Short-Acting Beta2-Agonists for Quick Relief of Asthma Symptoms

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Examples

Prescription short-acting beta2-agonists for asthma include:

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>albuterol</td>
<td>Proventil, Ventolin</td>
</tr>
<tr>
<td>levalbuterol</td>
<td>Xopenex</td>
</tr>
<tr>
<td>metaproterenol</td>
<td></td>
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<tr>
<td>terbutaline</td>
<td></td>
</tr>
</tbody>
</table>

Short-acting beta2-agonists are available in inhaled, pill, liquid, and injectable forms. The inhaled form is available in metered-dose inhalers (MDIs) and as a liquid for compressor-driven nebulizers. Always read the directions to be sure you are using the inhaler correctly.

How It Works

Short-acting beta2-agonists are bronchodilators. They relax the muscles lining the airways that carry air to the lungs (bronchial tubes) within 5 minutes. This increases airflow and makes it easier to breathe. They relieve asthma symptoms for 3 to 6 hours. They do not control inflammation.
Why It Is Used

Short-acting beta2-agonists are used to:

• Provide quick relief of symptoms during asthma attacks.
• Prevent asthma symptoms before exercise.
• Treat symptoms in intermittent asthma.

Using the inhaled form of a short-acting beta2-agonist is preferred for asthma treatment, because it:

• Opens (dilates) bronchial tubes better than the pill or liquid form and does so at lower doses.
• Causes fewer side effects throughout the body than the oral forms.
• Acts faster and lasts about as long as the oral forms.

Medicine treatment for asthma depends on a person's age, his or her type of asthma, and how well the treatment is controlling asthma symptoms.

• Children up to age 4 are usually treated a little differently than those 5 to 11 years old.
• The least amount of medicine that controls the asthma symptoms is used.
• The amount of medicine and number of medicines are increased in steps. So if asthma is not controlled at a low dose of one controller medicine, the dose may be increased. Or another medicine may be added.
• If the asthma has been under control for several months at a certain dose of medicine, the dose may be reduced. This can help find the least amount of medicine that will control the asthma.
• Quick-relief medicine is used to treat asthma attacks. But if you or your child needs to use quick-relief medicine a lot, the amount and number of controller medicines may be changed.

Your doctor will work with you to help find the number and dose of medicines that work best.

How Well It Works

Short-acting beta2-agonists are the treatment of choice for relieving symptoms during asthma attacks and for treating intermittent asthma symptoms.\(^1\) They are also used to relieve symptoms caused by exercise.

Research shows that combining short-acting beta2-agonists and ipratropium in acute, severe asthma episodes, compared with using only beta2-agonists, resulted in:\(^2,\,3\)

• Fewer hospital visits.
• Improved lung function.
Side Effects

All medicines have side effects. But many people don't feel the side effects, or they are able to deal with them. Ask your pharmacist about the side effects of each medicine you take. Side effects are also listed in the information that comes with your medicine.

Here are some important things to think about:

- Usually the benefits of the medicine are more important than any minor side effects.
- Side effects may go away after you take the medicine for a while.
- If side effects still bother you and you wonder if you should keep taking the medicine, call your doctor. He or she may be able to lower your dose or change your medicine. Do not suddenly quit taking your medicine unless your doctor tells you to.

Call your doctor if you have:

- Hives or a skin rash.
- Rapid heartbeat or palpitations.

Common side effects of this medicine include:

- Headache and dizziness.
- Nausea, vomiting, and diarrhea.
- Anxiety.
- Nervousness or tremor (such as unsteady, shaky hands).

Side effects of short-acting beta2-agonists are more likely to occur when using the pill, liquid, or injectable forms than when using the inhaled form.

See Drug Reference for a full list of side effects. (Drug Reference is not available in all systems.)

What To Think About

Because short-acting beta2-agonists work quickly to reduce symptoms, people sometimes overuse these medicines instead of using the slower-acting, long-term medicines. But overuse of quick-relief medicines has harmful effects, such as reducing the future effectiveness of these medicines.4

If you need to use short-acting beta2-agonists on more than 2 days a week (except before exercise), you may need to start or increase long-term therapy. Discuss this with your doctor.

Try to avoid giving your child an inhaled medicine when he or she is crying. In this case, not as much medicine is delivered to the lungs.
Colds or other upper respiratory infections can cause asthma episodes in some people. Some doctors recommend that people who have intermittent asthma use a short-acting beta2-agonist at the first sign of cold symptoms.

**Taking medicine**

Medicine is one of the many tools your doctor has to treat a health problem. Taking medicine as your doctor suggests will improve your health and may prevent future problems. If you don't take your medicines properly, you may be putting your health (and perhaps your life) at risk.

There are many reasons why people have trouble taking their medicine. But in most cases, there is something you can do. For suggestions on how to work around common problems, see the topic Taking Medicines as Prescribed.

**Advice for women**

If you are pregnant, breastfeeding, or planning to get pregnant, do not use any medicines unless your doctor tells you to. Some medicines can harm your baby. This includes prescription and over-the-counter medicines, vitamins, herbs, and supplements. And make sure that all your doctors know that you are pregnant, breastfeeding, or planning to get pregnant.

**Checkups**

Follow-up care is a key part of your treatment and safety. Be sure to make and go to all appointments, and call your doctor if you are having problems. It's also a good idea to know your test results and keep a list of the medicines you take.

**Complete the new medication information form (PDF) to help you understand this medication.**

**References**

**Citations**


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Adam Husney, MD - Family Medicine
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