

Poor vitamin D status linked to longer respiratory support in ICU patients, study finds

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Vitamin D status may influence the duration of respiratory support needed for surgical intensive care patients, according to a new cohort study conducted by researchers at Boston's Massachusetts General Hospital and Harvard Medical School.

The study demonstrated that plasma 25-hydroxyvitamin D (25OHD) levels on admission to the surgical ICU were inversely associated with the need for mechanical ventilation in critically ill surgical patients. The study's results are published today in the OnlineFirst version of the *Journal of Parenteral and Enteral Nutrition (JPEN)*, the research journal of the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.),

It is well known that an optimized [vitamin D](#) status is important for ideal musculoskeletal health, regulation of innate and adaptive immunity, and expression of endogenous antimicrobial peptides. Therefore, the researchers hypothesized that low 25OHD levels likely contributed to respiratory muscle weakness, systemic inflammation, and infections, which all affect the duration of respiratory support. However, because of the observational nature of this study and other limitations, these findings must be interpreted cautiously.

The researchers suggest further studies be conducted to validate their findings, to assess potential benefits of aggressive vitamin D

supplementation in critical illness, and to identify how vitamin D may reduce the need for respiratory support in surgical ICU [patients](#).

Provided by American Society for Parenteral and Enteral Nutrition

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