

5th Asian Obesity Specialists & Endocrinologists Annual Meeting

July 11-12, 2016 Kuala Lumpur, Malaysia

Human milk non obesigenic promoting factors: Beyond energy and nutrients

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Human milk is a complex active fluid that provides the optimal balanced nutrition for infants. In addition, non-nutritional and critical bioactive components have been detected in human milk such as anti-inflammatory mediators, as well as appetite-regulating hormones and growth factors. Recent studies focused on the possible role of breast feeding in the prevention of obesity with subsequent decrease risk of diabetes mellitus among adults. Breast adipose tissue was found to be a source of adipokines, such as adiponectin, leptin and ghrelin that are transported via breast milk to infants. Adiponectin, which is known for its insulin-sensitizing, anti-atherogenic, fat-burning and anti-inflammatory properties was detected in the serum of lactating mothers and breast fed infants more than the formula fed. Other adipocyte-derived hormones; leptin and ghrelin are produced and secreted by mammary epithelial cells in milk fat globules. A positive correlation has also been reported between human milk leptin levels and infant plasma leptin. Leptin and ghrelin have been shown to regulate energy homeostasis by relaying information about the body's energy and nutrient stores from the periphery to the brain, thus decreasing food intake and reflects the amount of body fat. Consequently, a possible role of adipokines as a satiety signal with a long-term effect on energy balance and body weight can be suggested. Human milk continues to be recommended as the preferred choice of feeding for all infants by national and international health organizations. The promotion of breast feeding can be a potential component of the primary health care efforts considering its role in early life determinants of later-onset obesity, non-communicable diseases and for the timely preventive measures that will improve overall health status of population.

Biography

Mona Hashim has completed her MSc in Nutrition and Dietetics from the American University of Beirut, Beirut Lebanon and currently a PhD candidate at Universiti Sains Malaysia, Malaysia. She is a Lecturer in the Department of Clinical Nutrition & Dietetics, College of Health Sciences, University of Sharjah, United Arab Emirates. She has participated as a speaker in many local conferences on topics related to school children dietary patterns and childhood obesity, and published work of related domain. Besides, she has organised professional dietetics workshops. She is a member of the Academy of Nutrition and Dietetic (AND) and "Association for Nutrition and Food Sciences (LANFS)", Lebanon.

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