



Book Supplement

Drug Treatment for COPD

Agent	Notes
Inhaled short-acting β_2 -agonist	Bronchodilation. Alleviate symptoms and improve pulmonary function. Generally used as needed.
Inhaled short-acting anticholinergic	Bronchodilation. Alleviate symptoms and improve pulmonary function. Used as scheduled maintenance. Do not combine short and long-acting anticholinergic drugs.
Inhaled long-acting anticholinergic	Bronchodilation. Alleviate symptoms and improve pulmonary function. Used as scheduled maintenance. Do not combine with a short-acting anticholinergic.
Inhaled long-acting β_2 -agonist	Bronchodilation. Alleviate symptoms and improve pulmonary function. Used as scheduled maintenance.
Oral theophylline aminophylline	Bronchodilation possibly improved respiratory muscle function. Alleviate symptoms and improve pulmonary function. Aim for serum levels between 5 and 12 $\mu\text{g}/\text{mL}$. Used as scheduled maintenance. Use is intravenous in emergency room situations.
Oral β_2 -agonists:	Bronchodilation. Alleviate symptoms and improve pulmonary function. Used as scheduled maintenance. Rarely used because of side effects but may be of benefit in patients who cannot use inhalers.
α_1 -antitrypsin augmentation therapy for AAT deficiency	Antiproteolytic enzyme. Possible reduced decline in pulmonary function and reduced mortality. Life-long therapy, most effective in patients with FEV ₁ 35% to 60% predicted, may be used in patients receiving lung transplants for AAT deficiency; not to be used unless emphysema is present.
Inhaled corticosteroids	Anti-inflammatory. Alleviate symptoms and improve pulmonary function. Used as scheduled maintenance. In patients with a history of frequent exacerbations, high doses are best studied. Pulmonary function improved in 10%-20% of patients but symptoms and exacerbations reduced in a larger percentage. No effect on decline in pulmonary function.
Oral corticosteroids	Anti-inflammatory. Alleviate symptoms and improve pulmonary function. Avoid use in stable chronic COPD. Intravenous or oral corticosteroids are effective for acute exacerbations

Supplemental oxygen	Improves tissue oxygenation. Improves quality of life; prolongs life. Must qualify for use on basis of arterial PaO ₂ or arterial oxygen hemoglobin saturation level.
Antibiotics for acute exacerbations of COPD	May alleviate symptoms and reduce severity of exacerbation. Most exacerbations due to viruses not susceptible to antibiotics.

ATT = α_1 -antitrypsin; COPD = chronic obstructive pulmonary disease

Table adapted from *Physicians Information and Education Resource (PIER)*, COPD module.