

Characterising the food supplements consumed by children and teenagers in Ireland

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Food supplements are concentrated sources of nutrients (such as vitamins and minerals) or other substances with a nutritional or physiological effect that are marketed in 'dose' form (e.g., pills, tablets, capsules, liquids) ⁽¹⁾. They are intended to correct nutritional deficiencies, maintain an adequate intake of certain nutrients, or to support specific physiological functions and have been shown to be effective at an individual level. The aim of this study was to use data from the National Children's Food Survey II (NCFS II) (2017–18) and the National Teens' Food Survey II (NTFS II) (2019–20) (www.iuna.net) to determine the prevalence of supplement use among children and teenagers in Ireland and to characterise the supplements used (types and nutrient amounts included per recommended dose). A 4-day weighed food record was used to collect food, beverage and food supplement intake data for 600 children (5–12y) and 428 teenagers (13–18y) in the NCFS II and the NTFS II, respectively. In addition, product labels for all food supplements used by participants during both surveys were obtained. A database of food supplements used was created by dual entering the full detailed description of the supplement type, brand information, form, ingredients and the potency/strength of the recommended dose into an MS excel file. Statistical analysis was conducted using SPSS[®] V26. Twenty-two percent of children consumed a food supplement. A total of 102 types (brands) were recorded (79% contained micronutrients). 'Multivitamins & minerals' were the most common type (31% of all supplements recorded), followed by single vitamin supplements (20%), multivitamins (19%), fish/cod liver oils (12%), botanical/herbal (7%), probiotics (6%) and other supplements including 'single vitamin & single minerals' (6%). The mean/median values per recommended dose for selected micronutrients was as follows: vitamins A (489/400µg), D (9.6/5.0µg), C (152/60mg), B6 (1.8/1.1mg), B₁₂ (2.7/2.0µg), folic acid (134/100µg), calcium (171/135mg), iron (6.8/5.5mg) and zinc (3.7/2.9mg). Fourteen percent of teenagers consumed a food supplement. A total of 80 types were recorded (71% contained micronutrients). 'Multivitamins & minerals' were the most common type (24% of all supplements recorded), followed by single vitamin supplements (18%), fish/ cod liver oils (14%), 'protein powder & creatine supplements' (11%), single mineral supplements (10%), single vitamin & single mineral supplements (6%), multivitamins (6%), botanical/herbal (4%), probiotics (4%) and other supplements (4%). The mean/median values per recommended dose was as follows: vitamins A (816/800µg), D (10.9/5.0µg), C (338/200mg), B6 (7.2/3.2mg), B₁₂ (7.4/3.4µg), folic acid (262/200µg), calcium (385/162mg), iron (10.7/12.0mg) and zinc (8.7/9.0mg). This study provides detailed information on food supplement use among children and teenagers in Ireland and will be useful for research related to nutrition, public health and food safety and will support the work of agencies that are responsible for food and nutrition policy and regulation in Ireland and Europe.

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References

1. European Food Safety Authority (2016). [available at: <https://www.efsa.europa.eu/en/topics/topic/food-supplements>].