

FEBRUARY NEWSLETTER

Saskatchewan Respiratory Therapy Education Committee



COPD Ventilator Strategies

THANK YOU FOR SUBSCRIBING TO OUR FIRST NEWSLETTER. AS REQUESTED THIS MONTH IS FOCUSING ON COPD VENTILATOR STRATEGIES.

- Invasive mechanical ventilation can be challenging in patients with COPD due to reduced elastic recoil and expiratory flow limitation
- The initial goal of invasive mechanical ventilation is to minimize auto-PEEP and maintain adequate minute ventilation (MV) while allowing for permissive hypercapnia
- Attempts to increase MV by increasing the respiratory rate will only further exacerbate dynamic hyperinflation
- Auto-PEEP increases the risk of barotrauma, hemodynamic instability and ineffective triggering
- Set external PEEP at 70-80% of intrinsic PEEP. Setting extrinsic PEEP greater than 85% of intrinsic PEEP can cause further hyperinflation, compromise hemodynamics, and impair gas exchange
- When titrating PEEP it is imperative to also note plateau pressure. If plateau pressure increases proportionally with the increase in PEEP this can be a sign of over distension
- Recommended vent settings: no mode has shown to be superior over the other, tidal volume 6-8 ml/Kg, respiratory rate 12/min, inspiratory flow 60-90 l/min, and I:E of 1:4 for prolonged exhalation

"YOU MAKE MY HEART RACE"

VENTOLIN: YOU *BETA* DO

HAPPY VALENTINE'S DAY!

SOCIAL MEDIA HIGHLIGHT

@MELODYBISHOP_RT

**STAY TUNED FOR MORE
INFORMATION ABOUT OUR
WEBINAR ON MARCH 20TH AT
1PM CST WITH
MELODY BISHOP, RRT/CCAA**

Educational Resources

COPD VENTILATOR STRATEGIES

ARTICLE RESOURCES

- [Jubran A. Setting positive end-expiratory pressure in the severely obstructive patient. Curr Opin Crit Care. 2024;30\(1\):89-96.](#)
- [MacIntyre NR. Acute Hypercapnic Respiratory Failure in COPD. Respir Care. 2023;68\(7\):973-82.](#)
- [Scaramuzza G, Ottaviani I, Volta CA, et al. Mechanical ventilation and COPD: from pathophysiology to ventilatory management. Minerva Med. 2022;113\(3\):460-70.](#)
- [Demoule A, Brochard L, Dres M, et al. How to ventilate obstructive and asthmatic patients. Intensive Care Med. 2020;46\(12\):2436-49.](#)

If you're having difficulty accessing the articles SHA Library Services is a great resource available to all SHA employees. Feel free to contact them to setup a library card number to obtain off site access.

SUMMARIES & GUIDELINES

[Mora Carpio A, Mora J. Ventilator Management in StatPearls \[Internet\]. Treasure Island \(FL\): StatPearls Publishing; 2023 Mar 27.](#)

This is a comprehensive document, special focus on the 'Dynamic Hyperinflation or Auto-PEEP' section and 'Special Circumstances; COPD'

VIDEO RESOURCES

- [Youtube video from the American Thoracic Society](#)
- [Youtube video from Respiratory Therapy Zone](#)
- [Melody Bishop on Abnormal Waveforms](#)
- [Melody Bishop on Identifying Causes of Auto-PEEP](#)
- [Melody Bishop on Fixing Auto-PEEP](#)

PODCASTS

[Emergency Medicine Cases: COPD and Pneumonia](#)

WEBINARS

SaskRTEC will be hosting a webinar on March 20th at 1PM CST on the topic of COPD Ventilator Strategies. Stay tuned for more information. Attendance certificates will be distributed to participants following the webinar.



Reminder to check out our Google Calendar linked under the 'resource' tab on our website for upcoming webinars and educational opportunities this month

As we navigate being a new committee we would love to hear any feedback you may have

Please feel free to contact the Saskatchewan Respiratory Therapy Education Committee at saskrtec@gmail.com or reach out to our committee members directly