LB005

ENERGY INTAKE VARIABILITY IN BOGOTA'S UNIVERSITY STUDENTS: ITS IMPLICATIONS IN ENERGY INTAKE EVALUATION

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Rationale: To describe energy intake variability and to establish its effect over food intake estimation
Methods: Daily food intake of 43 university students was evaluated during a 28 day period using a self applied food consumption diary. Participants were trained in data collection and weekly controlled to insure data quality. Energy intake was calculated from the Colombian Food Composition Table. Intake variability was represented in a box-plot graph; variance homogeneity was analyzed by Levene's test. The number of days necessary to estimate energy intake means, for each individual, was calculated with different precisions and confidences. Bayesian statistics were used to construct a posteriori distribution of mean energy intake variances, and then the population distribution of the number of days to estimate consumption were obtained.
Results: Day to day variability was different among individuals: energy intake variability and the value of its means had a direct relationship. Usual energy intake evaluation protocols in which data is collected for 1 week periods or less produce unreliable estimates. Bayesian posteriori distribution was constructed, to represent energy intake variability in the study population, in both cases non-informative and informative prior distribution. Informative priors were constructed from criteria usually applied by experts in DRI energy construction
Conclusion: Both individual variability and number of days to estimate energy intake can be represented by a probability distribution. Bayesian statistic gives the natural theoretical frame for its construction. From the data studied in a non-informative situation, it was shown that 2 weeks corresponds to the 95th percentile of the distribution in the number of days to estimate mean intake with an error of 225 kcal and a 95% confidence interval.

Disclosure of Interest: None declared.

LB006

IMPACT OF SHORT FISH OIL INFUSIONS ON CELL MEMBRANE COMPOSITION IN PATIENTS UNDERGOING CORONARY ARTERY BYPASS SURGERY: PRELIMINARY DATA

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Rationale: Fish Oil (FO) is known to blunt inflammatory responses and reduce arrhythmias. In healthy volunteers a single short 0.2 g/kg intravenous FO infusion blunts response to endotoxin and causes a significant incorporation of EPA/DHA in the platelets membranes. Oral FO reduces post infarction arrhythmias. Cardiac surgery patients exhibit a strong inflammatory response and suffer postoperative arrhythmias. The aim of the study is to test if short infusion of FO modifies platelet and cardiomyocytes membrane composition, and clinical course of patients undergoing elective coronary artery bypass surgery.
Methods: Patients were randomised to receive 3 short infusions 0.2 g/kg of FO (Omegaven, Fresenius Kabi) or placebo. Infusion timing were: evening before (T1), premedication (T3), ICU admission (T6). Blood samples: before and after (T2, T4, T7) each FO infusion and on morning after surgery (T8). During surgery, the excised auricle was held for analysis. Determination of triglycerides (TG) plasma concentration (safety), platelets & cardiomyocytes membranes fatty acid (FA) composition as % molar weight of total FA. Clinical data were recorded. Statistics: mean±SD, two-way ANOVA, Wilcoxon signed rank.
Results: Twelve patients aged 69±11 years (out of 40 planned) were enrolled. Plasma TG concentration peaked after infusions (2.6 to max 8 mmol/L) and reverted to pre-infusion levels before next FO infusion. Membrane composition data available in 11 patients: significant EPA incorporation in cardiomyocytes at (T4), EPA platelets and n-3/n-6 ratio at (T8). No difference found in length of ICU and hospital stay.

Table

	Membrane FA composition (%)			
	T1		T8	
	Control	FO	Control	FO
Platelets				
n-3/n-6	17.1±2.5	16.5±1.9	17.5±2.11	24.5±3.09*#
EPA	0.30±0.19	0.43±0.08	0.18±0.16	1.30±0.25*#
DHA	2.0±0.44	2.13±0.51	2.16±0.59	2.36±1.02
Cardiomyocytes				
EPA (T4)			0.6±0.14	0.98±0.24*

*$p < 0.05$ vs control, #$p < 0.05$, T1 vs T8.

Conclusion: Significant changes in n-3/n-6 ratio, EPA incorporation in cardiomyocytes after 2 perfusions and the EPA in platelets after 3 perfusions. The TG peak stays in safe ranges. At this stage no clinical changes were observed.

Disclosure of Interest: None declared.

LB007

NUTRITIONAL COUNSELLING IMPROVES ENERGY INTAKE AND QUALITY OF LIFE IN HOSPITALISED CANCER PATIENTS

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Rationale: Undernutrition is a common problem in cancer patients. 31 to 87% of cancer patients show loss of body weight at the moment of diagnosis of the malignant disease. We have studied the impact of nutritional therapy on food intake and quality of life (QoL) in hospitalised cancer patients.