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Fat content of human milk: Pilot study from Latvia

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Fat is the most energy-dense macronutrient found in human milk, providing vital calories for growth and development of a baby. Variation in fat content can be due to factors like length of lactation, feeding frequency, the stage of nursing process, baby's gender and birth weight, etc. As the human milk composition among lactating women in Latvia is not sufficiently studied, the aim of this pilot study was to determine fat content in mature human milk and factors affecting it. The study was carried out from November 2016 to April 2017. In total, 33 mature milk samples pooled within 24 h were collected from mothers whose babies had reached the age of at least two months. Fat content was determined by ISO 2446:2008. Participants (33 mothers with singleton deliveries of 16 male and 17 female babies) were 23 to 39 years old with an average Body Mass Index (BMI) 22.03±2.81. Primiparas were 45% of participants. Babies' birth weight ranged from 1.60 to 5.36 kg but height from 42 to 61 cm. Most participants for sampling used breast pump (64%), following expression by hand (21%) and combination of both methods (15%). During the study, majority of mothers (n=21) were still exclusively breastfeeding, two participants practiced partial breastfeeding (breastfeeding+formula feeding) but ten mothers had started weaning. Although determined fat content ranged from 1.90 to 5.80%, obtained mean value (3.95±1.02%) was comparable to data from other countries. No significant association was found with any of the above mentioned factors (mothers age and BMI, parity, baby's gender, birth weight and height, breastfeeding manner and milk expression method) ($p>0.05$). Results of the pilot study show that fat content in human milk is variable but more samples need to be analyzed to clarify the influencing factors.

Biography

Līva Aumeistere is a Nutritionist who has earned a Master's degree (Engineering in Food Science (Mg.sc.ing.)) in 2016. Currently, she is working on her PhD in Food Science programme held at Latvia University of Agriculture. At present, she is working as a Researcher in the Research Institute of Food Safety, Animal Health and Environment BIOR and a Vocational Education Teacher in Riga Technical School of Tourism and Creative Industry.

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