

Intakes and sources of dietary sugars in Irish pre-school children aged 1–4 years

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Recent dietary guidance from the UK recommends that, for those aged 2 years and over, the average population intake of free sugars should not exceed 5 % of total energy intake (%TE)⁽¹⁾. ‘Free’ sugars include all mono- and di-saccharides added to foods by the manufacturer, cook or consumer, plus sugars naturally present in honey, syrups and unsweetened fruit juices⁽¹⁾. The objective of this study was to estimate the intake and sources of dietary sugars (including free sugars) in 1 to 4 year old Irish children using data from the Irish National Pre-School Nutrition Survey 2010–11 (www.iuna.net) which collected detailed food and beverage intake data using a 4d weighed food diary. Energy, total sugars and lactose values were derived from the UK Food Composition Tables⁽²⁾ and product labels. Non-milk sugars were calculated as total sugars minus lactose. Free sugars values were assigned to each food and beverage consumed by adapting a systematic approach used to calculate added sugars content in foods and beverages⁽³⁾ and guidance from Public Health England on the calculation of free sugars. Mean intakes of total, non-milk and free sugars were calculated via the NCI-method⁽⁴⁾ using SAS© Enterprise Guide and key sources of free sugars were determined using SPSS v21.0 .

Table 1. Mean daily intakes of total, non-milk and free sugars (g, %TE) in Irish children aged 1–4 years

		1 year olds (n = 126)		2 year olds (n = 124)		3 year olds (n = 126)		4 year olds (n = 124)	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total sugars	g	70.7	5.3	74.3	5.7	75.9	5.9	83.4	6.2
	%TE	26.2	1.3	24.8	1.4	24.9	1.4	24.7	1.4
Non-milk sugars	g	45.3	4.6	54.3	5.3	60.7	5.8	68.7	6.2
	%TE	16.8	1.4	18.2	1.6	20.0	1.7	20.4	1.7
Free Sugars	g	25.1	3.8	33.4	4.9	41.4	5.7	49.0	6.4
	%TE	9.0	1.2	11.0	1.5	13.4	1.7	14.4	1.8

Table 2. % Contribution of key food-groups to intake of free sugars in Irish children aged 1–4 years

Age Food Group	1y		2y		3y		4y	
	g	%	g	%	g	%	g	%
Yoghurts and fromage frais	6.0	31.7	5.6	17.4	6.1	15.8	6.2	13.6
Fruit juices, smoothies & purées	4.3	14.4	6.1	16.1	8.5	20.5	9.4	18.7
unsweetened juices and smoothies	2.1	5.8	3.6	8.7	6.0	14.2	7.2	14.0
fruit purées	2.0	8.0	2.5	6.7	2.5	5.9	2.2	4.5
Biscuits (incl infant rusks etc.), cakes & pastries	3.4	14.6	4.4	12.6	4.6	12.3	6.1	13.5
Confectionery	1.5	5.2	4.0	11.4	5.3	13.2	6.3	13.2
chocolate confectionery	1.0	3.4	2.3	7.3	3.1	7.9	3.6	7.9
non-chocolate confectionery	0.5	1.8	1.7	4.1	2.2	5.3	2.7	5.3
Beverages	2.3	7.2	5.0	12.1	4.9	10.3	6.9	12.0
carbonated beverages	0.2	0.5	0.4	0.9	1.1	2.2	2.2	3.6
squashes and fruit juice drinks	1.4	4.5	4.4	10.6	3.8	8.0	4.6	8.1
Breakfast cereals	1.7	8.8	2.3	7.9	3.1	9.1	4.1	9.7
Creams, ice-creams & chilled desserts	1.7	6.1	2.2	7.5	2.5	6.7	3.3	7.2
Sugars, syrups & preserves	0.8	4.5	2.4	7.6	2.6	6.4	3.3	6.7

Intakes of total sugars (%TE) were similar across ages whereas intakes of non-milk and free sugars (%TE) increased with increasing age from 1–4 years. Mean intakes of free sugars far exceeded the UK recommended maximum of 5 % of total energy at each age with a number of food categories contributing to these intakes. These findings will be useful in developing dietary strategies to reduce the intakes of free sugars for pre-school children in Ireland.

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