

Examining the dietary amino acid characteristics of patients on ketogenic therapy

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Ketogenic Therapy (KT) is a high fat, adequate protein, low carbohydrate diet shown to reduce seizures in patients with intractable epilepsy. While KT has been used for decades, the building blocks of the dietary components such as amino acids have not been examined. The usual diet prescription ratio of grams of fat to grams of carbohydrate plus grams of protein assumes that the all protein is the same and has the same effect on the therapy as carbohydrate. To evaluate dietary protein characteristics in patients on KT, data were collected via weekly 24 hour dietary recalls taken from 14 patients on KT. The Minnesota Database (NDS) was used to analyze these recalls. Some of the dietary protein characteristics are listed in the table below.

Amino Acid Parameter		Minimum	Maximum
Ketogenic to Gluconeogenic		0.22	0.35
Branched-chain to Aromatic		1.64	2.12
Essential to Non-Essential		0.66	0.82

The characteristics of dietary amino acids vary among pediatric patients on ketogenic therapy for seizures. Characteristics such as the ratio of ketogenic amino acids to gluconeogenic amino acids may impact the therapy and these potential impacts need to be evaluated.