the kitchen, bathroom and in house-plant soil), and
- Cockroaches

Ask your doctor to test you for allergies. If you are allergic to any of these things, avoid them!

Here's how:

For pet allergies:

- Do not have pets at home, or
- Keep your pets outdoors.
- If you cannot do this, keep the pet out of your bedroom and bathe it weekly. Bathing may reduce the dander that triggers your allergy.



For dust mite allergies:

Dust mites are tiny insects that live in dust in carpets, mattresses, and bedding. If you are allergic, reduce your exposure to them, especially in your bedroom. This is the room where you spend the most time.

Here's how:

- Cover your mattress, box spring, and pillows with special anti-allergy plastic covers. Many department stores, pharmacies, and allergy supply houses sell them. If you cannot find them, ask your doctor.
- Wash your sheets, pillowcases, and blankets in **hot** water at least every 1 to 2 weeks.
- Do not have stuffed animals or other dust collectors in your bedroom!

For dust allergies:

- Change your heating and air conditioning filters every month.
- If possible avoid carpeting in your bedroom, and do the same for the rest of the house. Linoleum, tile, or hardwood floors are best. If you cannot remove the carpet, vacuum the carpet every week using special allergy bags (HEPA).

For cockroach allergies:

- Seal any cracks in walls, repair screens, and check all bags and boxes before bringing them into the house.
- Cockroaches need food and water to survive. Clean up soon after eating, clean up any spills and repair water leaks.
- If you have cockroaches in your home, hire a professional exterminator.

For mold allergies:

- Do **not** use humidifiers or vaporizers. You can try using a dehumidifier in rooms with high humidity (bathrooms and bedrooms).
- Houseplants may have mold. Keep them out of your bedroom. Limit plants in other parts of the house.
- **If you have mold...** clean the area with bleach (1 part bleach + 9 parts water). This will kill the mold. Try to have someone other than the person with asthma do the cleaning, due to the strong smell of the bleach. If this is not possible make sure to wear a mask and open windows in the room.

Outdoor Triggers

Outdoor irritants include:

- Cold dry air
- Change of weather
- Smog
- Smoke from indoor fireplaces or wildfires

For outdoor irritants:

It's hard to avoid seasonal triggers. But here are some tips:

- If you have seasonal allergies to grass, weed or tree pollens and outdoor molds, try closing your windows and taking a shower after being outdoors.
- If cold air triggers your asthma, wear a scarf over your mouth and nose.
- Talk to your doctor about wearing a face mask. You can get them at pharmacies, hardware stores, and many health care offices.
- Stay indoors on "Bad Air Days" (Spare the Air Days) especially in the afternoon. For more information, go to: www.sparetheair.com.

Winter Air

Winter air can be bad for people with heart or lung problems. It can contain tiny, harmful pollution particles from fireplaces, wood stoves, and fire pits. When the weather is bad, these particles get trapped close to the ground during fall and winter months. These particles are called “particulate matter (PM 2.5)”, a mixture of soot, smoke, metals, nitrates, sulfates, and dust.

Cozy fires are nice, but the smoke and odor from natural or compressed woods affects your health, and the health of your family, friends and neighbors. Winter pollution can lead to more premature deaths and heart attacks, and increase cases of childhood asthma.

In the Sacramento area, when the air quality is bad, the authorities announce “No Burn Days”. This means we must not burn wood, pellets, or compressed logs. For more information, see the Sacramento Metropolitan Air Quality Management District web site: www.airquality.org, or contact your local Air Quality Management District.

Summer Air

On Spare the Air Days, children with asthma should stay in the classroom for recess or Physical Education. These days usually happen when it's hot, there is no wind, and there is significant traffic. These things combined make the smog worse.

For parents and teachers: If the air quality index is between 101 - 300, keep children with asthma indoors during recess, physical education, or other outdoor activities. This can help prevent asthma attacks. If the air quality index is between 151 - 300, try to keep all children indoors. At those levels, the air is unhealthy for anyone to breathe. You can learn more about air quality from: www.sparetheair.com or download an air quality activity chart (as shown on page 7) from www.sacbreathe.org.

Exercise

Exercise is important for your health. If your asthma is keeping you from playing sports or doing other physical activities, talk to your doctor. Many doctors recommend using your rescue inhaler about 10 - 15 minutes before you exercise. **Asthma should not keep you from exercising.**

Recommendations for Schools and Others on Poor Air Quality Days Air Quality Index (AQI) Chart for Ozone (8-hr standard)

ACTIVITY	0 to 50 GOOD	51 to 100 MODERATE	101 to 150 UNHEALTHY FOR SENSITIVE GROUPS	151 to 200 UNHEALTHY	201 to 300 VERY UNHEALTHY
Recess (15 min)	No Restrictions	No Restrictions	Make indoor space available for children with asthma or other respiratory problems.	Any child who complains of difficulty breathing, or who has asthma or other respiratory problems, should be allowed to play indoors.	Restrict outdoor activities to light to moderate exercise.
P.E. (1 hr)	No Restrictions	No Restrictions	Make indoor space available for children with asthma or other respiratory problems.	Any child who complains of difficulty breathing, or who has asthma or other respiratory problems, should be allowed to play indoors.	Restrict outdoor activities to light to moderate exercise not to exceed one hour.
Scheduled Sporting Events	No Restrictions	Exceptionally sensitive individuals should limit intense activities.	Individuals with asthma or other respiratory/ cardiovascular illness should be medically managing their condition. Increase rest periods and substitutions to lower breathing rates.	Consideration should be given to rescheduling or relocating event.	Event should be rescheduled or relocated.
Athletic Practice and Training (2 to 4 hrs)	No Restrictions	Exceptionally sensitive individuals should limit intense activities.	Individuals with asthma or other respiratory/ cardiovascular illness should be medically managing their condition. Increase rest periods and substitutions to lower breathing rates.	Activities over 2 hours should decrease intensity and duration. Add rest breaks or substitutions to lower breathing rates.	Sustained rigorous exercise for more than one hour must be rescheduled, moved indoors or discontinued.

Note: All guidelines are cumulative (left to right and top to bottom) as duration and intensity of activities increase.

Medications

Until you know how you react, **do not take aspirin** (or other drugs like aspirin, such as Motrin). It is OK for most people to take Tylenol products.

Beta blockers (used to treat high blood pressure, heart failure, heart attack, migraines and glaucoma) can make your asthma worse. They may also make your inhaler less effective. If you think you may be on a beta blocker, talk to your doctor.

Important! Talk to your doctor before taking *any* herbal remedies or medicines, including aspirin!

Food allergies

Some food allergies cause skin reactions, such as eczema (scaly itchy skin) or hives. It usually happens within minutes to hours. Food allergies may also trigger asthma.

If you are allergic to pollens, avoid bee pollen including things such as pills, honey, etc...

If you think you have a food allergy, talk to your doctor.

Infections

Ear, sinus, and lung infections can trigger an asthma flare-up. So can a common cold. Influenza (flu) can be very dangerous for people with asthma.

The flu is a virus spread from person to person. To protect yourself from the flu, you should:

- Wash your hands often
- Cover your mouth if you cough or sneeze (and ask others to do the same)
- Stay inside on poor air quality days
- Talk to your doctor about getting a flu vaccine every year (The flu vaccine does not *give* you the flu.)

If you feel achy, have a runny nose, fever, or if your asthma flares up and you cannot control it easily, see your doctor! You may have the flu or an infection.

Ask your doctor about getting the flu shot.

How Bad is Your Asthma?

Tell your doctor about your answers to these questions:

- Does your asthma keep you from getting things done at work, school or home?
- Are you often short of breath?
- How often do asthma symptoms (wheezing, coughing, shortness of breath, chest tightness, or pain) wake you up at night or earlier than usual in the morning?
- How often have you used your rescue inhaler or nebulizer medication?
- Have you needed urgent care for your asthma?
- Do you have trouble controlling any of your triggers?

How to Work With Your Doctor

Your doctor may refer you to a specialist if:

- Allergy testing is needed.
- You have been hospitalized or in the emergency room because of your asthma.
- Your medication is not helping your asthma get better.
- You are taking prednisone often.
- You have other conditions that affect your asthma, such as rhinitis, sinusitis, GERD, eczema, or you are overweight. (See page 27 for more information.)

Important! Your doctor can help you the most when you provide complete honest information. Tell your doctor about:

- All of your symptoms
- How often you use your medications
- How often you forgot to take your medications

Your doctor or an asthma educator can teach you how to control your asthma.

Ask your doctor about:

- Your diagnosis
- Asthma triggers
- Inflammation in the air passages
- Your treatment plan and the difference between controllers and reliever medications
- Getting a yearly flu (influenza) vaccine

Your doctor can help you make a self-care plan (asthma action plan), and tell you when you should call for help. Ask your doctor to watch you use your medication to make sure you are doing it right, and what to do if your symptoms change or your medication isn't working.

Pregnancy and Asthma

If you have asthma and are pregnant, you and your doctor can work together to:

- Maintain control of your asthma
- Continue your normal activities, including regular exercise
- Prevent acute asthma attacks
- Deliver a healthy baby

Uncontrolled asthma symptoms may reduce the amount of oxygen that is available to your baby.

Remember: you are breathing for two. It is more important than ever to follow your asthma action plan very carefully.

You can:

- Tell your asthma doctor about your pregnancy
- Talk to your obstetrician (doctor) about your asthma and all medications you take*
- Ask for recommendations, and tell your family doctor about any changes
- See your doctors more often to make sure your asthma is being well controlled
- Avoiding asthma triggers is more important during pregnancy
- Use your inhalers properly to keep better control of your asthma and reduce possible side effects of medications
- Take your medications every day as prescribed, even if your asthma feels fine

* Scientists tell us that asthma management medications do not put your unborn or newborn baby at risk. FDA has approved Pulmicort (an inhaled corticosteroid) for use in pregnancy. Some asthma medications get into the breast milk, but the amounts are so small that they do not affect the baby.

If you are worried that your asthma medicines could be dangerous for you or your baby talk to your doctors. (Talk to the doctor who is caring for your pregnancy *and* your asthma doctor.)

Asthma Medications

There are two types of asthma medications:

- Controllers (also called “prevention” or “maintenance”), and
- Relievers (also called “rescue”)

Controllers

To be most effective, controllers must be used every day. Even if you do not feel better right away, do **not** stop using them. Some medications take up to 6 weeks to work at their best.

Caution: Controllers are **not** for quick relief of asthma symptoms.

Controllers include:

Inhaled corticosteroids

- Reduce swelling, inflammation, and mucus in the airways.
- *Examples:* Advair, Aerobid, Asmanex, Azmacort, Beclovent, Flovent, Pulmicort, Qvar, Vanceril

Inhaled corticosteroids are **the most effective treatment for long-term asthma control**. They are safe when used as recommended. Side effects are uncommon, but can include:

- Cough
- A hoarse voice
- Yeast infection in the mouth (with white spots on the tongue or inside of the cheeks)
- Young children, who take higher doses long-term, may have a risk of delayed growth. (Children who take low to medium doses may have a growth delay for the first year. But studies that followed children for more than 10 years suggest that their growth is not delayed, and they reach their final height later. Because this medication is so effective, its benefits outweigh a possible delay in growth.)

There are no significant effects on the incidence of cataracts, glaucoma or osteoporosis.

To decrease the risks of side effects, rinse your mouth and spit after taking the medication, and use a spacer device if your inhalers can use one.

Inhaled Long-Acting Bronchodilators

- Long-acting bronchodilators keep airways open for about 10 - 12 hours.
- Long-acting bronchodilators should never be used alone without inhaled corticosteroids.
- Many people take these medications with inhaled corticosteroids to control asthma. Combination medication devices (bronchodilators and corticosteroids) are available. Ask your doctor or pharmacists what they replace.
- *Examples:* Advair, (Flovent and Serevent) Advair HFA, Symbicort, Dulera (Asmanex, Foradil)

Inhaled cromolyn sodium and nedocromil

- Stabilize the airways and block response to triggers

Theophylline

- Keeps airways open

Leukotriene Modifiers

- Block response to some triggers
- *Examples:* Accolate, Singulair, Zflo, Zflo CR

Xolair

- Approved for severe allergic asthma (an injectable medication and must be administered under direct supervision of specialist).

Relievers (Quick Rescue/Reliever Medications)

Short-Acting Bronchodilators

- These medications relax the muscles around the breathing tubes so the air passages open. Breathing becomes easier within minutes.
- They can also be used to prevent exercise-induced asthma.
- *Examples:* Albuterol, Breathaire, Maxair, Proair HFA, Proventil HFA, Ventolin HFA, Xopenex HFA

Caution: These rescue/reliever medications (bronchodilators) do not reduce inflammation or swelling of the breathing tubes. If you need to use bronchodilator medications often (more than twice a week), the cause of the inflammation (swelling) is not controlled. Ask your doctor about how to get the inflammation under control by the use of inhaled corticosteroids. Unless your asthma is mild and occasional, it is important to treat your asthma symptoms *and* reduce the inflammation.

Possible side effects:

- Rapid heart rate, tremors, nervousness, headache
- Usually very minor and decrease over time as your body gets used to the medication.

Oral corticosteroids

Oral corticosteroids reduce the inflammation that causes an asthma flare-up.

Note: Corticosteroids used for the treatment of asthma are not the same as the anabolic steroids misused by athletes.

Examples: Orapred, Pediapred, Prednisone, Prelone

Possible side effects:

- Mood changes, increased appetite
- Usually go away after the medication is stopped.

Oral corticosteroids may be used for several days to reverse moderate to severe flare-ups. Do **not** take an oral corticosteroid for more than **10 days** without your doctor's permission. You could have more severe side effects and risks. Because of these risks, use your reliever ("rescue") bronchodilator for quick relief first.

Caution: It can take several hours to several days for an oral corticosteroid to reverse an asthma flare-up. Use your rescue/reliever treatment medication to help the asthma symptoms until the underlying inflammation is reversed. Because of these risks, oral corticosteroids should **NEVER** be first line treatment.

How To Take Asthma Medications

Inhaled medications give you the most benefit with the least side effects because they go directly to your lungs. There are several ways to take inhaled medications, including:

- **Metered dose inhalers** (MDI), also called “inhalers”, “puffers” or “sprays”. They spray a dose of the medication.
- **Spacer/Holding Chambers** are used with metered dose inhalers such as Aerochamber, EZ Vent, and InspirEase. Using a spacer makes more medication go directly to the lungs and less gets in the mouth and throat. Using a spacer/holding chamber takes less coordination to use with an MDI.
- **Dry powder inhalers** (DPI) let you inhale the medication as a dry powder. To use them, you need to suck air in quickly.
- **Nebulizers** deliver a fine mist of medication. Nebulizer treatments take about 15 minutes.



There are different kinds of inhalers. Yours may have a spacer with a mask. Or you may have a metered dose inhaler without a spacer. Ask your doctor how to use your inhaler properly. Look for your type of inhaler on the following pages, and follow the instructions carefully.

Caution: Inhalers only work if used correctly. Ask your doctor, nurse, respiratory therapist, or pharmacist to check the way you use your inhaler.

How to use a Metered Dose Inhaler

Pressured Metered Dose Inhalers (MDI) and Hydrofluoroalkane (HFA)

1. Remove cap from MDI
2. Shake inhaler several times
3. Prime inhaler (pump into the air) with 3-4 sprays prior to use and prime again if not used for 2 weeks
4. Exhale comfortably
5. Tilt head back slightly or keep head level
6. Hold inhaler upright and either
 - a. put mouthpiece 2-3 finger widths from mouth (the best way to use it) **or**
 - b. close lips around mouthpiece and over tongue
7. Start to breathe in SLOWLY through your mouth, then push down ONCE on the top of the inhaler canister
8. Continue breathing in slowly (over 3-5 seconds) until you have taken a full DEEP breath
9. Take inhaler away from your mouth and hold breath for 10 seconds before breathing out
10. If you need more than one puff, wait a least 1 minute between puffs and then repeat steps 2-8
11. Rinse mouth with water, gargle and spit out; do not swallow
12. Remove the canister and wash plastic canister holder with warm water once weekly

MDI + Spacer/Holding Chamber

1. Remove cap from spacer and inhaler
2. Shake inhaler several times
3. Prime inhaler (pump into the air) with 3-4 sprays prior to use and prime again if not used for 2 weeks
4. Insert inhaler into spacer/holding chamber
5. Exhale comfortably
6. Bring spacer to mouth and close lips around mouthpiece and over tongue, creating a seal
7. Push down ONCE on the top of the inhaler canister
8. Breathe in SLOWLY through your mouth (over 3-5 seconds) until you have taken a full deep breath (if device has an audible flow valve, should NOT hear a whistle)
9. Take spacer away from mouth and hold breath for 10 seconds before breathing out
10. If you require more than one puff, wait 1 minute between puffs and then repeat steps 2-8
11. Rinse mouth with water, gargle and spit out; do not swallow
12. Remove the canister and wash plastic canister holder and spacer/holding chamber with warm water once weekly

Dried Powder Inhalers (DPI) - Cylinder (*Asmanex and Pulmicort*)

1. Hold inhaler upright with the base on the bottom
2. Unscrew cap and lift off
 - a. Asmanex: dose counter will count down as you remove cap
 - b. Pulmicort: twist the grip all the way to the right, then fully to the left until a “click” is heard
3. Turn head away from inhaler while you exhale comfortably
4. Bring inhaler to mouth and close lips around mouthpiece and over tongue
5. With the inhaler in a horizontal position, breathe in **FORCEFULLY** and **DEEPLY** through your mouth
6. Take inhaler away from your mouth and hold breath for 10 seconds before breathing out
7. If you require more than one dose, wait 1 minute between doses and then repeat steps 2-6
8. Wipe inhaler dry, then replace cap and twist shut
9. Rinse mouth with water, gargle and spit out; do not swallow

Dried Powder Inhalers - Diskus (*Advair and Serevent*)

1. Open the diskus with the aid of the thumb grip
2. Hold the diskus horizontally (level) with the mouthpiece towards you
3. Slide lever away from you until it clicks
4. Turn head away from inhaler while you exhale comfortably
5. Bring inhaler to mouth and close lips around mouthpiece and over tongue
6. Breathe in **FORCEFULLY** and **DEEPLY** through your mouth
7. Take inhaler away from your mouth and hold breath for 10 seconds before breathing out
8. Wipe mouthpiece dry, then close diskus by putting thumb on grip and sliding it back towards you until a “click” is heard
9. Rinse mouth with water, gargle and spit out; do not swallow

Dried Powder Inhalers - Capsule (*Spiriva* and *Foradil*)

1. Peel paper or aluminum back from blister card and carefully remove one capsule
2. Open inhaler and mouthpiece
 - a. *Spiriva*: open the dust cap and mouthpiece by pulling upwards
 - b. *Foradil*: pull off inhaler cover and twist open the mouthpiece
3. Put capsule in the chamber; NEVER place capsule directly into mouth or mouthpiece
4. Close mouthpiece over capsule
 - a. *Spiriva*: mouthpiece will “click” when closed, leave the dust cap open
 - b. *Foradil*: twist mouthpiece closed
5. With the inhaler upright, puncture the capsule
 - a. *Spiriva*: firmly press green button ONCE and release
 - b. *Foradil*: press both side buttons ONCE and release
6. Turn head away from inhaler while you exhale comfortably
7. Tilt head back slightly, then bring inhaler to mouth and close lips around mouthpiece and over tongue
8. Breathe in FORCEFULLY and DEEPLY through your mouth (should hear capsule whirling)
9. Take inhaler away from your mouth and hold breath for 10 seconds before breathing out
10. Repeat steps 6-9 to make sure you get the full dose
11. Open mouthpiece and throw away used capsule
12. Wipe inhaler dry, then replace dust cap or cover
13. Rinse mouth with water, gargle and spit out; do not swallow

How many puffs are left?

Some inhalers discharge propellant even when there is no medication left. So to know if you have medication left, you must keep track of the puffs you use.

You can make a check mark each time you take a puff, and when you reach the total number of puffs, your inhaler is empty.

Or, for example, if you take 3 puffs a day, and your inhaler has 100 puffs, your medication will be empty after 33 days. You can mark this day on your calendar, and replace your inhaler.

<u>Inhaler</u>	<u>Puffs</u>	<u>Inhaler</u>	<u>Puffs</u>
Aerobid	100	Intal	200
Albuterol	200	Maxair	200
Asmanex	120	Tilade	104
Azmacort	240	Qvar	120
Dulera	124 (must discard first four puffs)		
Flovent HFA	120		
Xopenex	200		

Note: Some inhalers have counters that tell you when the inhaler is empty.

The Peak Flow Meter: An Early Warning Tool

The peak flow meter measures how closed or opened your breathing tubes are. The higher the peak flow, the more open your breathing tubes.

Your doctor may ask you to use the meter every day so you can measure how well your lungs are working. This can help warn you about possible asthma attacks even before you notice symptoms.

If the peak flow reading is lower than usual, your breathing tubes may be closing down. Look at your asthma self-care plan. You may need to adjust your medication.

Warning: Different peak flow meters may give different results, so always use the same meter. If you need to go to the doctor or hospital, bring your own peak flow meter.

Peak flow meters don't work for everyone. Some people cannot follow their asthma with the peak flow meter, **so take your maintenance medicines every day!**

Who can use a peak flow meter?

Anyone over age 5 can use a peak flow meter. Ask your doctor if a peak flow meter would be useful for you. Then, ask your doctor, nurse, respiratory therapist, or pharmacist to check how well you use it.

How to use the peak flow meter:

- Stand up straight and place the mouthpiece of the flow meter in your mouth. Be sure the indicator is at the bottom of the scale.
- Breathe in as much air as your lungs will hold.
- Then huff out (a quick forceful exhalation) as hard and fast as you can.
- Repeat these steps 3 times. Write down the **highest** of the 3 readings as the peak flow rate.
- Take peak flow readings once a day for 2 weeks when you are well. That number is your *personal best* peak flow rate. You will probably have the best peak flow between 2 - 4 p.m.

Your personal best peak flow rate is: _____

Asthma Treatment

Tell your doctor about all of your symptoms and your detailed medical history. Your doctor may order a special breathing test (spirometry test) to measure how bad your asthma is.

Once your doctor knows how severe your asthma is, s/he can tell you how much and what kinds of medication you will need to control it. It's important to talk to your doctor about a medication plan that works best for you.

Types of Asthma

Mild, Intermittent:

For mild, occasional asthma

If you can go for long periods of time without symptoms, your asthma is occasional. That means you do not need controller medications.

Persistent:

For persistent asthma

Your asthma is persistent if you have:

- daytime symptoms more than twice a week and
- nighttime symptoms more than twice a month.

If you use more than 2 canisters of reliever/rescue inhalers per year (except for exercise induced asthma), you need controller medication.

Anyone with asthma can get severe flare-ups. If you have any problems, contact your doctor.

Goals: How to know if you are taking enough medication

The amount of medication needed to keep asthma in control depends on how bad it is. Follow your plan for 2 - 3 weeks.

If the amount of medication is right, you should have:

- Few or no regular symptoms (cough, wheeze, chest tightness, shortness of breath) day or night
- Few or no flare-ups
- No limitations on activities; no school or work missed
- Peak flow rates at or near your normal level
- Use your reliever inhaler medication 2 times or less in a week
- Few or no side effects from medications

If these goals are not met, see your doctor to find out why. Some reasons could be:




- There is something in your house that is triggering your asthma.
- You have an infection.
- You are not using your inhaler correctly.
- You need more controller medication.
- You have another condition that is affecting your asthma, such as rhinitis, sinusitis, GERD, eczema, or you are overweight. (See page 27 for more information.)

Asthma Self-Care/Asthma Action Plan

How to Control Asthma:

- Green, Yellow, and Red Zone Management Plans
- Your asthma does not stay the same all the time. Sometimes it will be better, and sometimes it will be worse.
- Work with your doctor to make a plan for when you are well (green zone), are having a mild flare-up (yellow zone), or are starting to have a severe flare-up (red zone).

Ask your doctor for a written asthma self-care plan. (Some doctors may call it an Asthma Action Plan or a Self- Care Plan.)

Symptoms	Zone	What to Do
<ul style="list-style-type: none">• Normal activity• Waking due to asthma no more than 2 times/month• Asthma symptoms no more than 2 times/ week• Peak flow _____	 Green	Continue controller: _____ Albuterol: every 4 hours if needed
<ul style="list-style-type: none">• Increased coughing, wheezing, & shortness of breath• Waking due to asthma more than 2 times/ month• Peak flow _____	 Yellow	Inhaler ____ puffs ____ times a day Albuterol: ____ puffs every ____ hours if needed
<ul style="list-style-type: none">• Continuous symptoms; medications not helping• Waking frequently due to asthma• Activity limited• Peak flow _____	 Red	Call doctor Albuterol: ____ puffs every ____ hours if needed Start prednisone: _____ For severe distress, call 911

Green Zone – Your asthma is well-controlled

In the green zone, you are taking the daily controller medication your doctor prescribed, and you can:

- Do your normal activities.
- Sleep all night without waking up due to asthma more than twice a month.

Your asthma does not bother you more than twice a week. You should be in the green zone all the time.

Your green zone peak flow is more than: _____.

Your green zone plan is what your doctor tells you.

Yellow Zone – *Caution: A flare-up is starting!*

You are in the yellow zone if:

- You have increased coughing, wheezing, or shortness of breath
- You are waking up more than twice a month because of an asthma symptom.

Look at the asthma self-care plan that you and your doctor made. Start the yellow zone plan. It may tell you to start a rescue medication, bronchodilator, and to take a controller medication, inhaled anti-inflammatory.

If you stay in the yellow zone for more than 2-3 days, call your doctor. If you are in the yellow zone more than twice a week on a regular basis, your asthma is not controlled. Contact your doctor.

Your yellow zone peak flow is from _____ to _____.

Your yellow zone plan is: _____

Red Zone – *Danger: You are having a flare-up!*

You are in the red zone if:

- You have continuous coughing, wheezing, chest tightness, or fast breathing.
- Your response to medication or treatment may be poor or short-lived.
- You wake up often because of an asthma symptom.

Look at the asthma self-care plan that you and your doctor made. Start the red zone plan immediately!

If your flare-up seems severe, call your doctor.

If you are in distress, call 911.

Your red zone peak flow is less than: _____

Your red zone plan is: _____

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Frequently Asked Questions

Can I die of asthma?

Yes, but very few people die because of asthma.

Can I have a good quality of life if I have asthma?

If you follow your asthma action plan carefully you can improve your quality of life and reduce the risk of lung damage from poorly controlled asthma.

Is asthma a disease caused by unstable emotions?

No. Asthma is a *real* disease. But stress can make your asthma worse and harder to treat.

Why did the doctor prescribe a steroid?

The steroids used to prevent asthma are corticosteroids. They are **not** the same steroids that athletes use to improve their performance. Corticosteroid medications have been proven safe, effective, and powerful enough to control inflammation (swelling) in the airways.

Why is my asthma not well controlled?

It may be that you are not taking your medications correctly, or you may have one of these severe triggers:

- Gastro Esophageal Reflux Disease (GERD)
- Underlying respiratory infection
- Severe allergen exposure
- Environmental factors, such as cigarette smoke

You can talk about other possible causes with your doctor.

Other Things That Can Make Your Asthma Worse

Many conditions can make your asthma worse. Talk to your doctor if you have:

- **Rhinitis or Sinusitis** — Rhinitis is swelling and congestion in the nose. Sinusitis is swelling and congestion in the nasal sinuses. They may be caused by an infection. If you have rhinitis or sinusitis and asthma, you should be treated. The treatment for these conditions will make your asthma better.
- **Gastro Esophageal Reflux Disease (GERD)** — GERD is a common condition among people with asthma. It is caused by stomach acid going backwards into your esophagus. The esophagus is the tube from your mouth to your stomach. Sometimes the acid gets into the back of your throat and into your lungs. GERD usually causes heartburn. But instead of heartburn, your symptom may be coughing, wheezing, hoarseness or a sore throat.
- **Obesity** — Your asthma can be worse if you are overweight or obese. Being heavy can make you more short of breath.
- **Eczema** — Eczema refers to different types of skin inflammation. Anyone can get eczema. But it is most common in babies. For about half of the babies who have eczema, it goes away by age 3. But sometimes it flares up later in life. Eczema and other allergies like hay fever often run in families.
- **Obstructive Sleep Apnea (OSA)** — Obstructive sleep apnea interferes with sleep. Apnea means you can stop breathing when you are asleep for sometimes a minute or longer. You may stop breathing hundreds of times in one night. When your sleep is interrupted at night, you cannot think or remember as well during the day. If you are tired due to apnea, it can affect your asthma. Talk to your doctor if you are having trouble sleeping at night.
- **Stress or anxiety** — Scientists have found a link between the areas of the brain that control our emotions and asthma symptoms. They believe that stress and anxiety can trigger an asthma attack. For most people, exercise, regular sleep, good nutrition, and relaxation help control your stress. Learn what you can do to reduce your stress.
- **Other factors** — Your asthma can be affected by other factors, such as medications for other medical conditions, sulfites (preservatives in food-example dried fruit), infections, and hormones.

Resources

Allergy and Asthma Foundation of America
(202) 466-7643 www.aafa.org

Allergy and Asthma Network/Mothers of Asthmatics, Inc.
(800) 878-4403 www.aanma.org

Allergy and Asthma Network Mothers of Asthmatics
(800) 878-4403 www.breatherville.org

American Academy of Allergy, Asthma and Immunology
(414) 272-6071 www.aaaai.org

Amercian College of Allergy and Immunology
(847) 427-1200 www.acaai.org

Breathe California of Sacramento-Emigrant Trails
(916) 444-5900 www.sacbreathe.org

Center for Disease Control and Prevention
(800) CDC-INFO www.cdc.gov

National Heart Lung and Blood Institute
(310) 592-8573 www.nhlbi.nih.gov

Sacramento County Health Department
(916) 875-6091 www.sacdhrs.com

Sacramento Metropolitan Air Quality Management District
www.sparetheair.com

Greater Sacramento Area

Kaiser Permanente Asthma Program

North Valley-Sacramento,
Davis, Rancho Cordova,
Roseville
(916) 784-4050
www.kp.org

South Sacramento
(916) 688-6090
www.kp.org

Mercy Hospital of Folsom
(916) 983-7473
www.mercyfolsom.org

Mercy General Hospital/
Medical Plaza
(916) 733-3303
www.chwhealth.org/Sacramento

Mercy San Juan Medical Center
(916) 537-5000
www.chwhealth.org/Sacramento

Methodist Hospital
(916) 423-3000
www.chwhealth.org/Sacramento

Sacramento County Clinic
Services
(916) 874-8912

Sutter General Hospital/
Adult classes only
(916) 733-1782
www.sutterhealth.com

Sutter Memorial Hospital/
Pediatric classes only
(916) 733-1782
www.sutterhealth.com

UC Davis Asthma Network Adult
Program (UCAN)
(916) 734-5676
www.ucan.ucdmc.ucdavis.edu

UC Davis Children's Hospital
Pediatric Program
(800) 823-4543

Amador Sutter Hospital

Senior Center
(209) 223-7581
www.sutterhealth.com

El Dorado County

Barton Memorial Hospital
Respiratory Therapy Care
(530) 541-3420

Youth Asthma Camps
(530) 541-3420

El Dorado Public Health
Department Clinic
(530) 621-6100

Sierra Nevada Memorial Hospital
(530) 274-6124

Placer County

Kaiser Permanente Asthma
Program, Roseville
(916) 784-4050
www.kp.org

Sutter Auburn Faith Hospital
(530) 888-4530
www.sutterhealth.com

Sutter Roseville Medical Center
(916) 781-1449
www.sutterhealth.com

San Joaquin County

Dameron Hospital
(209) 944-5550
www.dameronhospital.org

Lodi Memorial Hospital
(800) 323-3411
www.lodihealth.org

Saint Joseph's Medical Center
(209) 943-2000
www.stjosephcares.org

Yolo County

Kaiser Permanente Asthma
Program, Davis
(800) 464-4000
www.kp.org

Sutter Davis Hospital
(530) 757-5122
www.sutterhealth.com

Woodland Memorial Hospital
(530) 662-3961

Stop Smoking Programs

American Lung Association
1-800-LUNG-USA

Breathe California of Sacramento-
Emigrant Trails
(916) 444-5900

California Smokers' Help Line
1-800-NO-BUTTS

Kaiser Permanente
(916) 688-6783

Mercy General Hospital
(916) 453-4268

Mercy San Juan
Medical Center
(916) 537-5299

Sutter Hospital
1-800-NO-BUTTS

UC Davis Medical Center
(916) 734-8493





To achieve our mission we focus primarily on prevention and youth programs. Our innovative programs in tobacco prevention, asthma, and clean air education and advocacy include:

Asthma

- [Asthma Education](#) — for the community including healthcare providers, school staff, students, parents and community groups
- [Asthma Collaborative](#) — working to reduce asthma severity in our community
- [Little Lungs Tool Kit](#) — providing asthma information to preschool children, caregivers, and parents

Clean Air

- [Air Quality Flag Program](#) — a multi-colored flag system run by students that acts as a daily indicator of outdoor air quality conditions on elementary school campuses
- [May: Clean Air Month](#) — featuring the Clean Air Awards Luncheon and other clean air events
- [Clean Air and Health Policy Committee](#) — advocating for local health impact studies
- [Cleaner Air Partnership](#) — promoting clean air policy through a partnership with Sacramento Metro Chamber and Valley Vision
- [iBreathe: Sacramento](#) — a free, air quality iPhone app designed to provide alerts about air quality information in our region right to your device
- [O24u](#) — a hands-on, environmental education program that provides children in existing after school programs with the knowledge and background to become advocates for clean air within their homes, schools and communities. Available in English and Spanish
- [The Health Effects Task Force](#) — a coalition of volunteer health and air quality experts conducting local studies of Sacramento Valley air pollution and the resulting health impacts on our residents

Tobacco

- [Thumbs Up! Thumbs Down!](#) — working with teens and Hollywood to reduce the glamorization of tobacco in entertainment
- [STAND \(Sacramento Taking Action Against Nicotine Dependence\) Project](#) — works to prevent and reduce tobacco use, eliminates secondhand smoke exposure, counters tobacco industry manipulation, and provides tobacco cessation for youth and young adults

[Youth Advisory Board](#) teaches high school and college students the necessary skills to become successful clean air and tobacco prevention activists, as well as leadership skills they will use throughout their careers.

For more information, or to volunteer on any of these programs or our special events, please contact us:

(916) 444-5900 or 1-877-3-BREATHE • www.sacbreathe.org
909 12th Street, Sacramento, CA 95814