

Antonio Pesenti, M.D.
University of Milan
Milan, Italy
and
Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico Milan
Milan, Italy

Laurent Brochard, M.D.*
University of Toronto
Toronto, Ontario, Canada
and
St. Michael's Hospital
Toronto, Ontario, Canada

Daniel Brodie, M.D.†
Columbia University College of Physicians and Surgeons
New York, New York
and
New York-Presbyterian/Columbia University Irving Medical Center
New York, New York

*L.B. is Deputy Editor of *AJRCCM*. His participation complies with American Thoracic Society requirements for recusal from review and decisions for authored works.

†Corresponding author (e-mail: hdb5@cumc.columbia.edu).

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Too Many Calories for All?

To the Editor:

In a recent paper published in the *Journal*, Deane and colleagues (1) explored the effects of two different strategies of caloric intake (70% vs. 100%) in critically ill patients undergoing invasive mechanical ventilation. The main hypothesis was that optimal energy delivery, or approximately 100% of recommended caloric intake, impacted long-term mortality, quality of life, returning to work, and disability. The authors stated that no approach was used to estimate individual caloric needs. Instead, study participants were randomly assigned to an energy-dense (1.5 kcal/ml) or to a regular (1.0 kcal/ml) enteral formula with similar protein contents and then received an

infusion at a rate of 1 ml/kg/h on the basis of calculated ideal body weight. Accordingly, the mean total energy provided for the intervention and control groups resulted in, respectively, 30.2 and 21.9 kcal/kg of ideal body weight/d or 24.0 and 17.4 kcal/kg of actual body weight/d. Because a sizeable proportion of participants (30%) had obesity and the mean body mass index was 29.2 kg/m², we are concerned that the arms represented overfeeding rather than standard nutrition. Energy supply exceeded recommendations of current nutritional guidelines (2, 3) in the so-called 100%-calorie-requirements group, particularly considering the short median duration of the enteral trial, which was 6 days.

From our standpoint, the aim of a modest goal for caloric intake during the acute phase of critical illness is no longer debatable (2–4). An energy target of at least 70% of the estimated requirements still confers a survival advantage (5), and overfeeding is notably detrimental in critically ill individuals with obesity (2). So, we disagree that control individuals in the aforementioned trial (1) had been truly underfed. Moreover, a smaller but well-powered study (6) has already addressed physical quality of life at 6 months after ICU admission by comparing two different strategies of energy provision, in which the control group received 64% of the calories administered to the intervention group, and found no superiority for the latter. Therefore, we believe that future trials should investigate whether adequate and individually tailored nutritional management beyond the 5–7 days of an ICU stay leads to better functional outcomes. ■

Author disclosures are available with the text of this letter at www.atsjournals.org.

Ana Carolina Peçanha Antonio, M.D., Ph.D.*
Hospital de Clínicas de Porto Alegre
Porto Alegre, Brazil

Sergio Henrique Loss, M.D., M.Sc.
Hospital de Clínicas de Porto Alegre
Porto Alegre, Brazil
and
Universidade Federal do Rio Grande do Sul
Porto Alegre, Brazil

Luciana Verçoza Viana, M.D., Ph.D., M.Sc.
Universidade Federal do Rio Grande do Sul
Porto Alegre, Brazil

ORCID ID: 0000-0001-6146-1247 (A.C.P.A.).

*Corresponding author (e-mail: ana.carolina.antonio@gmail.com).

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Originally Published in Press as DOI: 10.1164/rccm.202004-1496LE on June 9, 2020