Muscarinic antagonist (anticholinergic) bronchodilators provide quick relief of symptoms such as coughing, wheezing, and shortness of breath for 3-6 hours.

Combination medications:

**Short-acting**

- **inhalation powder**
  - fluticasone 500/50, 100/50, 250/50,
  - **Diskus® Advair** 80 mcg HFA
  - **ipratropium bromide**
  - **Atrovent® HFA**
  - **albuterol**
  - **ProAir®**
  - **ciclesonide** 80 mcg, 160 mcg
  - **Alvesco® HFA**
  - **RespiClick**
  - **albuterol sulfate**
  - **ProAir®**
  - **salmeterol propionate**
  - **fluticasone 230/21**

**Long-acting**

- **inhalation powder**
  - **Seebri™ Neohaler®**
  - **fluticasone furoate** 100 mcg, 200 mcg
  - **sulfate**
  - **albuterol HFA**
  - **Breo® Ellipta®**
  - **umeclidinium**
  - **Incruse® Ellipta®**
  - **albuterol**
  - **HFA**
  - **Serevent®**
  - **indacaterol**
  - **Anoro® Ellipta®**
  - **powder inhalation**
  - **umeclidinium 80 mcg, 160 mcg**
  - **albuterol sulfate**
  - **ProAir®**
  - **resin acid levaterol**
  - **Xopenex HFA®**

- **inhalation powder**
  - **Tudorza™ Pressair™**
  - **fluticasone furoate**
  - **mometasone furoate**
  - **tartrate levalbuterol**
  - **Twisthaler®**
  - **dihydrate fumarate formoterol**
  - **and budesonide 80/4.5, 160/4.5**

- **inhalation**
  - **Utibron™**
  - **powder inhalation**
  - **salmeterol propionate and 230/21**
  - **Flovent® HFA**
  - **Respimat®**
  - **tidropium bromide 44 mcg, 110 mcg, 220 mcg**
  - **Flovent® Diskus®**
  - **Respimat®**
  - **olodaterol hydrochloride**

**Short-acting beta2-agonist bronchodilators** relax tight muscles in airways and help you breathe more easily.

**Inhaled corticosteroids** contain both inhaled corticosteroid and long-acting beta2-agonist (LABA) components. They are prescribed to reduce swelling and inflammation in the airways.

**Combination medications** and **salmeterol propionate** (containing both inhaled corticosteroid and long-acting beta2-agonist) are marketed under various brand names, as listed above.

**Reach** through the national Allergy & Asthma Network to #EndAsthma and related conditions through outreach, education, advocacy, and research. This organization is a nonprofit organization dedicated to ending allergies and related conditions.

Learn More at 800.878.4403.
Short-acting beta₂-agonist bronchodilators relax tight muscles in airways and offer quick relief of symptoms such as coughing, wheezing and shortness of breath for 3-6 hours.

**Muscarinic antagonist (anticholinergic) bronchodilators**

- **Atrovent® HFA**
  - ipratropium bromide
  - Short-acting

**Combination medications** contain both inhaled corticosteroid and long-acting beta₂-agonist (LABA)

- **Advair® Diskus®**
  - 100/50, 250/50, 500/50 fluticasone propionate and salmeterol xinafoate
  - Short-acting

- **Breo® Ellipta®**
  - 100/25 mcg, 200/25 mcg fluticasone furoate and vilanterol inhalation powder
  - Long-acting

**Inhaled corticosteroids** reduce and prevent swelling of airway tissue; they do not relieve sudden symptoms of coughing, wheezing or shortness of breath.

- **Aerospan® HFA**
  - 80 mcg flunisolide
  - Short-acting

- **Alvesco® HFA**
  - 80 mg, 160 mcg fluticasone furoate
  - Short-acting

- **Arnuity® Ellipta®**
  - 45/21, 115/21 mcg fluticasone furoate and budesonide dihydrate
  - Short-acting

- **Asmanex® HFA**
  - mometasone furoate
  - Long-acting

- **Asmanex® Twisthaler®**
  - 110 mcg, 220 mcg mometasone furoate inhalation powder
  - Long-acting

**Long-acting bronchodilators**

- **ProAir® RespiClick**
  - albuterol sulfate inhalation powder
  - Short-acting

- **Proventil®**
  - albuterol sulfate inhalation powder
  - Short-acting

- **Ventolin® HFA**
  - albuterol sulfate
  - Long-acting

- **Xopenex® HFA**
  - levosalbutamol tartrate
  - Long-acting

**Combination inhalers**

- **Seebri™ Neohaler**
  - glycopyrrolate inhalation powder
  - Short-acting

- **Incruse® Ellipta®**
  - umecyclidinium bromide inhalation powder
  - Long-acting

- **Symbicort® (HFA)**
  - formoterol fumarate and budesonide inhalation powder
  - Long-acting

- **Arcapta™ Neohaler™**
  - aclidinium bromide and olodaterol hydrochloride inhalation powder
  - Long-acting

**Short-acting beta₂-agonist bronchodilators**

- **ProAir®**
  - albuterol sulfate
  - Short-acting

- **Respimat®**
  - olodaterol hydrochloride
  - Long-acting

- **Flovent® Diskus®**
  - tiotropium bromide
  - Long-acting

- **Tudorza™**
  - indacaterol and glycopyrrolate inhalation powder
  - Long-acting

- **Twisthaler®**
  - tiotropium bromide and olodaterol inhalation powder
  - Long-acting

**Side effects**

- **Atrovent HFA** has been associated with gas pains, nausea, dry cough, tremor, muscle weakness, and bloating.

- **Advair Diskus** and **Breo Ellipta** may cause irritation of the eye, increased heart rate, sleep disturbance, and muscle weakness.

**AllergyAsthmaNetwork.org**

- Learn more about asthma and its management at AllergyAsthmaNetwork.org

- 800.878.4403

**Additional information**

- Relieve cough, sputum production, wheeze and chest tightness associated with chronic lung diseases.

**At a Glance**

- Respiratory Inhalers

- Short-acting and long-acting medications are available.

- Combination medications offer lasting relief of symptoms such as coughing, wheezing and shortness of breath for at least 12 hours.

-Muscarinic antagonists (anticholinergics) and beta₂-agonists work together to relax tight muscles in airways and offer relief.

**Dose indicators**

- **A** = Asthma
- **C** = COPD
- **B** = Built-in spacer

**Warning**

- Asthma can be a life-threatening condition and needs immediate attention.

- Nonfatal asthma attacks can lead to unnecessary hospitalizations and deaths.

- People with asthma and COPD who are on long-term treatment should consult their healthcare provider if their condition worsens.

- Symptoms of severe asthma include difficulty breathing, rapid breathing, feeling faint, and having a high fever.

- People with asthma should call 911 immediately if they are facing a life-threatening asthma attack.

**Conclusion**

- Asthma is a serious condition that must be treated promptly to prevent unnecessary hospitalizations and deaths.

- Nonfatal asthma attacks are often due to inadequate treatment or poor control of the condition.

- People with asthma and COPD should consult their healthcare provider to ensure they are receiving appropriate treatment.

- People with asthma should carry a rescue inhaler and know how to use it effectively.

- The importance of regular follow-up appointments with healthcare providers cannot be overstated.

- Asthma is a condition that can be managed, but it requires ongoing care and monitoring.

- People with asthma should always carry their medication and an action plan in case of an emergency.

- Asthma is a condition that can be managed, but it requires ongoing care and monitoring.

- People with asthma should always carry their medication and an action plan in case of an emergency.

- Asthma is a condition that can be managed, but it requires ongoing care and monitoring.

- People with asthma should always carry their medication and an action plan in case of an emergency.

- Asthma is a condition that can be managed, but it requires ongoing care and monitoring.

- People with asthma should always carry their medication and an action plan in case of an emergency.
Muscarinic antagonist (anticholinergic) bronchodilators

- Quick relief of symptoms such as coughing, wheezing, and shortness of breath for 3-6 hours

- Short-acting beta2-agonist bronchodilators
  - Relax tight muscles in airways and offer lasting relief of symptoms such as coughing, wheezing, and shortness of breath for at least 12 hours

- Inhaled corticosteroids
  - Reduce and prevent swelling of airway tissue; they do not relieve sudden symptoms of coughing, wheezing, or shortness of breath

- Combination medications
  - Contain both long-acting muscarinic antagonist (LAMA) and long-acting beta2-agonist (LABA)

- Short-acting inhalation powder
  - Anafoate salmeterol
  - Fluticasone propionate 500/50, 100/50, 250/50, Diskus®
  - ProAir®

- Long-acting inhalation powder
  - Albuterol sulfate
  - Fluticasone furoate 100 mcg, 200 mcg, Arnuity® Ellipta®
  - Dulera®
  - Formoterol fumarate and budesonide 80/4.5, 160/4.5, Symbicort® (HFA)

- Powder inhalation
  - Tiotropium bromide
  - Spiriva® HandiHaler®

- HFA
  - Beclomethasone dipropionate
  - QVAR® (HFA)

- Pulmonary treatment
  - Budesonide inhalation
  - Respimat®

- Noninhalable
  - Levalbuterol HFA®
  - Xopenex®

- Outreach, education, advocacy, and research.

- Allergy & Asthma Network

Learn More at AllergyAsthmaNetwork.org

800.878.4403

Reviewed by Dennis Williams, PharmD ©2016 Allergy & Asthma Network