

# Nebulization in the COVID-19 Era

FOR CLINICIANS



## MYTHS

## BUSTED

**Nebulizers get contaminated by patient secretions.**

Contamination of nebulizer cups by patient secretions has not been demonstrated. Contamination can occur during improper handling or if solutions for nebulization are contaminated.



**Nebulizers increase dispersion of bioaerosols from infectious patients.**

Nebulizers have fugitive emissions but have not been shown to increase dispersion of bioaerosols from infectious patients. Fugitive emissions from nebulizers could be greatly reduced by use of an expiratory filter, by using vibrating mesh nebulizers instead of jet nebulizers, or by using breath-actuated nebulizers.



**Nebulizers increase infection among bedside health care workers.**

Infection of health care workers occurred early in the SARS-CoV-1 epidemic and SARS-CoV-2 pandemic when the infection was not recognized and health care workers were not wearing adequate personal protective equipment (PPE). When proper PPE has been used, health care workers have not been infected. Prolonged exposure and poor infection control measures or compliance may also contribute to nosocomial transmission.



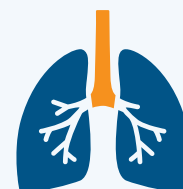
**Nebulizers should not be used in patients with COVID-19.**

Neither CDC nor WHO advises against use of nebulizers in patients with COVID-19. Appropriate precautions (including rinsing, air drying, washing, or sterilization) between treatments and use in areas with good ventilation should be employed when nebulizers are used in patients with COVID-19.



**Metered-dose inhalers, dry-powder inhalers, and soft-mist inhalers could replace nebulizers in all clinical scenarios, and nebulizers should not be used for inhalation therapy during the pandemic.**

Many formulations are not available in other devices, and patients who are dyspneic are unable to coordinate breathing with inhalers or may be too weak to use them effectively. Avoiding use of nebulizers altogether could potentially lead to increased hospitalizations and need for invasive mechanical ventilation, itself an aerosol-generating procedure that puts health care workers at increased risk.



To learn more, go to [chestfoundation.org/copd](https://chestfoundation.org/copd)