

## Inhaled Budesonide in COVID-19

April 2021—Version 1.0

Inhaled budesonide **may** decrease time to symptomatic improvement and utilization of health care resources when used in adults with mild symptoms of COVID-19.<sup>1, 2</sup>

The Budesonide inhalation dose evaluated for treatment of COVID-19 was 800 mcg BID

- Represents high dose inhaled corticosteroids (ICS) in the adult population.
- No studies have been published evaluating lower doses or alternative ICS agents, however budesonide may not be attainable by all patients. *See approximate equivalence table and formulations of ICS below*

It is recommended to **NOT** administer oral steroids to outpatients with the intent to prevent or treat COVID-19. Note the following:

“...There was no evidence that dexamethasone [oral tablet] provided any benefit among patients who were not receiving respiratory support at randomization, and the results were consistent with possible harm in this subgroup”<sup>3</sup>

Medication	Equivalent Strength	Formulation
Budesonide	800 mcg BID <i>*FDA approved max: 720 mcg BID</i>	Pulmicort Flexhaler DPI - 180 mcg/inhalation <i>4 inhalations (720 mcg) BID</i> Pulmicort Respules (neb) 1000 mcg/2mL
Beclomethasone	400 mcg BID <i>*FDA approved max: 320 mcg BID</i>	Qvar RediHaler HFA - 80 mcg/inhalation <i>5 inhalations (400 mcg) BID</i> <i>4 inhalations (320 mcg) BID</i>
Ciclesonide	320 mcg BID	Alvesco HFA - 160 mcg/inhalation <i>2 inhalations (320 mcg) BID</i>
Fluticasone furoate	200 mcg daily	Arnuity Ellipta DPI - 200 mcg/inhalation <i>1 inhalation (200 mcg) daily</i>
Fluticasone propionate	880 mcg BID	Flovent FHA - 220 mcg/inhalation <i>4 inhalations (880 mcg) BID</i> Flovent Diskus DPI - 250 mcg/inhalation <i>4 inhalations (1000 mcg) BID</i> <i>3 inhalations (750 mcg) BID</i>
Mometasone	440 mcg BID	Asmanex Twisthaler DPI - 220 mcg/inhalation <i>2 inhalations (440 mcg) BID</i> Asmanex HFA - 200 mcg/inhalation <i>2 inhalations (400 mcg) BID</i>



References:

1. Ramakishnan S, Nicolau DV, Langford B, et al. Inhaled budesonide in the treatment of early COVID-19 (STOIC): a phase 2, open-label, randomized controlled trial. *Lancet Respir Med*, published online April 9, 2021.
2. Yu LM, Bafadhel M, Dorward J, et al. Inhaled budesonide for COVI-19 in people at higher risk of adverse outcomes in the community: interim analysis from the PRINCIPLE trial. PrePrint. doi: <https://doi.org/10.1101/2021.04.10.21254672>
3. The RECOVERY Collaborative Group. Dexamethasone in Hospitalized patients with COVID-19. *NEJM* 2021; 384:693-704

**COVID-19 WORKGROUP FOR THE ACUTE MEDICINE CLINICAL PRACTICE COUNCIL**

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