Getting to the Meat of the Matter: Beyond Protein Supplementation in Maintenance Dialysis.

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Abstract Until recently, patients on dialysis with low serum albumin levels were characterized as suffering from protein malnutrition suggesting that the cause of this malady was due to an inadequate intake of protein. In fact, these patients tend to suffer from a wasting syndrome similar to cachexia commonly associated with inflammation in which there is loss of lean body mass and fat mass is underutilized. The term protein energy wasting has been used to characterize this syndrome and suggests that the simple addition of protein supplements to the dietary regimen of hemodialysis patients will not cure this malady. Correction of the underlying inflammatory disorder which drives losses of body protein and fuel reserves is far more important and is the single most effective therapy. Protein supplements which may promote albumin synthesis and synthesis of liver-related proteins tend to increase muscle catabolism. Muscle growth is not fostered by increasing dietary protein above recommended goals for dialysis patients, but can be promoted by the addition of protein of high biological value that is rich in leucine and other essential amino acids in tandem with repetitive exercises. Ultimately, correction of PEW hinges on the diagnosis and treatment of co-morbid conditions in combination with strategies to replenish caloric and protein stores. A supplementary exercise program would allow recovery of lean body mass. Given the multiple co-morbidities that exist in this population, therapy would have to be individualized.

PMID: 19497033 [PubMed - as supplied by publisher]