

Indirect calorimetry in the nutritional management of eating disorders.

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The caloric prescription, a key component of the nutritional therapy of anorexia nervosa (AN) and bulimia nervosa (BN), may be empirically prescribed, or based on predicted resting energy expenditure (REE), yet adaptive changes in the metabolic rate may render both methods unreliable. Indirect calorimetry measurement of fasting REE was obtained in 32 patients with AN (n = 21) or BN (n = 11). Predicted REE was calculated according to the Harris-Benedict equation, and empiric caloric prescriptions were made by experienced physicians. In the AN group, mean measured REE was significantly lower than predicted REE (p = .00). The empiric caloric prescription was, as intended, significantly higher than the measured REE, but the two methods correlated significantly (r = .53, p < .05). The predicted REE overestimated caloric needs but was also highly correlated with measured REE (r = .69, p < .001). By regression analysis, measured REE could be calculated from predicted REE as follows: measured REE (Kcal/day) = (1.84 x Harris-Benedict predicted REE) - 1,435. In the BN group, mean measured REE was not significantly different from the empiric caloric prescription (p = .09) but was significantly lower than the Harris-Benedict predicted REE (p = .022). Neither correlated with measured REE in BN. **Therefore, in BN indirect calorimetry is the only reliable method for determining caloric needs. In AN indirect calorimetry remains the preferred method,** but when not available, we recommend the above equation to determine resting energy requirements.

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