

Restricting calories early on does not help acute lung injury patients on ventilators

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Acute lung injury patients on ventilators who require a feeding tube have a similar number of ventilator-free hospital days and similar mortality rates if they receive a low-calorie feeding program initially followed by a full-calorie program compared to a full-calorie program right away. These results are part of a new clinical study funded by the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health.

The patients in the low-calorie, or delayed, feeding program received about 400 [calories per day](#) for the first six days before advancing to a full feeding program. The patients enrolled in the full feeding program were advanced as quickly as they could tolerate to a full daily calorie and protein goal based on weight (averaging about 1,300 calories per day).

"The appropriate feeding protocol for mechanically ventilated patients is an important practical question that has been debated in intensive care units for decades," said Susan B. Shurin, M.D., acting director of the NHLBI. "Nutrition is important for healing, but feeding may lead to bowel complications in acutely ill patients. This study suggests that in cases of [acute lung injury](#), physicians can take into account the patient's tolerance to feeding in reaching caloric goals."

Results of this study will be presented Feb. 5 at the Society of [Critical Care Medicine](#) Congress in Houston, Tex. The results will also appear online in the [Journal of the American Medical Association](#).

Previous clinical studies that enrolled small numbers of patients have produced conflicting results on the amount of feeding to provide [ventilated patients](#). Some studies indicate that full feeding as soon as possible can improve patient health and their outcomes. Other findings, however, have suggested that starting out with lower calories could improve patient recovery by reducing [gastrointestinal problems](#) such as vomiting or constipation.

This new study enrolled 1,000 mechanically ventilated adult patients with acute lung injury who required a feeding tube. The primary clinical outcomes measured were the number of days alive and off the ventilator each patient had in the first 28 days, as well as overall mortality after 60 days.

Patients on the delayed feeding program had an average of 14.9 ventilator-free days and 23.2 percent mortality. Patients on the full feeding program had an average of 15.0 ventilator-free days and 22.2 percent mortality. The researchers noted that patients in the full feeding group showed slightly higher rates of vomiting and constipation, although this was a secondary outcome of the study.

The researchers noted that since these findings were in adult patients ventilated for acute lung injury from largely medical causes, such as pneumonia or sepsis, extrapolation to surgical patients or children must be done cautiously.

The study was carried out at 44 hospitals and medical centers across the country as part of the NHLBI Acute Respiratory Distress Syndrome Clinical Research Network.

Provided by National Institutes of Health

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