

Medications used in COPD

Drug	Efficacy						Adverse events				Cost	Overall value
	Acute symptom relief	Improve FEV ₁	Reduce frequency of exacerbations	Improve exercise capacity	Slow progression of COPD	Reduce mortality	Pneumonia	CV	Oral thrush	Head-ache		
Short-acting β -agonists	Green	Yellow		Yellow						Yellow	Green	Yellow
Long-acting β -agonists					**							Yellow
Ipratropium	Green			Yellow		‡		##				Yellow
Tiotropium				Yellow		‡		##			Red	Yellow
Inhaled corticosteroids					**		Red		Red			Yellow
Fluticasone/salmeterol		Green	Green		**	‡‡	Red		Red		Red	Yellow
Budesonide/formoterol		Green	Green				Red		Red		Red	Yellow

CV = cardiovascular

Best outcome	Intermediate	Problem	Unknown or nil effect shown
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Short-acting β -agonists = albuterol, levalbuterol; long-acting β -agonists = salmeterol, formoterol, arformoterol; inhaled corticosteroids = fluticasone, budesonide, beclomethasone

**Results from post-hoc analysis of TORCH study

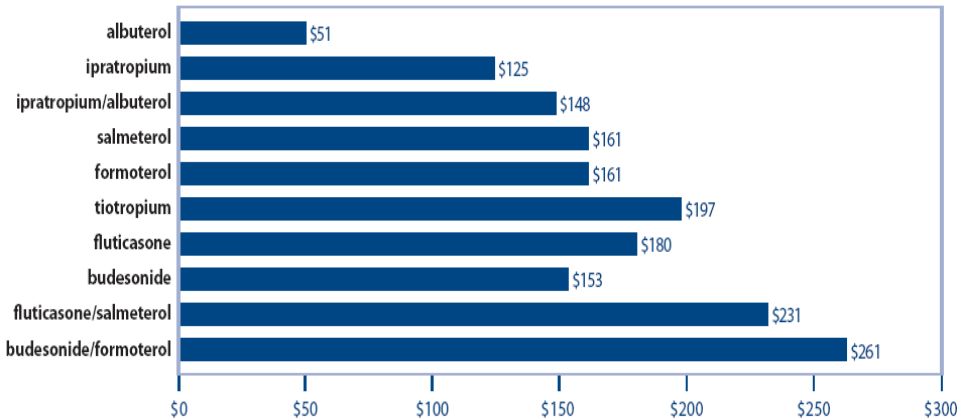
‡, ## A meta-analysis showed a significantly increased risk of cardiovascular death, MI, or stroke (but not all-cause mortality) in COPD patients using inhaled anticholinergics.

‡‡ Not demonstrated in all trials; reduced mortality shown in a meta-analysis of trials including TORCH.²

1. Singh S, Loke YK, Furberg CD. Inhaled anticholinergics and risk of major adverse cardiovascular events in patients with chronic obstructive pulmonary disease: a systematic review and meta-analysis. *JAMA*. Sep 24 2008;300(12):1439-1450.

2. Nannini L, Cates CJ, Lasserson TJ, Poole P. Combined corticosteroid and long-acting beta-agonist in one inhaler versus placebo for chronic obstructive pulmonary disease. *Cochrane Database Syst Rev*. 2007(4):CD003794.

Cost of medications used in COPD



Approximate cost of a 30-day supply of the defined daily dose (DDD)

Prices obtained July 2009 from www.epocrates.com.

These are general recommendations only; specific clinical decisions should be made by the treating physician based on an individual patient's clinical condition.

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