

PATIENT EDUCATION | INFORMATION SERIES

Treating Asthma Symptoms with Quick Relief Bronchodilators: Prescription or Over-The-Counter Inhalers

Asthma is a chronic lung disease. When a person has asthma, he or she can have serious airway symptoms that may come on quickly. The most common symptoms of asthma are coughing, wheezing (whistling sound when you breathe), chest pain or tightness, and/or shortness of breath. This fact sheet will focus on using quick relief bronchodilators for treating asthma flare-ups. For more detailed information about asthma, see ATS Patient Information Series fact sheet on Asthma at <http://www.thoracic.org/patients>.



Coughing can be the first sign of an asthma problem. Symptoms may be intense right away or can get worse over time. These symptoms can be scary and need treatment right away. A common treatment for symptom flare-ups is a quick relief bronchodilator (bron-ko-die-lay-tor).

What are quick relief bronchodilators?

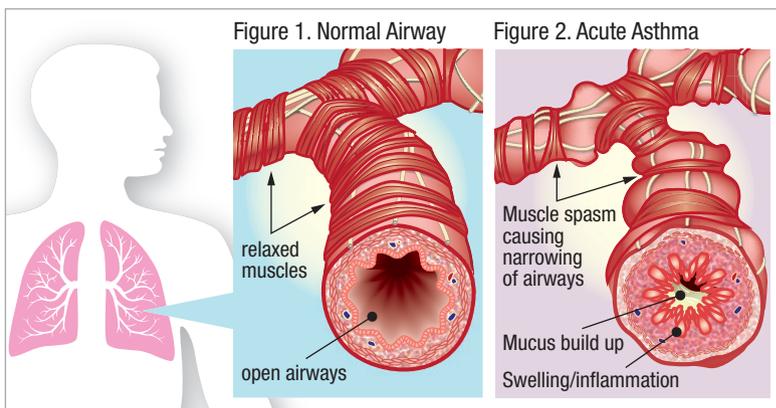
When you are having asthma symptoms or are having an asthma attack (flare-up), you need to treat your symptoms with quick relief medicines that can give fast, but not lasting relief by relaxing the airway muscles.

These medicines are inhaled using a metered dose inhaler (MDI), dry powder inhaler, slow mist inhaler (SMI), or a nebulizer (mist formed from liquid medicine in an air compressor). Inhalers work best if used with a valved holding chamber (spacer). A prescription is needed for nebulizers and spacers.

The most commonly used bronchodilators are beta-agonist medicines and include albuterol (inhaler brand names include ProAir® HFA, ProAir Respiclick®, Proventil® HFA, Ventolin® HFA) and levalbuterol (inhaler brand name Xopenex HFA®). These are available only by prescription. They start to work within a few minutes and can last for up to 4-6 hours. All types are also available as nebulizer liquid.

Another type of bronchodilator used at times is anti-cholinergic medicine. Ipratropium comes as a MDI or liquid for the nebulizer (brand Atrovent®). It also is available in combination with albuterol as a MDI (brand Combivent®) or liquid for nebulizer (Duoneb®).

A prescription is required and your healthcare provider can help decide if this is something for you to try.



In 2018, the US FDA approved another kind of beta-agonist bronchodilator, inhaled epinephrine (brand Primatene® Mist HFA), as an MDI inhaler to treat acute asthma symptoms. Inhaled epinephrine is different from the other beta-agonist medicines in several ways, including:

- A person can buy this medicine without a prescription (over-the-counter).
- It acts quickly but does not last as long as the prescription medicines.
- It is more likely to cause side effects such as rapid heart rate.
- The FDA approved its use for people who are 12 years and older.
- The FDA approved its use only by people who have mild asthma with intermittent (not regular) asthma symptoms. People who have persistent (chronic or long-lasting) asthma or have had repeated asthma attacks can benefit from daily controller medicines that help prevent problems.

A similar drug, racepinephrine (brand names Asthmanefrin® and S2®), is available as an inhaled solution over-the-counter. Like epinephrine, it does not last as long and can have more side effects. It is approved for use only with mild asthma in adults and children 4 years and older.

If you need to use a bronchodilator regularly or are not getting relief of your symptoms, you need to seek medical care. Quick relief medicines treat symptoms, but not the airway problems that cause the symptoms in the first place. Even people with mild asthma can have a severe flare-up that can be life threatening.

What are possible risks or side effects of using quick relief bronchodilator medicines?

Any inhaled bronchodilator can cause side effects. Side effects are more likely to occur with higher doses or with more frequent use.

Inhaled epinephrine (Primatene Mist®) is more likely than beta-agonist medicines to cause:

- Increased blood pressure
- Increased heart rate. This may be more of a concern for people who have heart disease or hypertension (high blood pressure) and could even lead to a heart attack or stroke.
- Nervousness, sleeplessness, shakiness (tremor), and seizures.

Using inhaled epinephrine can also cause problems if you:

- Have certain health conditions
- Take certain medicines
- Eat or drink foods or beverages containing caffeine.

Check with your healthcare provider or pharmacist about whether it is safe for you to use inhaled epinephrine. They can also tell you about possible risks and side effects of other medicines you may be taking. Your pharmacist may recommend that you see your doctor to discuss the need for prescription asthma medicines.

Can asthma be controlled?

Yes, asthma CAN be controlled. Work with your healthcare provider to create your Asthma Action Plan. See your healthcare provider at least once a year for your asthma check-up. During your checkup, you will review your overall asthma control, solve any problems with your treatment, discuss how you can avoid future symptoms, problems, and have a better quality of life.

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Rx Summary and Action Steps

- ✓ Quick relief bronchodilators can give quick but not lasting relief of intense symptoms of asthma like cough or wheezing.
 - ✓ Make sure you know how to use your inhaler or nebulizer correctly.
 - ✓ Asthma can be controlled. You should get help to avoid symptoms that can affect your quality of life.
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- ✓ Seek emergency care if you are having distress and difficulty breathing or are not getting better in 20 minutes after using a quick relief bronchodilator.
 - ✓ See your healthcare provider right away if:
 - Your asthma symptoms are getting worse,
 - You need more to use a quick relief bronchodilator for more than 24 hours for an asthma flare-up every 4-6 hours (day and night), or have more than two asthma attacks in a week. These may be signs that your asthma is getting worse.
 - ✓ Talk to your healthcare provider if you have symptoms that are affecting your quality of life, such as:
 - You are not able to do your normal daily activities because of your asthma, and/or
 - You have symptoms of asthma regularly (every week or several nights a month)
 - You have had repeated asthma attacks or have had to go to an urgent care or emergency room or stayed in the hospital because of asthma.

Healthcare Provider's Contact Number:

Resources

American Thoracic Society (ATS)

<http://www.thoracic.org>

- Asthma
- Asthma and Exercise
- Breathlessness

National Asthma Education Prevention Program (NAEPP)

https://www.nhlbi.nih.gov/files/docs/public/lung/asthma_actplan.pdf

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