

Optimal PEEP strategy



What strategies can I use to treat patients with ARDS?

You can use volume control mode with an optimal PEEP strategy to manage patients with ARDS.

In this strategy, you adjust PEEP up and down to find the PEEP at which the lung is the most compliant. To determine when the lung is most compliant you can monitor PaO₂ or calculate the static compliance.



PaO₂

Static compliance

PEEP that produces the highest PaO₂ =
Optimal PEEP

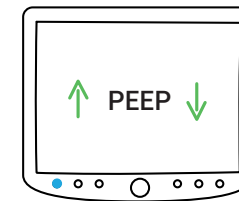
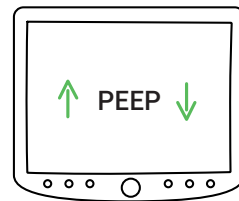
PEEP that produces the highest static compliance =
Optimal PEEP

Volume control mode

Low tidal volume strategy

High respiratory rate strategy

Optimal PEEP strategy



$$\text{Static compliance} = \frac{\text{Tidal volume}}{\text{Plateau pressure}}$$

* Use inspiratory hold.

Lots of needle sticks (ABG)
Highest PaO₂ = best oxygenation
(not necessarily best lung compliance)

Easier to ensure no negative hemodynamic effects of a high PEEP.



Still a debated topic... and so you might want to switch modes!

Volume control → ???

