

Comment in:

- [J Am Diet Assoc. 1993 Dec;93\(12\):1381.](#)
- [J Am Diet Assoc. 1993 Sep;93\(9\):976.](#)

Changes in resting energy expenditure and body composition in anorexia nervosa patients during refeeding.

Krahn DD, Rock C, Dechert RE, Nairn KK, Hasse SA.

Department of Psychiatry's Eating Disorders Program, University of Michigan, Ann Arbor 48109-2029.

Accurate prediction of the energy level necessary to promote weight restoration in patients with anorexia nervosa would be clinically useful. Resting energy expenditure (REE), respiratory quotient, and body composition were measured in 10 nonmedicated women with anorexia nervosa during a vigorous refeeding protocol. REE was measured three times per week by open-circuit indirect calorimetry after an overnight fast. Subjects ranged in age from 19 to 38 years and weighed 39.9 +/- 4.3 kg (mean +/- standard deviation) at admission. The refeeding protocol was as follows: phase 1, 1,200 kcal/day for 1 week (baseline); phase 2, an increase of 300 kcal/day for 1 week; phase 3, 3,600 kcal/day until target weight was reached; phase 4, 1,800 to 2,800 kcal/day (stabilization). REE was 30.0 +/- 6.4, 33.5 +/- 6.7, 37.3 +/- 6.6 and 34.5 +/- 4.4 kcal/kg body weight during phases 1, 2, 3, and 4, respectively. The Harris-Benedict equation overestimated phase 1 24-hour REE by a mean of 14% and underestimated REE in phases 2, 3, and 4 by a mean of 8%, 24%, and 23%, respectively. Skinfold measurements revealed percent body fat to be 12 +/- 4% at admission and 19 +/- 5% at discharge, with a mean of 48% of the weight gained during refeeding attributable to increased body fat. These findings indicate that refeeding in anorexia nervosa is associated with increased REE, which cannot be explained by increased body mass, and that caloric requirements for weight restoration in patients with anorexia nervosa are best determined by monitoring individual response.