



## Noninvasive Continuous Positive Airway Pressure Is a Lung- and Diaphragm-protective Approach in Self-inflicted Lung Injury

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To the Editor:

Strenuous spontaneous effort can promote lung and diaphragmatic injury in acute lung injury (ALI), phenomena known as “patient self-inflicted lung injury” (P-SILI) and load-induced diaphragmatic injury, respectively (1–3). Although continuous positive airway pressure (CPAP) can relieve hypoxemia and work of breathing (4), it is controversial if it prevents lung and diaphragmatic injury (5, 6). We aimed to investigate the effects of noninvasive CPAP on lung and diaphragmatic injury in an ALI model compared with unassisted animals.

### Methods

The study protocol was approved by the Universidad Andrés Bello Bioethics Committee (approvals 05/2016 and 020/2017). Twenty-eight Sprague-Dawley rats weighing  $270 \pm 4$  g were randomized to three groups: 1) an unassisted group, representing ALI followed by unsupported spontaneous breathing ( $n = 10$ ); 2) a CPAP group, representing ALI followed by CPAP 6 cm H<sub>2</sub>O

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The datasets used and analyzed during the current study are available from the corresponding author on reasonable request.

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the flu cohort. This aligns with previous studies showing a strong association between age, preexisting comorbidities, and postcritical illness outcomes (9). Age also alters the host response to influenza (10). Differences persisted after adjustment for these factors. Because of higher mortality, fewer patients with influenza were at home at 1 year. HFDs were, however, similar with the two viruses. To conclude, long-term outcomes among ICU survivors with influenza were similar or worse than outcomes among those with COVID. ■

**Author disclosures** are available with the text of this letter at [www.atsjournals.org](http://www.atsjournals.org).

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