

Muscarinic Antagonists

Like [beta-agonists](#), muscarinic antagonists are bronchodilators. These are also known as anticholinergics. They open your airways as well as or better than beta-agonists. Firstly, they block nerve impulses that constrict the muscles in your airways. Secondly, they reduce the amount of mucus in your airways.

There are two types of muscarinic antagonists:

- SAMAs are short-acting. For example, ipratropium.
- LAMAs are long-acting. For example, tiotropium.

COPD studies suggest these drugs can be used as a “first line of defense” to prevent [flare-ups](#). You can take them in an inhaler or nebulizer, or as a nose spray.

Note: Taking SAMAS or LAMAS, and beta-agonists at the same time has an “additive effect.” That means you get a more powerful effect than if you took either drug by itself. As a result, they’re often used in [combination inhalers](#).

Possible side effects of muscarinic antagonists include:

- Dry mouth
- Cough
- Headache
- Trouble urinating (especially for older men)

Note: If you spray or rub these drugs into your eyes, they can dilate your pupils. This may increase pressure in your eye and worsen one form of glaucoma.

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U.S. trade name ®	Generic name	INH* (mcg)**	Nebulizer* (mg)	Duration of action (hrs)
Short-acting				
Atrovent HFA Atrovent Solution	ipratropium	17 mcg	0.25-0.5	6-8
Long-acting				
Spiriva Respimat and Handihaler	tiotropium	180 mcg		24
Tudorza Pressair	acclidinium	400 mcg		12
Incruse Ellipta	umeclidinium	62.5 mcg		24
Seebri Neohaler, Lonhala Magnair	glycopyrrolate	15.6 mcg	100 mcg	12
Yupelri	revefenacin		175 mcg	24

* INH = inhaled medicine given by metered dose inhaler (MDI) or dry powder inhaler (DPI)

** Important to note that mgs are 1,000 times greater than mcgs

Learn more

Would you like to learn more about medicines for Alpha-1 lung disease? Check out the [BFRG](#) for a complete list of drugs to help you live well with Alpha-1.

For more in-depth information on this topic, please visit the [Big Fat Reference Guide \(BFRG\)](#). If you are enrolled in AlphaNet's Subscriber Portal, you can access the BFRG [here](#).