

Medications for COPD

Classes of medications	Action	Common side effects	Precautions
Long-term control medications "Preventer"			
Beta₂-agonists (Long-acting inhaler) Salmeterol, Formoterol, Vilanterol, Indacaterol, Olodaterol	Dilate the airway and prevent acute exacerbations of COPD.	Palpitations, nervousness, headache, muscle cramps, tremors	* Overdose can increase the risks of side effects.
Antimuscarinics (Long-acting inhaler) Tiotropium, Glycopyrronium, Aclidinium, Umeclidinium	Dilate the airway and prevent acute exacerbations of COPD.	Dry mouth, cough, runny nose, sore throat, tachycardia	* Overdose can increase the risks of side effects.
Corticosteroids (Inhalation) Beclomethasone, Budesonide, Ciclesonide, Fluticasone	Relieve airway inflammation and prevent acute exacerbations of COPD.	Dry mouth, hoarseness, sores or white patches in your mouth or throat.	* Rinse mouth with water after use. * Should use with long-acting bronchodilators.
Xanthine (Oral) Theophylline	Dilate the airway and prevent acute exacerbations of COPD.	Palpitations, nervousness, tremors, trouble sleeping, nausea, repeated vomiting, headache, restlessness	* The controlled release formulations of theophylline must not be chewed. * Symptoms of overdose may include nausea, severe vomiting, fast heartbeat, seizure and headache, etc.
PDE-4 Inhibitor (Oral) Roflumilast	Relieve airway inflammation and prevents acute exacerbations of COPD.	Diarrhoea, unexplained weight loss, trouble sleeping	* This medication may cause weight loss. Please monitor your weight regularly while taking this medication. Please inform your doctor if you notice a substantial decline in body weight.
Quick relief medications "Reliever"			
Beta₂-agonists (Short-acting inhaler) Salbutamol	Rapidly dilate the airway and soothe breathing. Relieve the symptoms during acute exacerbations of COPD.	Palpitations, nervousness, headache, muscle cramps, tremors	* Carry with you at all times. * Overdose can increase the risks of side effects. * If your symptoms do not subside or worsen after using this inhaler, please seek medical attention immediately. * If you need to use this inhaler more frequently than instructed, please check with your healthcare professionals to see if you are using it or other medications properly. Please inform your doctor if needed, as it may indicate your condition has not been controlled effectively.
Antimuscarinic (Short-acting inhaler) Ipratropium	Rapidly dilate the airway and soothe breathing. Relieve the symptoms during acute exacerbations of COPD.	Dry mouth, headache, cough, runny nose, sore throat, constipation and diarrhoea, tachycardia	* Overdose can increase the risks of side effects. * If your symptoms do not subside or worsen after using this inhaler, please seek medical attention immediately. * If you need to use this inhaler more frequently than instructed, please check with your healthcare professionals to see if you are using it or other medications properly. Please inform your doctor if needed, as it may indicate your condition has not been controlled effectively.
Corticosteroid (Oral) Prednisolone	Relieve airway inflammation and prevent deterioration during acute exacerbations of COPD.	Increased appetite, weight gain, high blood pressure, edema, insomnia, affected mood. Side effects will subside after stop taking the medication.	* Taken in the morning with food. * For short-term use only, complete the treatment course as instructed.

- * If you experience sleepiness, dizziness or blurred vision after taking the medications, avoid driving or activities requiring mental alertness or coordination. Avoid alcohol as it may increase the side effects.
- * If you notice any allergic reactions like skin itchiness, face or hand swelling, breathing difficulty, etc., consult your doctor immediately.
- * Combination products may contain two or more ingredients. This may reduce the frequency of medication usage and increase patients' drug adherence.

**? For any queries,
please seek advice from your doctor,
pharmacist or other healthcare
professionals.**

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Medications for Chronic Obstructive Pulmonary Disease



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What is Chronic Obstructive Pulmonary Disease



Chronic obstructive pulmonary disease (COPD) is a persistent lung disease characterised by obstruction of airway. COPD is usually caused by long-term exposure to noxious particles or gases (e.g. cigarette smoke), resulting in narrowing of the respiratory tract. The most common symptoms include breathing difficulty, breathlessness, chronic cough and increase in sputum production.

COPD patients often do not get enough oxygen to maintain normal daily activities. Although there is no cure for COPD, many medications can prevent flare-ups and alleviate symptoms. Therefore, patients should use the medications as prescribed even if the condition improves.

How is COPD treated?

Quit smoking

Smoking is one of the major causes of COPD. Smoking cessation is the most effective method in reducing cough and phlegm in COPD patients, as well as slowing down the disease progression. Patients can receive counseling and/or medications (e.g. nicotine replacement therapy) to assist in smoking cessation if necessary.

Medical Treatment

The goal of treating COPD is to reduce frequency and severity of exacerbations, improve exercise tolerance, relieve symptoms, prevent disease progression and thereby improve the quality of life. There are two main categories of medications for COPD:

- (i) Long-term control medications “Preventer” – these medications need to be taken on a long-term basis to prevent disease progression and acute exacerbation of COPD. They maintain disease control by attenuating the chronic inflammation of respiratory tract. Therefore, patients have to take the medications regularly even if the condition improves.
- (ii) Quick relief medications “Reliever” – these medications relieve symptoms during acute exacerbation of COPD. Short-acting bronchodilator can quickly relieve symptoms such as breathlessness and breathing difficulty. However, regular use of long-term COPD control medications is still the most effective method in preventing acute exacerbations of COPD.

Most medications for COPD are delivered via inhalation, allowing the medications to reach the bronchi directly with rapid therapeutic effect and less side effects. Patients must learn how to use the inhalers properly in order to control COPD effectively. Improper use of inhalers can result in underdosing or overdosing. COPD patients may require mucolytic to help cough out sputum, reduce lung infections and acute flare-ups.

Patient should seek immediate medical attention if his/her condition worsens or presents with increased cough, increased sputum production, purulent sputum or increased shortness of breath. Doctors may prescribe antibiotic according to clinical need, and patients should finish the whole course of antibiotic as instructed.

Vaccinations

COPD patients should receive seasonal influenza and pneumococcal vaccine regularly as advised by the Centre for Health Protection or your doctor to reduce risk of lower respiratory tract infections and complications.

Pharmacist's advice

1. To control COPD effectively, you should:
 - Use the medications as directed. Do not stop using the medications or change the dose or frequency unless directed by your doctor.
 - Learn how to use the inhalation medications correctly (please refer to the relevant leaflets).
2. If you have been prescribed with both bronchodilator and corticosteroid inhaler, you should use the bronchodilator first as it helps dilate the airway and allow the corticosteroid to reach the lungs more effectively.
3. Please clean the inhaler according to product information.
4. If you have history of drug allergy, consult your doctor or pharmacist before using the medications.
5. Tell your doctor and pharmacist if you are pregnant, planning to become pregnant or breastfeeding.
6. Consult your doctor or pharmacist before using any other medications, including health supplements, Traditional Chinese Medicines, Proprietary Chinese Medicines and over-the-counter medications.
7. Please consult your doctor or pharmacist if you encounter any difficulties in using the medications.
8. Please consult your doctor if symptoms persist or worsen after using the medications.

What if I miss a dose?

Use the missed dose as soon as you remember. Skip the missed dose if it is almost time for your next scheduled dose.

Do not double the dose.

How to store?

- Store in a cool, dry place and away from direct heat and light.
- Precaution of storage of metered-dose inhaler
 - The metal canister should not be stored separately from the plastic holder.
 - The metal canister contains compressed gas. Do not puncture and keep away from heat to avoid hazard.
- Keep out of reach of children.
- Discard all medications that have expired or are no longer required.
- Do not share the medications with other people.