

# COMMONLY USED MAINTENANCE MEDICATIONS IN COPD\*

## DELIVERY OPTIONS

Generic Drug Name	Inhaler Type	Nebulizer	Oral	Injection	Duration Of Action
<b>BETA<sub>2</sub>-AGONISTS</b>					
<b>SHORT-ACTING (SABA)</b>					
Fenoterol	MDI	√	pill, syrup		4-6 hours
Levalbuterol	MDI	√			6-8 hours
Salbutamol (albuterol)	MDI & DPI	√	pill, syrup, extended release tablet	√	4-6 hours 12 hours (ext. release)
Terbutaline	DPI		pill	√	4-6 hours
<b>LONG-ACTING (LABA)</b>					
Arformoterol		√			12 hours
Formoterol	DPI	√			12 hours
Indacaterol	DPI				24 hours
Olodaterol	SMI				24 hours
Salmeterol	MDI & DPI				12 hours
<b>ANTICHOLINERGICS</b>					
<b>SHORT-ACTING (SAMA)</b>					
Ipratropium bromide	MDI	√			6-8 hours
Oxipropium bromide	MDI				7-9 hours
<b>LONG-ACTING (LAMA)</b>					
Acidinium bromide	DPI, MDI				12 hours
Glycopyrronium bromide	DPI		solution	√	12-24 hours
Tiotropium	DPI, SMI, MDI				24 hours
Umeclidinium	DPI				24 hours
Glycopyrrolate		√			12 hours
Revefenacin		√			24 hours
<b>COMBINATION SHORT-ACTING BETA<sub>2</sub>-AGONIST PLUS ANTICHOLINERGIC IN ONE DEVICE (SABA/SAMA)</b>					
Fenoterol/ipratropium	SMI				6-8 hours
Salbutamol/ipratropium	SMI, MDI				6-8 hours
<b>COMBINATION LONG-ACTING BETA<sub>2</sub>-AGONIST PLUS ANTICHOLINERGIC IN ONE DEVICE (LABA/LAMA)</b>					
Formoterol/acidinium	DPI				12 hours
Formoterol/glycopyrronium	MDI				12 hours
Indacaterol/glycopyrronium	DPI				12-24 hours
Vilanterol/umeclidinium	DPI				24 hours
Olodaterol/tiotropium	SMI				24 hours
<b>METHYLXANTHINES</b>					
Aminophylline			solution	√	Variable, up to 24 hours
Theophylline (SR)			pill	√	Variable, up to 24 hours
<b>COMBINATION OF LONG-ACTING BETA<sub>2</sub>-AGONIST PLUS CORTICOSTEROID IN ONE DEVICE (LABA/ICS)</b>					
Formoterol/beclometasone	MDI, DPI				12 hours
Formoterol/budesonide	MDI, DPI				12 hours
Formoterol/mometasone	MDI				12 hours
Salmeterol/fluticasone	MDI, DPI				12 hours
Vilanterol/fluticasone furoate	DPI				24 hours
<b>TRIPLE COMBINATION IN ONE DEVICE (LABA/LAMA/ICS)</b>					
Fluticasone/umeclidinium/vilanterol	DPI				24 hours
Beclometasone/formoterol/glycopyrronium	MDI				12 hours
<b>PHOSPHODIESTERASE-4 INHIBITORS</b>					
Roflumilast			pill		24 hours
<b>MUCOLYTIC AGENTS</b>					
Erdosteine			pill		12 hours
Carbocysteine†			pill		
N-acetylcysteine†			pill		

TABLE 3.3

\*Not all formulations are available in all countries. In some countries other formulations and dosages may be available. † Dosing regimens are under discussion.  
MDI = metered dose inhaler; DPI = dry powder inhaler; SMI = soft mist inhaler.