

DIFFERENCES IN PROTEIN AND FAT CONTENT IN COMMERCIAL INFANT MEALS FROM 3 EU COUNTRIES

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INTRODUCTION

Several observational studies in infants (especially in non-breast-fed infants) and young children in Europe have shown some nutritional imbalances due to certain dietary habits and infant feeding practices. Among those imbalances, an excessive intake of protein¹⁻³ and an insufficient fat intake have been reported⁴⁻⁶.

There is some evidence revealing that a high protein intake during the complementary feeding period is associated with an increased risk of later obesity. According to several scientific bodies, the contribution of fat to energy intake during the complementary food period should be between 35 and 40%⁷⁻⁸. Together with breastmilk and/or formula milk, infant meat/fish meals (whether commercial and/or homemade) are important sources of protein and fat during the complementary feeding period.

This study aimed to compare the protein and fat contents of commercial infant meals (CIM) marketed in three different EU countries: UK, Spain and Sweden.

METHODS

In this cross-sectional study, CIM targeted to infants under 18 months produced by the main infant food manufacturers in the UK, Spain and Sweden were analyzed.

Nutritional data was collected from information shown in food labels and available on the manufactures' websites. All CIM included in the study were based on meat or fish. Vegetarian meals were excluded.

The analysed CIM represented more than 85% of the commercial infant food market in each country. All data was collected between August and October 2016. Protein was evaluated in g/100 Kcal and fat was evaluated in % contribution to the energy. Statistical analyses were performed using SPSS data software (v.18).



CIM

Source of data

Manufacture's websites

Eligible criteria

- Main brands (>85% market)
- UK, Spain and Sweden
- Targeted to infant < 18mo
- Only Meat and Fish CIM
- No vegetarian meals

Figure 1. Study diagram

CONCLUSION

Our results suggest that infants being fed with CIM are exposed to different proportions of protein and fat depending on the country. In particular:

- CIM marketed in Sweden were lower in protein and higher in fat than the CIM marketed in the UK and Spain. Still, all analyzed CIM's compositions were fully compliant with current EU legislation in force.
- The results of this study are useful to understand the different nutritional environments to which infants are exposed, depending on the countries they live in.
- These results could be used by the industry R+D departments and even nutritional policy makers to improve the nutritional profile of CIM and therefore to improve the nutritional status of European infants.

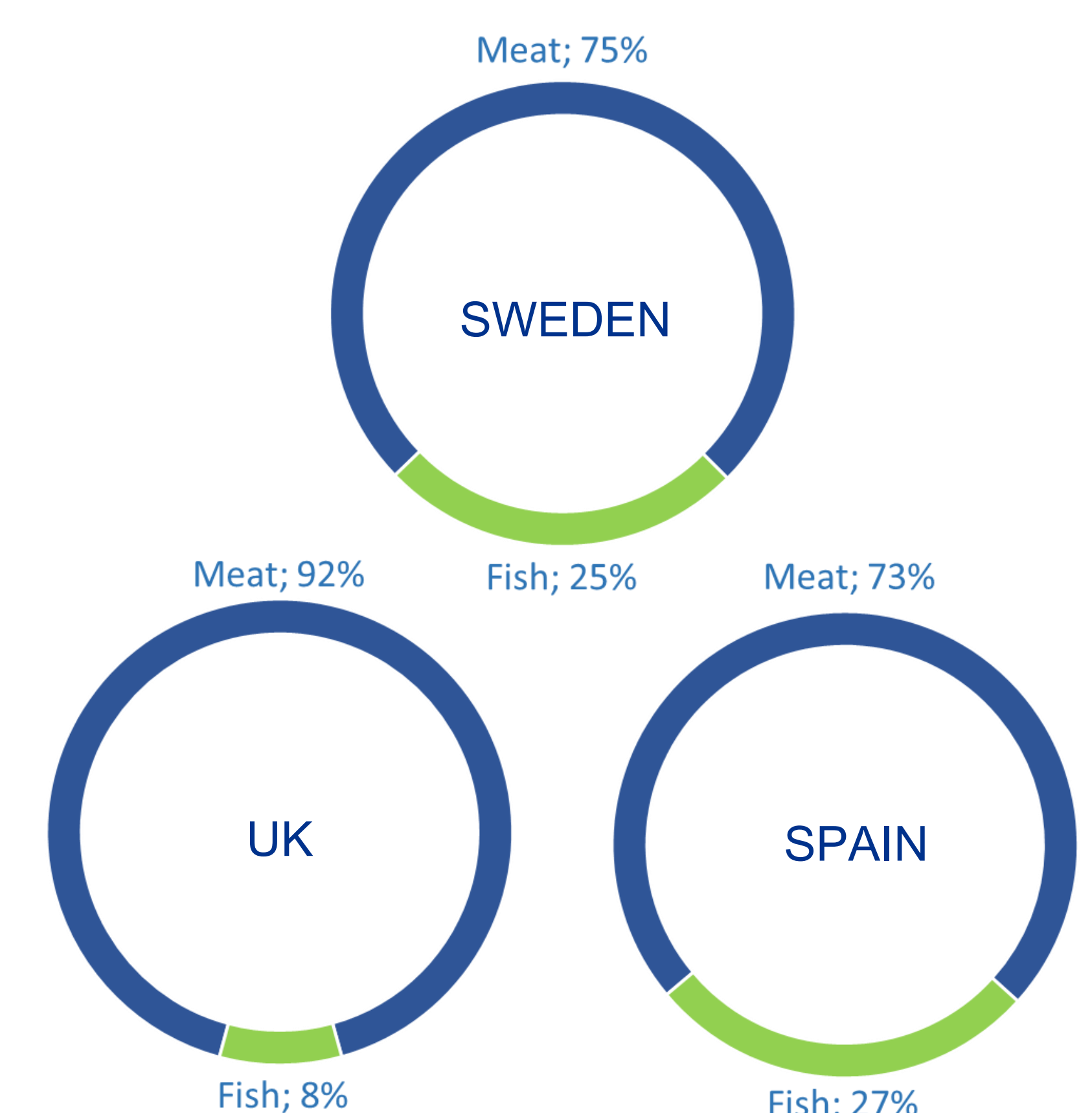


Figure 2. Distribution of CIM according to country

RESULTS

- A total of 130 UK CIM (119 meat and 11 fish), 103 Spanish CIM (75 meat and 28 fish) and 87 Swedish CIM (65 meat and 22 fish) were compared for protein and fat content (Figure 2)
- Protein content in CIM marketed in Spain and UK were significantly higher than CIM marketed in Sweden ($p < 0.05$).
- The fat content in CIM was significantly different among all countries ($p < 0.05$).

Table 1. Protein and fat content in CIM in 3 countries. Data are expressed as mean (sd).

Country	N° products	Protein (g/100 Kcal)	% Energy from fat
UK	130	4.67 ^a (0.98)	28.50 ^a (6.64)
Spain	103	4.65 ^a (0.68)	30.76 ^b (4.04)
Sweden	87	4.06 ^b (0.57)	33.62 ^c (3.44)
All	320	4.5 (0.83)	30.62 (5.53)

^{a-b-c} values with different letter were significantly different at $p < 0.05$

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Disclosure of Interest

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