

# 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.](#)
- [Scaramuzzo 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](mailto:saskrtec@gmail.com) or reach out to our committee members directly**