

SECTION 4: MEDICATIONS

THE ASTHMA HANDBOOK



There are many safe, effective medications that can help you manage your asthma. You need a doctor’s prescription for these medications. You also need special advice on when and how to use each kind of medication.

Because asthma symptoms may change — for better or worse — you need to know how to adjust your medications accordingly. An asthma action plan will describe how to adjust your medication depending on your symptoms.

Some asthma medication can be inhaled (breathed into your lungs) or swallowed. The preferred route is inhaled because the medication goes directly in to the lungs and there are fewer side effects.

Preventer and rescue medications work together

There are two main kinds of asthma medications: preventer medication and rescue medication. Each medication is important. Each medication does a different thing for your lungs. For most people with asthma, the doctor will prescribe both kinds of medication:

Asthma preventer medication: Take your preventer medication every day, even if you have no symptoms, to prevent redness, mucus and swelling.

Asthma rescue medication: Keep your rescue medication on hand and take it only when you need it — during an asthma attack, if your breathing gets bad, or before exercising.

Some people think they can skip the preventer medication and only use the rescue medication. This is dangerous. If you’ve been prescribed a preventer medication, use it. The rescue medication alone won’t control your asthma over the long term.

To make sure you get all your medication into your lungs, be sure you know how to properly use your inhalation device (metered-dose inhaler, spacing chamber, Turbuhaler, Diskus, etc.).

HOW DOCTORS AND CERTIFIED ASTHMA EDUCATOR CAN HELP.

Your doctor, pharmacist or certified asthma educator can also:

- explain how each of your asthma medications works
- answer your questions
- show you how to use your medication inhalation device (your metered-dose inhaler, spacing chamber, Turbuhaler, Diskus etc.)
- teach you how to use a peak flow meter to monitor your breathing, if needed.

ASTHMA PREVENTER MEDICATIONS

It's really important to take your preventer medication as directed, even when you don't have symptoms. Without your preventer medication, you'll be more sensitive to your triggers and more likely to have an asthma attack.

If you take your preventer medication as directed:

- Your asthma will be better controlled.
- You will help prevent asthma attacks.
- You won't need to use your rescue medication (blue puffer) as often.
- Your rescue medication will work better and faster because your lungs will be in better shape.

Preventer medication:

- needs to be taken regularly every day to be effective
- will not help right away in an asthma attack
- usually acts slowly
- works over the long term
- reduces swelling and mucus in your lungs

There are different kinds of preventer medications:

- inhaled corticosteroids
- corticosteroid pills
- long-acting bronchodilators
- leukotriene receptor antagonists
- theophylline

Inhaled corticosteroids

Inhaled corticosteroids (brown, red or orange puffers) are the most common and effective type of asthma preventer. They reduce swelling in the airways. They are inhaled, not swallowed, so they go straight to your lungs and give you fewer side effects than pills. To get the most out of your medication, it's important that you know how to use your inhaler device.

Corticosteroids for asthma are not the same as the muscle-building steroids that are banned by some sports organizations. Inhaled corticosteroids are similar to the steroids that are naturally produced in your body. You need more of these steroids to reduce and prevent swelling in the lungs. Inhaled corticosteroids don't have the same risks or effects as the muscle-building steroids.

Examples of inhaled corticosteroids: budesonide (**Pulmicort®**), fluticasone (**Flovent®**), ciclesonide (**Alvesco®**).

What inhaled corticosteroids do: Reduce the inflammation (swelling, redness) and mucus in your airways.

Side effects of inhaled corticosteroids: For a full list, see your doctor, pharmacist or certified asthma educator. In most cases, inhaled corticosteroids have few side effects and are considered to be safe with the dose needed to control asthma.

Some side effects include:

- hoarseness and sore throat.
- thrush or yeast infection (looks like a whitish layer on your tongue).

Corticosteroid pills

Sometimes the swelling and mucus in your airways is severe — this may be caused by a chest infection or for some other reason. In cases of severe airway swelling, your doctor may prescribe corticosteroid pills. Corticosteroid pills basically do the same thing as inhaled corticosteroids but they are more powerful. Doctors often prescribe these pills for a short time to get the swelling and mucus under control quickly. Keep taking your regular asthma medication in addition to these pills unless your doctor tells you otherwise. Tell your doctor if you have taken corticosteroid pills in the last two years.

Examples: Prednisone, Prednisolone (**PediaPred®**), and Dexamethasone (**Decadron®**).

What corticosteroid pills do: Reduce the swelling, redness and mucus in the airways.

Side effects: For a full list, see your doctor, pharmacist or certified asthma educator.

For prescriptions lasting three to seven days, side effects may include:

- increased appetite
- mood changes
- water retention
- hyperactivity in children

PREVENTING THRUSH

You can easily prevent thrush by rinsing your mouth, gargling and spitting out the water after using your puffer. Your doctor can adjust your dose so you get the best asthma control using the least amount of medication.

For prescriptions lasting longer, side effects may include:

- increased appetite
- weight gain
- stomach irritation
- bone thinning

Note: Because your body can go into withdrawal if you suddenly stop taking prednisone, your doctor will tell you to slowly decrease your dose.

If your asthma is not controlled by using only inhaled corticosteroids, your doctor may add another preventer medication, such as a long-acting bronchodilator or leukotrine receptor antagonist. These preventers also need to be taken regularly.

Long-acting bronchodilators

Long-acting bronchodilators are inhaled medications. They are always prescribed with inhaled corticosteroids and should not be taken alone. Because long-acting bronchodilators take many hours to open your airways, they should not be used as rescue medication. You should keep taking your inhaled corticosteroids while taking long-acting bronchodilators.

Examples: salmeterol (**Serevent®**), formoterol (**Foradil®**, **Oxeze®**).

What long-acting bronchodilators do: Help keep airways open and muscles relaxed, preventing asthma attacks. Long-acting bronchodilators work slowly, over a 12-hour period.

Combined inhaled corticosteroids and long-acting bronchodilators

If you need to have both a corticosteroid and a long-acting bronchodilator, your doctor may prescribe one inhalation device that has both of these medications in it. This makes it easier to take both your medications on a regular basis.

Examples of combination asthma medications

- **Symbicort®:** made of a corticosteroid (budesonide / Pulmicort®) plus a long-acting bronchodilator (formoterol / Oxeze®)
- **Advair®:** made of a corticosteroid (fluticasone / Flovent®) plus a long-acting bronchodilator (salmeterol / Serevent®).

Leukotriene receptor antagonists

If you are already taking inhaled corticosteroids, your doctor may also prescribe a leukotriene receptor antagonist to relieve your asthma symptoms. By adding this medication, your doctor may be able to slowly reduce your dose of corticosteroids and still keep your asthma under control.

Leukotriene receptor antagonists come in pill form. Not everyone will respond to leukotriene receptor antagonists. Your doctor will monitor your response for the first six to eight weeks of treatment.

Examples: zafirlukast (**Accolate®**), montelukast (**Singulair®**).

What leukotriene receptor antagonists do: Help reduce inflammation or swelling in airways and keep airways muscles relaxed. In some people, they have been shown to reduce asthma symptoms triggered by cold air, exercise, allergens and Aspirin.

Side effects: For a full list, see your doctor, pharmacist or certified asthma educator. In general, side effects are very rare. Occasionally, people may notice these side effects from leukotriene receptor antagonists:

- headache
- dizziness
- heartburn
- upset stomach
- fatigue

Theophylline

Theophylline, a bronchodilator in pill form, is not commonly used in the treatment of asthma. It is taken in the evening if shortness of breath disturbs sleep or regularly if asthma is severe. Theophylline levels can be affected by other medications — make sure that your doctor is aware of all the medications you are taking, including over-the-counter drugs.

Examples: TheoDur®, Uniphyll®, Phyllocontin®, TheoLair®.

What theophylline does: Works directly on the airway muscle to relax it, making it easier for you to breathe.

Side effects: For a full list, see your doctor, pharmacist or certified asthma educator.

Some common side effects include:

- diarrhea
- nausea
- heartburn
- loss of appetite
- headaches
- nervousness
- rapid heart beat
- upset stomach

The right dose must be determined and monitored regularly by your doctor. Do not increase the dose on your own.

Antibody Neutralizers

Antibody neutralizers are used in specific cases when moderate to severe asthma is triggered by allergies and inhaled steroids are not helping. Antibody neutralizers work by decreasing the amount of the antibody (the substance in your body that causes airways to become swollen when you have an allergic reaction).

Example: Xolair®.

ASTHMA RESCUE MEDICATIONS

Usually, you take rescue medication only when you need them (when you have symptoms or before exposure to a trigger). You may also take some before exercising. It's important you keep your rescue medication close by so it's there when you need it.

If your asthma is under control, you won't need to take rescue medication more than three times a week (except once a day before exercise). If you use your rescue medication more than three times a week, tell your doctor.

Rescue medication:

- helps during asthma attacks — take it right away
- is usually in a blue puffer
- acts quickly
- reduces the effects of asthma triggers, such as exercise and cold air
- makes your tight airway muscles relax

Fast-acting bronchodilators

You take fast-acting bronchodilators only as needed:

- for quick relief during an asthma attack (you should feel relief within five to 10 minutes)
- for relief of symptoms, such as cough, chest tightness, wheezing and shortness of breath
- fifteen minutes before exercising, as prescribed by your doctor

Examples: salbutamol (Ventolin®, Apo-Salvent®, Novo Salmol®, Gen-salbutamol®, Alti-Salbutamol®, Airomir®) fenoterol hydrobromide, terbutaline sulfate (Bricanyl® inhaler).

Side effects: For a full list, ask your doctor, pharmacist or certified asthma educator. Some common side effects include:

- trembling
- nervousness
- flushing
- increased heart rate

If you are using your fast-acting bronchodilators too often (more than three times a week except for once a day with exercise), your airways are inflamed (swollen and red) and need treatment. Use your asthma action plan and follow the instructions. You may need to increase your asthma preventer medication or add another medication until your asthma is under good control.

REMEMBER...

- Keep taking your asthma medication as instructed by your doctor. This medication is necessary and scientifically proven to keep you healthy.
- Always tell your doctor if you are considering taking or are taking any other medication or alternative remedies of any sort. You have to make sure that these medications or remedies do not interfere with your asthma medication.

COMMONLY ASKED QUESTIONS ABOUT ASTHMA MEDICATIONS

What are the different devices I can use to take my asthma medication?

Many medications are inhaled through a specific device. A device is a tool or instrument that is used to deliver medication to your lungs (for example, a puffer). There are two classes of devices available today:

- MDI (metered-dose inhaler or puffer), used with a spacer
- Dry powder inhalers (Turbuhaler, Diskus, or AeroLizer)

Your doctor or a certified asthma educator can discuss which device best suits your needs. You should regularly review how to use your device with your doctor or certified asthma educator or pharmacist to ensure the medication is getting where it is needed — to your airways.

Should I use a nebulizer to take my medication?

Inhalers are the most common method of getting medication into your lungs. When an inhaler cannot be used, a nebulizer or compressor is another way in which you can take medications. A liquid form of the medication is placed in a container attached to a tube. The nebulizer changes the medication from a liquid to a mist. It can take up to 20 minutes of breathing mist from a nebulizer to get the same dose of medication as you would receive from one or two puffs from an inhaler.

What other drugs can affect my asthma?

Make sure your doctor knows all of the medications you are taking, even over-the-counter drugs and alternative remedies. Check with either your doctor or certified asthma educator or respiratory educator before you start any new treatment.

Drugs that could affect your asthma include:

- Medications containing Aspirin or acetylsalicylic acid (ASA), such as cold remedies, painkillers and medications used for arthritis and muscle pain, may make asthma symptoms worse for some people.
- Beta-blocking medications, which are used to treat high blood pressure, angina, glaucoma and other conditions, can cause severe asthma attacks.
- ACE inhibitors, which are used to treat high blood pressure, heart disease and other conditions, can cause an increase

of twitchiness in airways. Examples of these medications are Captopril and Lisinopril.

What are alternative therapies and can they manage my asthma?

Alternative therapies are ways to deal with an illness that are not usually provided by your doctor or other conventionally trained health-care providers. Some examples of alternative therapies are acupuncture, chiropractics, homeopathy, naturopathy, osteopathy, herbal remedies, tai chi, yoga, reflexology, relaxation therapy and aromatherapy. Alternative remedies may be advertised to treat asthma, but most claims are based on testimonials and not scientifically proven.

What is bronchial thermoplasty and can it manage my asthma?

Bronchial thermoplasty is a new procedure being developed as a potential treatment for asthma in adults. It involves use of thermal energy, or heat, to reduce the amount of the muscle surrounding the airway, thereby reducing tightening of the airway muscle that makes breathing difficult. This method has the potential to provide asthma relief to people who do not respond adequately to conventional asthma treatment. However, people who have had bronchial thermoplasty still need to take asthma medications. Bronchial thermoplasty has only been done in adults and is not proposed for use in children under age 18. Presently, this new treatment is only available in research studies.