

## Evaluation of dyslipidemia and diet prescription of patients on ketogenic therapy for seizures

Lauren E. Little<sup>1</sup> and Peggy R. Borum, PhD<sup>1</sup> : <sup>1</sup>University of Florida, Gainesville, FL

Ketogenic therapy (KT) has been shown to be effective against seizures, but requires a fat intake (80-90% of calories) much higher than is recommended by the American Heart Association (AHA). There is conflicting evidence in the literature as to whether or not dyslipidemia is an adverse effect of KT. Currently there are no available feeding options that provide a balanced fatty acid profile similar to what is recommended by the AHA. KT prescription is designated as a ratio of grams of fat to grams of carbohydrate plus protein. 76 patients who had been on KT for at least 1 year were stratified according to fat ratio and no effect of ratio on blood lipids was observed. During therapy, oral fed patients usually receive a diet high in saturated fatty acids (SF) and tube fed patients usually receive a diet high in omega 6 fatty acids (w6). When the patients were stratified between the high SF oral diet and the high w6 tube-fed diet, the following data were obtained using a t-test assuming unequal variances.

<b>Blood Lipids</b>	<b>Oral-fed (n=38)</b>	<b>Tube-fed (n=37)</b>
TG (mg/dL)	174.1 ± 97.9	189.4 ± 142.7
HDL Chol (mg/dL)	52.3 ± 15.1	50.5 ± 13.2
NonHDL Chol (mg/dL)	142.1 ± 46.6	111.9 ± 39.1*
LDL Chol (mg/dL)	106.9 ± 47.5	76.5 ± 26.9**
Total Chol (mg/dL)	195.6 ± 49.5	162.5 ± 37.2**
Total/HDL	4.0 ± 1.6	3.5 ± 1.3

\*p<0.05, \*\*p<0.001

The type of fat appears to be more important than the amount of fat for increasing the risk of dyslipidemia on patients receiving KT for seizures.