

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 | | | | | | | | | | | | | |
| Long-acting β -agonists | | | | | ** | | | | | | | | |
| Ipratropium | | | | | | ‡ | | ## | | | | | |
| Tiotropium | | | | | | ‡ | | ## | | | | | |
| Inhaled corticosteroids | | | | | ** | | | | | | | | |
| Fluticasone/salmeterol | | | | | ** | ‡‡ | | | | | | | |
| Budesonide/formoterol | | | | | | | | | | | | | |

CV = cardiovascular

| | | | |
|--------------|--------------|---------|-----------------------------|
| Best outcome | Intermediate | Problem | Unknown or nil effect shown |
|--------------|--------------|---------|-----------------------------|

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

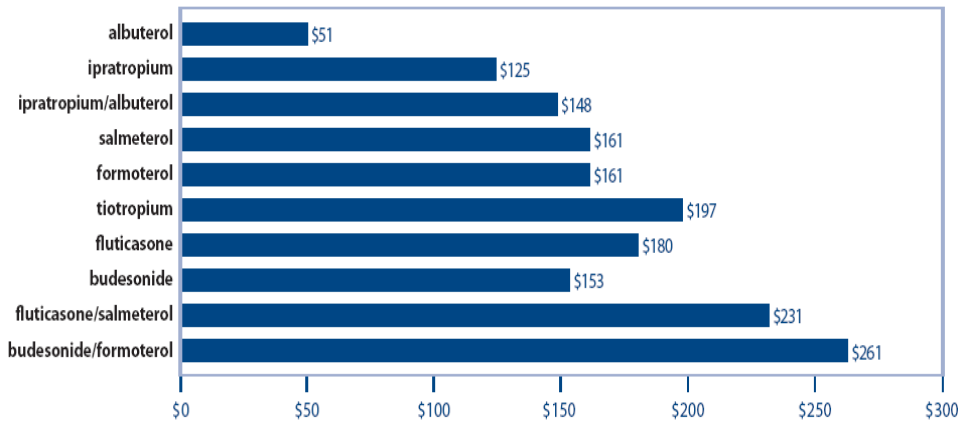
‡, ## A meta-analysis showed a significantly increased risk of cardiovascular death, MI, or stroke (but not all-cause mortality) in COPD patients using inhaled anticholinergics.¹

‡‡ 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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