

Principle of Mechanical Ventilation Liberation

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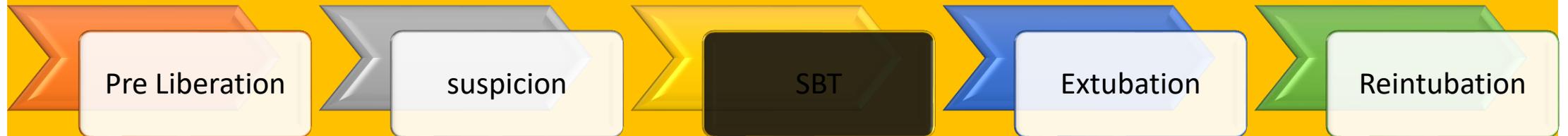
Discontinuing MV

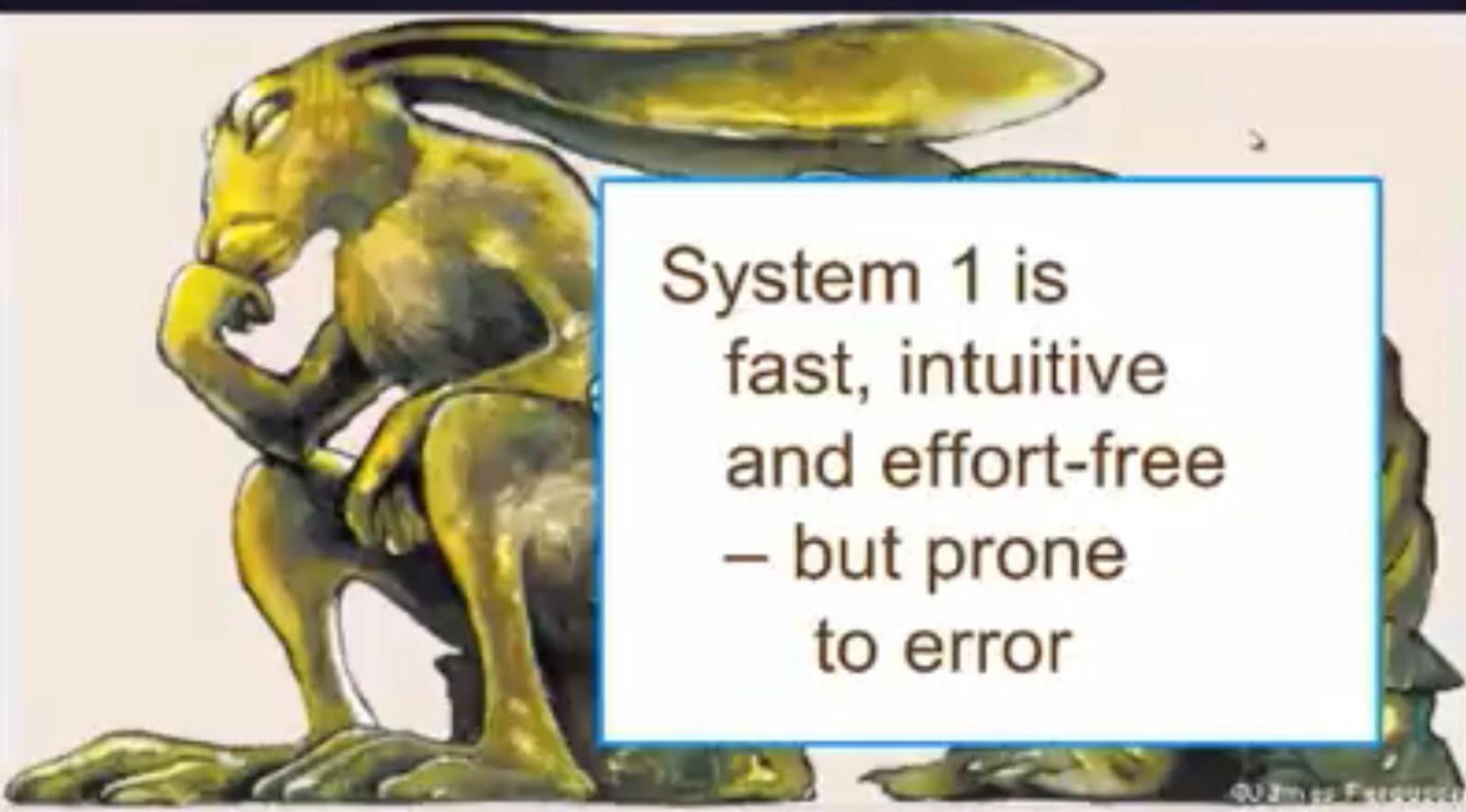
Weaning MV

Liberation MV

Withdrawn MV

MV liberation stages





System 1 is
fast, intuitive
and effort-free
– but prone
to error

System 2 does the
slow work of
forming judgments
based on
deductive reasoning



MV liberation stages



Spontaneous breathing trial (SBT)

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Article Tools 

Comparison of three methods of gradual withdrawal from ventilatory support during weaning from mechanical ventilation.

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L Brochard , A Rauss , S Benito , G Conti , J Mancebo , N Rekik , A Gasparetto , and F Lemaire

  1,567  631

<https://doi.org/10.1164/ajrccm.150.4.7921460>

PubMed: [7921460](https://pubmed.ncbi.nlm.nih.gov/7921460/)

Abstract

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Abstract

Several modalities of ventilatory support have been proposed to gradually withdraw patients from mechanical ventilation, but their respective effects on the outcome of weaning from mechanical ventilation are not known. We conducted a randomized trial in three intensive care units in mechanically ventilated patients who met standard weaning criteria. Those who could not sustain 2 h of spontaneous breathing were randomly assigned to be weaned with T-piece trials, with synchronized intermittent mandatory ventilation (SIMV), or with pressure



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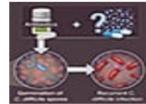
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ORIGINAL ARTICLE

A Comparison of Four Methods of Weaning Patients from Mechanical Ventilation

Andrés Esteban, M.D., Ph.D., Fernando Frutos, M.D., Martin J. Tobin, M.D., Inmaculada Alía, M.D., José F. Solsona, M.D., Valverdú Valverdu, M.D., Rafael Fernández, M.D., Miguel A. de la Cal, M.D., Salvador Benito, M.D., Ph.D., Roser Tomás, M.D., Demetrio Carriedo, M.D., Santiago Macías, M.D., *et al.*, for the Spanish Lung Failure Collaborative Group*



Article **Figures/Media**



23 References 862 Citing Articles



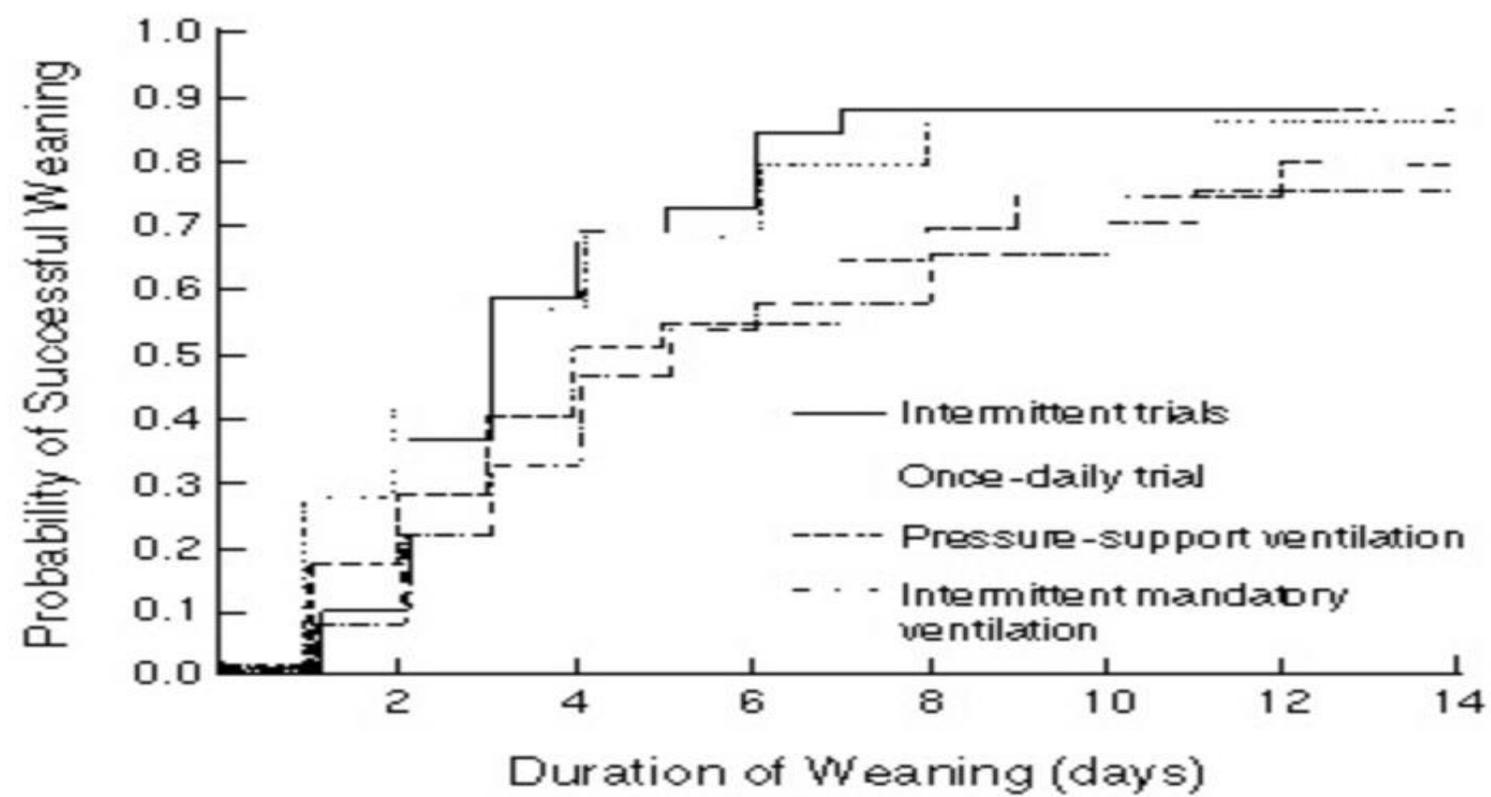
Abstract

February 9, 1995

N Engl J Med 1995; 332:345-350

DOI: 10.1056/NEJM199502093320601

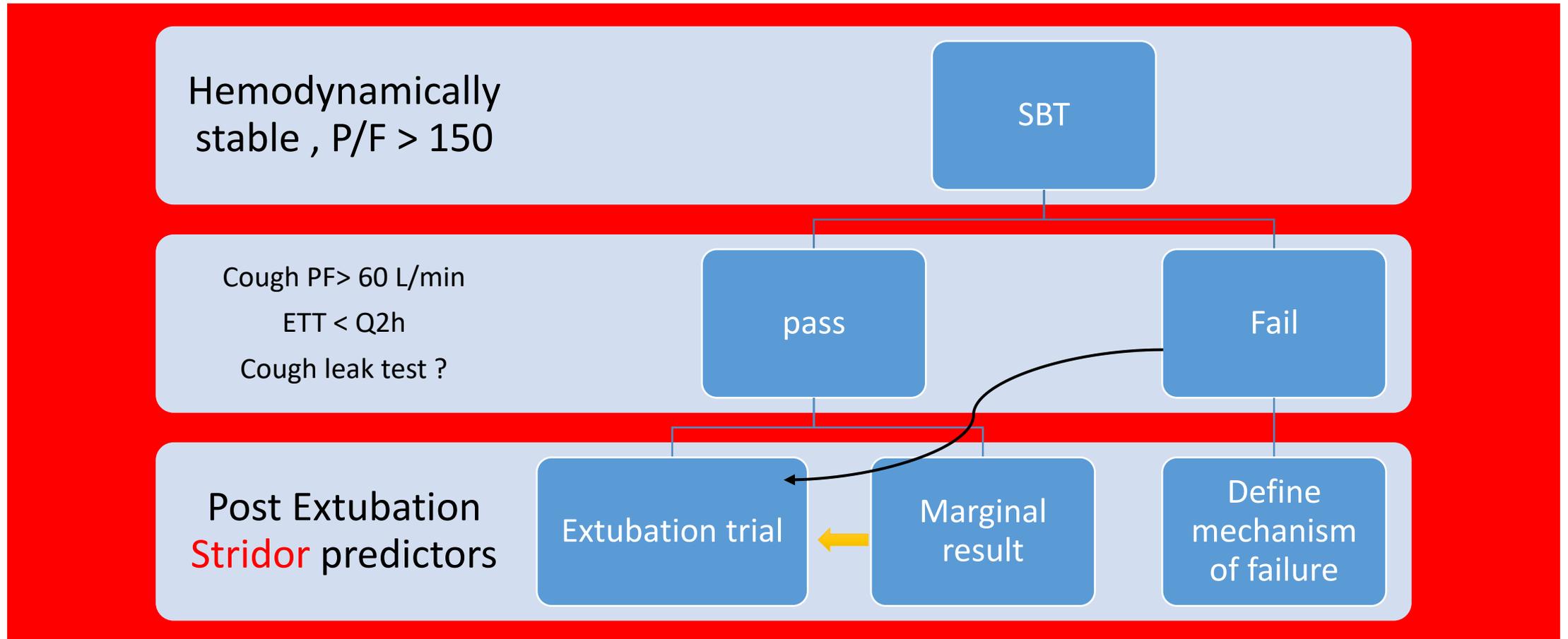




Daily **SBT** screening

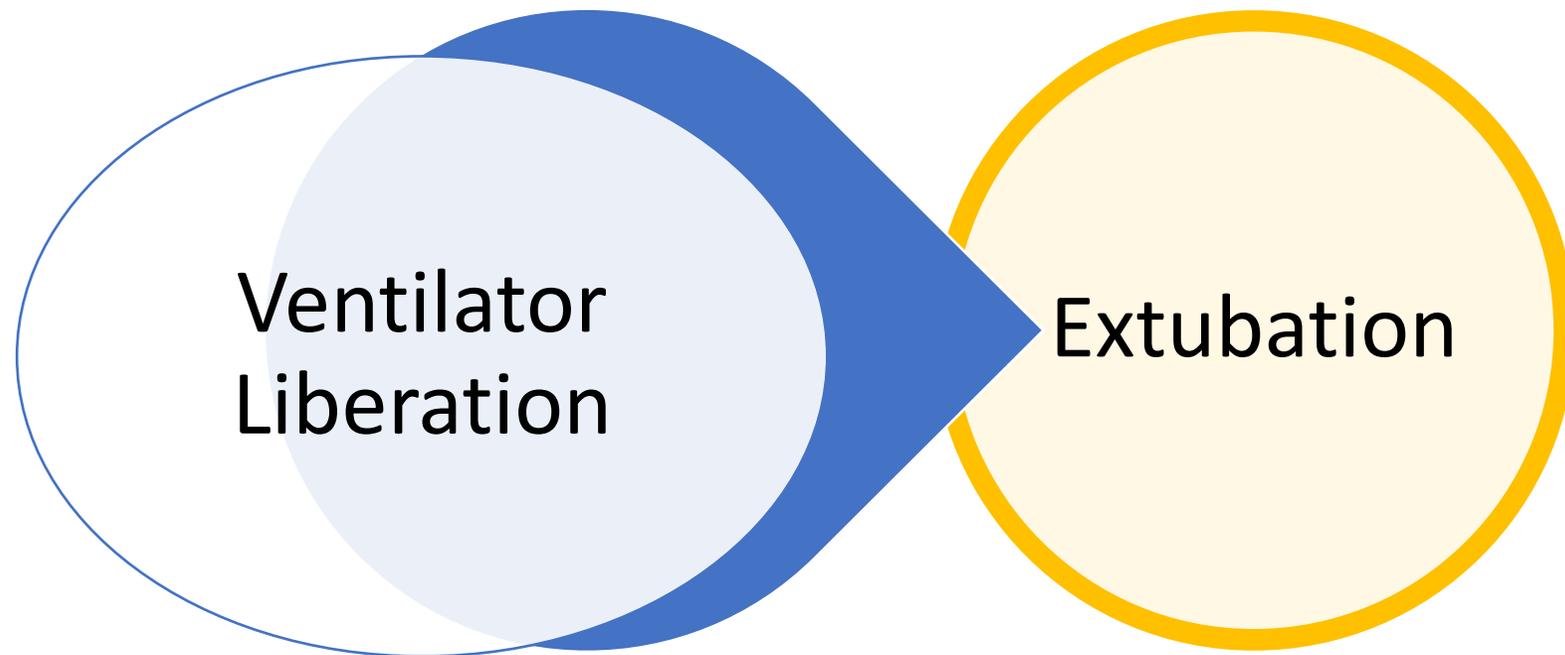


A simple bedside algorithm for MV liberation



MV liberation stages





ATS/ ACCP guide for MV liberation

PICO Question

- **Question 1** : In Acutely Hospitalized Patients Ventilated More Than 24 Hours, Should the Spontaneous Breathing Trial (SBT) Be Conducted with Or without Inspiratory Pressure Augmentation?

- **Question 2:** In Acutely Hospitalized Patients Ventilated for More Than 24 Hours, 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)?

- **Question 3:** In High-Risk Patients Receiving Mechanical Ventilation for More Than 24 Hours 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?

- **Question 4:** Should Acutely Hospitalized Adults Who Have Been Mechanically Ventilated for >24 Hours Be Subjected to Protocolized Rehabilitation Directed toward Early Mobilization or no Protocolized Attempts at Early Mobilization?

- **Question 5:** Should Acutely Hospitalized Adults Who Have Been Mechanically Ventilated for >24 Hours Be Managed with a Ventilator Liberation Protocol or no Protocol?

- **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?