Liberation from mechanical ventilation in critically ill adults *Who Have Been Mechanically Ventilated for >24 Hours*
ATS and CHEST clinical practice guideline

ATS/CHEST recommendations

Question 1:

Should the Spontaneous Breathing Trial (SBT) Be Conducted with Or without Inspiratory Pressure Augmentation?

- Initial SBT to be conducted with inspiratory pressure augmentation (5-8 cm H2O) rather than without (T piece or CPAP). (Conditional recommendation, Moderate certainty in the evidence)

Question 2:

Do Protocols Attempting to Minimize Sedation Compared to Approaches That do not Attempt to Minimize Sedation Impact Duration of Ventilation, Duration of ICU Stay, and Short-Term Mortality (60 Days)?

- Protocols attempting to minimize sedation. (Conditional recommendation, Low certainty in the evidence).

Question 3:

In High-Risk Patients Who Have Passed A Spontaneous Breathing Trial (SBT), Does Extubation to Preventive Noninvasive Ventilation Compared to no Noninvasive Ventilation Have a Favorable Effect on Duration of Ventilation, Ventilator-Free Days, Extubation Success (Liberation > 48 Hours), Duration of Intensive Care Unit (ICU) Stay, Short-Term Mortality (60 Days), or Long-Term Mortality?

- For patients at high risk for extubation failure who have passed a spontaneous breathing trial, we recommend extubation to preventative NIV (Strong recommendation, moderate certainty in the evidence).

Question 4:

Should Patients Be Subjected to Protocolized Rehabilitation Directed toward Early Mobilization or no Protocolized Attempts at Early Mobilization?

- Protocolized rehabilitation directed toward early mobilization (Conditional recommendation, low certainty in the evidence).

Question 5:

Should Patients Be Managed with a Ventilator Liberation Protocol or no Protocol?

- Managing patients with a ventilator liberation protocol (Conditional recommendation, low certainty in the evidence).

Question 6:

Should a Cuff Leak Test (CLT) Be Performed prior to Extubation of Mechanically Ventilated Adults? Should Systemic Steroids Be Administered to Adults Who Fail a CLT prior to Extubation?

- Performing a CLT in mechanically ventilated adults who meet extubation criteria and are deemed high risk for PES (Conditional recommendation, very low certainty in the evidence).
- For adults who have failed a cuff leak test but are otherwise ready for extubation, suggest administering systemic steroids at least 4 hours before extubation (Conditional recommendation, moderate certainty in the evidence).

Remarks

Risk factors for PES include: traumatic intubation, intubation > 6 days, large endotracheal tube, female sex, and reintubation after unplanned extubation. A repeat cuff leak test is not required following the administration of systemic steroids.