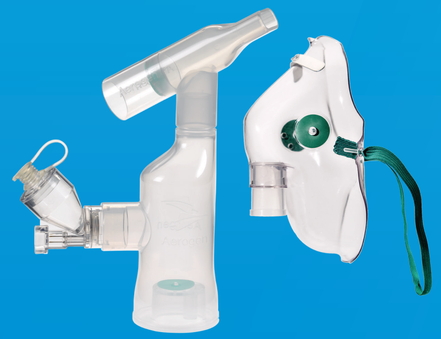
Consider Aerogen as your aerosol drug delivery solution for the ICU

Aerogen® Solo

- Quick and easy to set up[1]
- Refill medication cup without opening the circuit[1]
- Virtually silent[1,14]
- Single patient use[1]
- 28 days intermittent or 7 days continuous use[1]
- No added flow required[1]



Aerogen® Ultra[§§]

- Oxygen port enables optional delivery of oxygen[19]
- An ergonomic, valved mouthpiece controls the flow of air through the chamber to facilitate aerosol drug delivery[19]
- Innovative chamber design provides an aerosol reservoir intended for optimal drug delivery[19]
- Extended mouthpiece[¶¶] to easily add bacterial or viral filter[19]

*Aerogen can be used across multiple modalities for ventilated and non-ventilated patients. †Studies by Joyce et al and McGrath et al were performed in in-vitro models of mechanical ventilation and self-ventilation, respectively; studies by Hamois et al and Li et al were self-ventilation and high-flow studies, respectively, performed in healthy subjects. ‡Use of Aerogen with tracheostomy is not approved in the United States. §Study performed in healthy subjects compared to a jet nebuliser. ¶Study performed in stable subjects with moderate-to-severe COPD compared to jet nebuliser. #Survey of worldwide clinical practice of HF and concomitant aerosol therapy in the adult ICU setting. **When placed 15 cm from the Y-Piece in a heated setting; in-vitro model. ††Study performed in healthy subjects. ‡‡In-vitro model. §§Adult or paediatric masks are not available in all markets. Refer to the relevant instruction manual for your region to determine availability. ¶¶The Aerogen Ultra with an extended mouthpiece is only available in selected regions. Refer to the relevant instruction manual for your region to determine availability.

HF, high-flow; IMV, invasive mechanical ventilation; NIV, non-invasive ventilation; SV, self-ventilating.

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GL-2431-EN

Aerogen®

Aerogen®

Supporting aerosol drug delivery during de-escalation/weaning

from invasive mechanical ventilation*[1]

*Aerogen can be used across multiple modalities for ventilated and non-ventilated patients.[1]

Discover Better

Weaning is an important component of care for the invasively mechanically ventilated patient[2]

Weaning is the process of liberating a patient from ventilator support and enabling them to assume a greater proportion of their own ventilation.[2]

Patients should be weaned from IMV as soon as the cause that led to IMV has improved, they meet the necessary clinical criteria, and they can self-ventilate unassisted.[2-4]

How do you administer aerosolised medication to patients during the weaning process?

Weaning can be challenging, and may be prolonged[5]

Of the 4523 patients who had a weaning attempt in an international, multicentre, prospective, observational cohort study done in 481 intensive care units in 50 countries:[5]

5 days
was the median time to first weaning attempt after tracheal intubation

65% of patients
were weaned within ≤**1 day** of the first weaning attempt

10% of patients
had an intermediate weaning process of **2–6 days**

10% of patients
had a prolonged weaning process of ≥**7 days**

16% of patients
experienced weaning failure

Patients may require **non-invasive ventilation and/or high-flow** to support the weaning process.[2,6]

Aerogen can support aerosol drug delivery throughout the weaning process

Aerogen Solo is intended for the aerosolisation of physician-prescribed medications for inhalation, which are approved for use with a general purpose nebuliser.[1]

With Aerogen, one system can be used throughout a patient's respiratory journey (IMV, non-invasive ventilation [NIV], high-flow [HF], self-ventilating [SV]),[1] supporting continuity of care during the weaning process.

THE WEANING PROCESS ▶

Patient admitted

Physician suspects patient can be weaned[7]

- Improvement of the underlying disease
- Adequate gas exchange
- Stable haemodynamics
- Correct management of secretions
- No metabolic and/or electrolytic disturbances

Assess readiness to wean

Treatment of acute respiratory failure (ARF)

Invasive mechanical ventilation

Aerogen is a closed-circuit aerosol drug delivery system[1]

- Aerogen is a closed-circuit aerosol drug delivery system,[1] which can help mitigate the release of fugitive aerosols during nebulisation†[8-11]
- Eliminates the need to open the circuit when administering medication[1,8]
- Suitable for use in IMV tracheostomy patients[11]

Spontaneous breathing trial (SBT)

Via low pressure support ventilation (5 to 10 cm H_2O) or T-piece and supplemental oxygen

or direct extubation

or SBT on tracheostomy[5,15]

Extubation

Extubation attempted if patient passes SBT – patient monitored for 48 hours post extubation[4,7]

Non-invasive ventilation

Aerogen optimises aerosol drug delivery during NIV§[12,¶13]

- Aerogen Solo can be used in-line during NIV[1]
- The Aerogen Solo can rotate within the T-piece allowing various patient positions[1]
- Virtually silent drug delivery,[1,14] keeping a calm environment for your patients

NIV is used as:[2]

1. An alternative weaning modality in patients who are intolerant of the initial SBT
2. A treatment option for extubated patients who develop acute respiratory failure within 48 hours of extubation
3. A prophylactic measure for patients at high risk of reintubation

Re-intubation if patients develop ARF or are unable to self-ventilate for a sustained period[7]

NIV and/or HF provided, where required[7]

High-flow

With Aerogen, integrated aerosol drug delivery with HF is possible[1]

- Aerogen fits in-line with no added flow and no interruption of therapy during administration of medication[1]
- With Aerogen, the circuit can be maintained during aerosol therapy[1] unlike conventional nebulisation methods that require interruption of high-flow to use a facemask or mouthpiece#[16]

In patients at high risk of extubation failure, the use of high-flow with non-invasive ventilation after extubation has been shown to significantly decrease the risk of reintubation compared with high-flow alone.[6]

Self-ventilating

Aerogen provides effective medication delivery during self-ventilation[17,18]

- The Aerogen Ultra facilitates intermittent and continuous nebulisation with optional supply of supplemental oxygen[19]
- Compatible with all standard aerosol/valved face masks,[19] to meet varied patient needs
- The Aerogen Solo is suitable for use in self-ventilating tracheostomy patients[11]
- Portable, to facilitate aerosol medication delivery throughout the hospital[1]

Patient discharged

Aerogen facilitates effective medication delivery across multiple respiratory modalities[12,13,17,20-23]

In studies, when compared with a jet nebuliser:

~4x

more drug deposition with Aerogen during IMV,**[20,21] NIV,§[12,13] and HF††[22]

~6x

more drug deposition with Aerogen when self-ventilating†††[17]

In studies, when compared with a pMDI:

~8x

higher drug delivery with Aerogen during IMV‡‡[24]