

Ventilator-free days comparable with lower, higher SpO₂ target

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The number of ventilator-free days does not differ for critically ill adults

receiving mechanical ventilation with a lower, intermediate, or higher target for oxygen saturation, according to a study published online Oct. 24 in the *New England Journal of Medicine*.

Matthew W. Semler, M.D., from Vanderbilt University Medical Center in Nashville, Tennessee, and colleagues randomly assigned adults who were receiving [mechanical ventilation](#) to a lower target for [oxygen saturation](#) as measured by [pulse oximetry](#) (SpO₂; 90 percent; goal range, 88 to 92 percent), an intermediate target (94 percent; goal range, 92 to 96 percent), or a higher target (98 percent; goal range, 96 to 100 percent) in a trial conducted at an academic center. The primary analysis included 2,541 patients, and the primary outcome was the number of days alive and free of mechanical ventilation through day 28.

The researchers found that the median number of ventilator-free days was 20, 21, and 21 in the lower-, intermediate-, and higher-target groups, respectively. In-hospital death by day 28 occurred in 34.8, 34.0, and 33.2 percent of patients in the lower-, intermediate-, and higher-target groups, respectively. The three groups had similar incidences of cardiac arrest, arrhythmia, myocardial infarction, stroke, and pneumothorax.

"Limiting exposure to [supplemental oxygen](#) by targeting SpO₂ values as low as 90 percent does not prevent death or expedite liberation from mechanical ventilation," the authors write.

More information: Matthew W. Semler et al, Oxygen-Saturation Targets for Critically Ill Adults Receiving Mechanical Ventilation, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMoa2208415](https://doi.org/10.1056/NEJMoa2208415)

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