# Did You Know?

Low tidal volume ventilation (LTVV) is one of the interventions specifically designed to prevent ventilator-associated conditions (VAC).

For patients without acute respiratory distress syndrome (ARDS), target the recommended tidal volume of 6–8 mL/kg predicted body weight (PBW).

For patients with ARDS, the recommended tidal volume target is between 4–6 mL/kg PBW.

Emerging evidence links protective tidal ventilation to decreased incidence of acute lung injury (ALI) and ARDS, as well as decreased time on the ventilator.

Use at least 5 cm H2O positive end expiratory pressure (PEEP).

## Why wait? Initiate LTVV on all patients to prevent ALI and ARDS. Prevent the lung damage that can occur within a few hours of mechanical ventilation at high tidal volume.

# What the Evidence Says

* Low tidal volume ventilation could shorten the duration of mechanical ventilation in general; LTVV may therefore be an effective strategy to lower ventilator-associated events rates.1
* In patients with healthy lungs, low tidal volume ventilation, moderate PEEP, and repeated recruitment maneuvers can markedly help improve postoperative outcome in patients undergoing abdominal surgery.2
* Low tidal volume ventilation can benefit patients with or without ARDS.3
* Low tidal volume can reduce ARDS progression in patients without ARDS.4
* Mechanical ventilation with higher tidal volumes contributes to the development of lung injury in patients without ALI at the onset of mechanical ventilation.5
* Ventilation with low tidal volumes is associated with a lower risk of development of pulmonary complications in patients without ARDS.6
* Strong consideration should be given to limiting large tidal volume, not only in patients with established acute lung injury but also in patients at risk for ALI.7
* The prophylactic protective ventilation strategy can be recommended for almost all mechanically ventilated patients who do not yet have ARDS and particularly those with risk factors to prevent progressive development of lung injury.8
* The use of lower tidal volume should be considered in all mechanically ventilated patients regardless of ALI.9

# References

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