

Caloric requirements in total parenteral nutrition.

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Resting energy expenditure (REE) was measured in 100 consecutive total parenteral nutrition (TPN) patients. Only forty-eight percent of the measured REEs were within 90-110% of the predicted Harris-Benedict values. A literature review revealed 191 published guidelines for non-protein caloric requirements of hospitalized TPN patients. These guidelines were appropriately matched and applied to the 100 individual TPN patients. The relationship between the recommended caloric supply and measured caloric expenditure was minimal. The recommendations exceeded measured REE by an average of 1076 +/- 660 kcal/day. These published guidelines were substantially above and below caloric requirements based on measured REE for both fat maintained (130% REE) and fat depleted (150% REE) patients. Following published guidelines rather than standards based on measured REE results in the administration of 6947 excess liters of TPN per year. Improvement in the precision of TPN caloric prescription can be accomplished by using measured REE as a reference base. When published guidelines were compared to prescriptions based on measured REE it was found that published guidelines were inaccurate both overall and individually and a substantial cost savings justifies actual measurement of energy needs.

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