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Percentage contribution of reference recipes to Food Groups for Irish and UK Food Based Dietary Guidelines.

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Abstract

Food Based Dietary Guidelines (FBDG) are a set of recommendations that describe the quantity and types of foods to consume to promote healthy eating and prevent diseases such as obesity. However, when assessing compliance with FBDG, calculating contributions from composite dishes is challenging, since the specific recipe ingredients are often unknown. This project aims to establish proportional contribution of composite dishes to food groups defined by the Irish and UK FBDG. This will facilitate automated assessment of compliance with FBDG for users of novel technology such as Nutritics, a suite of integrated nutrition analysis software tools for healthcare professionals, educators and industries. Territory specific food composition data (n = 3291) for Ireland and the UK were downloaded from the 2015 McCance & Widdowson Composition of Foods Integrated Dataset (CoFIDs). Recipes were identified and classified into groups broadly aligned with the food groups defined in the Healthy Food for Life Ireland and the Eatwell Guide UK. Supplementary recipe details were accessed from McCance & Widdowson 7th Edition book and online resources. Recipes were categorised by recipe type and ingredients were categorised into food groups. Percentage contribution of each food group to the total recipe was calculated. Of the 3,291 foods, 1,108 were classified as recipes, details were available for 138 of these. Of the 138 recipes, there were fruit & vegetable dishes (n = 20), breads, potatoes, pasta and rice dishes (n = 12), meat, fish and alternative protein sources dishes (n = 40), dairy dishes (n = 23), high fat/oil, sugar, salt dishes (n = 43). For fruit & vegetable dishes, the median percentage contribution to the fruit & vegetable food group was 67% (15% min/ 100% max). For breads, potatoes, pasta and rice dishes the median percentage contribution to the breads, potatoes, pasta and rice food group was 53% (17% min/ 89% max). For meat, fish and alternative protein sources dishes, the median percentage contribution to meat, fish and alternative protein sources food group was 55% (16% min/ 85% max), for dairy dishes, the median percentage contribution to the dairy food group was 90% (53% min/ 96% max). For high fat/oil, sugar, salt dishes the median percentage contribution to the high fat/oil, sugar, salt food group was 22% (3% min/ 97% max). The calculation of recipes into percentage contribution to food groups can support assessment of adherence to FBDG when using reference recipes. This is a useful tool to support healthcare professionals when assessing dietary intake where specific recipe components are unknown.

Conflict of Interest

The authors F.Douglas and D.O'Kelly provided supervision from the private company Nutritics Ltd.