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## **LONG-ACTING MUSCARINIC ANTAGONISTS**

**ASTHMA**

### **WHAT IS A LONG-ACTING MUSCARINIC ANTAGONIST (LAMA) AND WHEN IS IT USED IN ASTHMA TREATMENT?**

A LAMA is a medicine that may help control asthma long-term.

Most people who have persistent asthma need two kinds of medicines: long-term control medicines and quick-relief medicines. You take long-term control medicines every day for a long time, to stop and control the inflammation in your airways and thereby prevent symptoms and attacks from coming on in the first place. The most effective anti-inflammatory medicines for most people who have asthma are inhaled corticosteroids.

If inhaled corticosteroids alone do not control asthma, a health care provider may add a long-acting bronchodilator. Inhaled long-acting bronchodilators can help prevent symptoms when taken with inhaled corticosteroids by

helping to keep airway muscles relaxed. These medicines should not be used alone. They also should not be used to treat symptoms or an attack, with one exception: For individuals age 12 and older with moderate to severe persistent asthma, health care providers may prescribe a single inhaler containing an inhaled corticosteroid and the long-acting bronchodilator formoterol (such as SYMBICORT®\*) to be used as both a daily long-term control medicine and a quick-relief inhaler as needed.

Long-acting bronchodilators include long-acting beta<sub>2</sub>-agonists (LABAs; for example, salmeterol xinafoate, brand name SEREVENT®\*) and LAMAs. As of September 2020, only one LAMA (tiotropium bromide, brand name SPIRIVA®\*) is approved in the United States for treating asthma.

*\*Mention of brand names is to aid in identification and does not imply endorsement.*



**U.S. Department of Health and Human Services**  
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For more information and resources on asthma, visit [nhlbi.nih.gov/BreatheBetter](https://nhlbi.nih.gov/BreatheBetter).

## HOW ARE LAMAs USED?

LAMAs and LABAs should always be used with an inhaled corticosteroid. For children under 12 and most individuals 12 or older with asthma that is not controlled by an inhaled corticosteroid alone, adding a LABA rather than a LAMA to an inhaled corticosteroid is preferred. Prescribing a LABA with an inhaled corticosteroid has been recommended practice for over 10 years.

A LABA should not be used if the individual cannot take it or it is unavailable for insurance or supply reasons.

For individuals 12 years old and older,\*\* if a LABA cannot be used your health care provider may prescribe a LAMA with inhaled corticosteroid treatment instead of continuing the inhaled corticosteroid alone. If you already use an inhaled corticosteroid plus a LABA and your asthma still is not controlled, your health care provider may add a LAMA.

If your health care provider prescribes a LAMA, make sure that you understand how to use the inhaler properly, because it may be different than those you are used to using.

*\*\*LAMAs were not reviewed in children younger than 12 for the 2020 Asthma Guidelines update.*



## WHO SHOULD NOT USE LAMAs?

- Do not use a LAMA if you have glaucoma or are at risk of urinary retention.
- If you have uncontrolled persistent asthma, talk with your health care provider about the risks of adding a LAMA to your inhaled corticosteroid therapy versus the benefits.



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