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## The Nutritional Content of Main Course Ready-meals Aimed at Children Aged 12 Months to 3 Years

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### **Authors' contributions**

*This work was carried out in collaboration between all authors. Author JTLH designed the study, collected and collated the data, performed the statistical analysis and prepared the manuscript. Authors MM and KA provided supervision and critical feedback on manuscript preparation. All authors read and approved the final manuscript.*

**Conference Abstract**

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### **ABSTRACT**

**Background:** Rapid changes to dietary and lifestyle patterns have transformed the home and food environment with an increased trend towards convenience in home food preparation and ready-meal availability [1]. Despite the widespread use of convenience foods, there is a lack of research into the nutritional quality of convenience foods for young children. This study examined the nutritional content of ready-meals for children aged 12 months to 3 years. The objectives of this study were to (i) investigate the nutritional quality of ready-meals, on sale in the UK market for children aged 12 months to 3 years, comparing their nutrition labelling information to dietary standards, (ii) identify the nutrition claims on the packaging of ready-meals for this age group and (iii) determine whether the nutrition claims identified met European Union legislation.

**Methods:** A sample of main course ready-meals (n=38) marketed to children aged 12 months to 3 years from five brands, available in the UK was assessed. One ready-meal represents only a proportion of energy and nutrients consumed per day, therefore dietary standards were obtained taking 30% of age-appropriate dietary reference values (DRVs). The energy, protein and sodium content of these ready-meals were compared to the calculated dietary standards using one sample t-tests. Descriptive analysis was performed

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on all nutritional information (energy, carbohydrate, sugars, protein, fat, saturated fat, fibre, sodium and iron) collected. Nutrition claims were validated against legislative requirements [2,3,4].

**Results:** All ready-meals examined were significantly lower in energy ( $p=0.000$ ) and higher in protein ( $p=0.000$ ) compared to the dietary standards. Sodium was significantly higher than the dietary standard in three brands; brand 1 ( $p=0.000$ ), 3 ( $p=0.004$ ) and 5 ( $p=0.03$ ), with brand 5 containing only 65mg less than the DRV (500mg) for total daily allowance. Four of the nutrition claims made across the brands were assessed - “no added salt”, “no added sugar”, “low salt” and “source of iron”. Only brand 1 and 5 did not meet legislation for “no added salt” as the ready-meals contained more than the amount of sodium per 100g permitted. All other nutrition claims conformed to legislative requirements; however the majority of ready-meals from brand 1 did contain ingredients with added salt and/or sugar e.g. mustard or sun-dried tomato, despite claims of “no added salt/sugar” and this could misinform consumers.

**Discussion:** The ready-meals investigated did not meet calculated dietary standards and although the majority of nutrition claims displayed on the packaging did meet legislation, some claims did not and there were claims that could mislead consumers. There is paucity in research into the nutritional quality of convenience foods for young children and therefore comparisons between this study and other work cannot be drawn. Furthermore, since comprehensive dietary standards are unavailable for this age group, it is difficult to fully assess the nutritional adequacy of these ready-meals.

**Conclusion:** The development of nutritional standards and transparent nutrition claim legislation would enable practitioners to fully assess the adequacy of children’s diets and enable consumers to make healthier food choices.

*Keywords: Children’s ready-meals; convenience foods; nutrition labelling.*

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