

Dietary intakes of polyphenols and food sources in Ireland

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A diet high in polyphenols has been shown to reduce the risk of chronic diseases such as cardiovascular disease (CVD) and cancer⁽¹⁾. It has been proposed that development of recommended daily intakes (RDIs) may be required for polyphenols on the basis of their putative health benefits⁽²⁾. A critical step in this process is the assessment of dietary exposure within the general population using validated and accurate methods⁽³⁾. The aim of the present study was to assess the current intakes of polyphenol-containing foods in Irish adults, teens and children.

Nationally representative data from the Irish Universities Nutrition Alliance (IUNA) dietary surveys were utilised, including the National Adults Nutrition Survey (NANS) (19–90y, N = 1500), National Teens Food Survey (NTFS) (13–17y, N = 441) and National Children’s Food Survey (NCFS) (5–12y, N = 594). Using Crème Global[©] software and the online database Phenol-Explorer (<http://phenol-explorer.eu/>), the mean daily intakes (MDI), polyphenol intakes, average portion sizes and the number (%) of consumers of each polyphenol containing food were calculated.

The mean (SD) intake of total polyphenols among Irish adults was 548 (247) mg/day, teens 370(295) mg/day and children 276 (187) mg/day. The main foods contributing to polyphenol intakes among adults and teens and were tea and coffee. Main sources of polyphenols in children were apple juice and tea. Outside of beverages, apples were the main contributing sources to daily intakes of total polyphenols.

	Percentage of consumers (%)	MDI (SD) (g/d)	Polyphenol intakes (mg/d)	Polyphenol percentage contribution (%)
Tea	80	521(386)	433	69
Coffee, filtered	18	147(157)	394	61
Red wine	18	129(109)	277	41
Apple	36	68(50)	187	34
Pear	10	65(51)	183	34
Orange juice	26	112(86)	90	6
Dark chocolate	4	8(7)	185	6
Apple juice	5	95(80)	78	5
Green tea	4	263(227)	163	5
Peaches	3	54(52)	141	4

This study is the first that uses nationally represented data from all age groups within a population. Beverages were the main sources of polyphenols that contributed to total polyphenol intakes suggesting that beverages could be a medium by which to increase polyphenol intakes in the general population.

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