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Commercial infant foods in the UK: macro-nutrient content and composition

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Early infant feeding provides nutrients for optimal growth and development. Currently in the UK, one in five children starts school overweight[1]: recent data suggest that children who are overweight at an early age are likely to continue to be overweight. This in turn, increases the risk of developing chronic disease such as type II diabetes, heart disease and a variety of other co-morbidities at early adulthood[2,3]. Over recent decades, changes in life style and food economy has contributed to shifting dietary patterns leading to increased consumption of energy-dense diets high in fat, particularly saturated fat, and low in unrefined carbohydrates[4]. The modern lifestyle dynamic, therefore, has lead to an increased parental reliance on commercially marketed complementary foods in the UK, which may have potential implications for total energy and fat intake in addition to taste acquisition. The foregoing factors can negatively impact the risk of chronic non-communicable disease[4]. The aforementioned trend enhances the importance of labelling in the areas of food safety and nutritional information.

Quantitative analyses of the macronutrient content of eight popular commercial 'ready to-feed' baby meals for infants of 7–9 months old in the UK market has been undertaken in order to ascertain their nutritional suitability in relation to the total daily dietary intake as well as nutritional profiling of the products. The chemical analyses conducted included Kjeldhal for protein, acid hydrolysis and extraction for fat, phenol sulphuric acid for carbohydrate and AOAC 985.29 for fibre. The only significant difference found between different varieties (meat and vegetable-based) was with respect to the protein content ($P = 0.04$) per 100 g of food. The experimentally determined concentrations of macronutrients (g/418.4 kJ) were compared with the declared values provided by the manufacturers on the product labels and despite some variations, the values obtained comply with the regulatory requirements (Commission Directive 2006/125/EC). The total daily intake of fat (27.0 g/d) – based on the menu composed from commercial complementary food – is suggested to exceed the DRV of fat (27.1 g/d), *if the intake of snacks and desserts are incorporated*. The aforementioned results imply that the formulations of the recipes, based on a standard commercial menu, are of significant importance in relation to the nutritional quality of the infant's diet.

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