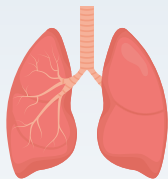


# In Patients With ARDS, Does Airway Pressure Release Ventilation Have Benefits Compared With Low Tidal Volume Ventilation?

## STUDY DESIGN

Single-center randomized controlled trial of 40 patients with moderate-to-severe ARDS

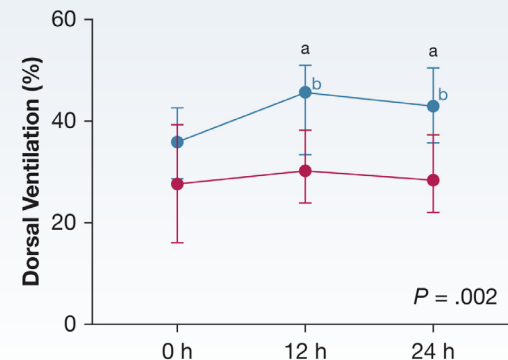
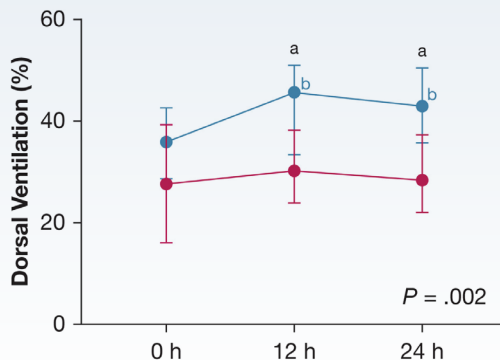


Compared lung ventilation and ventilation/perfusion ( $\dot{V}/\dot{Q}$ ) homogeneity at 0, 12, and 24 hours via electrical impedance tomography

## RESULTS

Patients with airway pressure release ventilation had:

Increased dorsal ventilation	Decreased dorsal shunt
Increased dorsal $\dot{V}/\dot{Q}$ matching	Lower ventilation distribution heterogeneity
Higher $\text{PaO}_2/\text{FiO}_2$ ratio	Higher respiratory system compliance
Lower $\text{CO}_2$	



Dorsal  $\dot{V}/\dot{Q}$  at 0, 12, and 24 hours for low tidal volume (LTV) and airway pressure release ventilation (APRV)

In ventilated patients with ARDS, compared with low tidal volume, airway pressure release ventilation recruited dorsal lung, decreased dorsal shunt, and improved dorsal  $\dot{V}/\dot{Q}$  matching, which may contribute to higher blood oxygenation and compliance.