

Asthma/COPD Flare

Initial pharmacologic therapy

Beta adrenergic agonists

- Dose and administration – Albuterol 2.5 mg (diluted to a total of 3 mL with sterile normal saline) by nebulizer or one to two inhalations (most commonly two, occasionally four; 90 mcg per inhalation) by MDI with a spacer every one hour for two to three doses and then every two to four hours as needed, guided by the response to therapy. - Levalbuterol 1.25 mg (diluted to a total of 3 mL with sterile saline) by nebulizer at the same frequency as albuterol.
- Levalbuterol (45 mcg/actuation) by MDI is given one to two inhalations (most commonly two, occasionally four) every one hour for two to three doses, then every two to four hours as needed. When combined with ipratropium, albuterol 2.5 mg is mixed with ipratropium bromide 0.5 mg in 3 mL. Muscarinic antagonists — Suggest use of the combination of a SAMA (eg, ipratropium) and SABA for exacerbations.
- Dose and administration – When combined with albuterol for nebulization, ipratropium 0.5 mg (500 mcg) is mixed with albuterol 2.5 mg in 3 mL and given every hour for two or three doses and then every two to four hours as needed. - Combination ipratropium-albuterol soft mist inhaler (SMI) can be used, 1 inhalation, approximately every hour for two to three doses and then every two to four hours as needed, guided by the response to therapy.

Ipratropium

also available in an MDI that can be used with a spacer, 2 to 4 inhalations every hour for two to three doses, and then every two to four hours as needed.

Systemic glucocorticoids

- IV glucocorticoids administered to with a severe exacerbation, not responded to oral glucocorticoids at home, unable to take oral medication
- Dose prednisone 40 mg once daily for the majority of COPD exacerbations. Regimens range from prednisone 30 to 60 mg, once daily, to methylprednisolone 60 to 125 mg, two to four times daily.
- Duration – Range of 5 to 14 days

Antimicrobial therapy

Recommend antibiotics with at least two of these three symptoms – increased dyspnea, increased sputum volume, or increased sputum purulence.

Oxygen therapy

Supplemental oxygen be titrated to a target of 88 to 92 percent pulse oxygen saturation, rather than using high-flow, nontitrated oxygen

<https://www.uptodate.com/contents/copd-exacerbations-management/abstract/1,17,>

<https://www.uptodate.com/contents/copd-exacerbations-management/abstract/33>

<https://www.uptodate.com/contents/copd-exacerbations-management/abstract/12,34,35>

<https://www.uptodate.com/contents/copd-exacerbations-management/abstract/1,12,39-41>

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