

## Dietary determinants of saturated fat intake in Irish pre-school children aged 1–4 years

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Elevated intakes of saturated fat are known to increase circulating LDL cholesterol concentrations and risk of cardiovascular disease (in both children and adults)<sup>(1,2)</sup>. However, emerging studies suggest the impact of saturated fat on health may be dependent on the food form (particularly relating to dairy foods)<sup>(3,4)</sup>. We have previously reported the mean intakes of saturated fat in Irish children (15.7, 14.8, 14.5 and 14.1 %E at age 1, 2, 3 and 4, respectively)<sup>(5)</sup>. We also identified that the patterns of intakes of saturated fat at age 4 years in Irish children will make it difficult to comply with recommendations for saturated fat intake in later childhood (<10 % of energy from age 5 years)<sup>(6)</sup>. The objective of this analysis was to determine dietary sources of saturated fat in 1 to 4 year old Irish children and to investigate the dietary determinants of saturated fat intake at age 4 years. Analyses were based on the National Pre-School Nutrition Survey (2010–2011) ([www.iuna.net](http://www.iuna.net)) which used a 4-day weighed food record to collect food intake data of 500 pre-school children. Saturated fat intakes were determined based on published food composition tables and published papers as outlined elsewhere<sup>(7)</sup>. Dietary sources and determinants of saturated fat were calculated using SPSS<sup>®</sup> software. On the basis of mean daily intake of saturated fat at age 4 years, participants were divided into three intake groups: low medium or high consumers. The food groups which accounted for the greatest proportion of the difference in intakes between the high (top third) and low (bottom third) consumers of saturated fat were identified.

**Table 1.** Contribution (%) of food groups to saturated fat intake in Irish children

Food Group	1 year olds	2 year olds	3 year olds	4 year olds
			%	
Milks	42.7	28.8	24.4	21.5
Biscuits, cakes & confectionery	8.7	13.3	15.9	17.9
Meats	11.8	13.9	14.2	14.8
Fat spreads & oils	5.5	8.9	10.0	8.3
Cheeses	7.4	8.2	7.3	7.9
Creams	2.0	3.4	4.3	5.5
Yoghurts	6.9	5.5	5.5	5.0
Other foods	15.9	20.1	20.2	21.4

**Table 2.** Dietary determinants of saturated fat intake in 4 year old children

Mean daily saturated fat intake (g/d)			% Contribution of food groups to the difference between high and low consumers
Low	High	Difference	
13.8 (11.6 %E)	26.8 (16.8 %E)	13.0 (5.2 %E)	Milks (27), Biscuits, cakes & confectionery (14), Fat spreads & oils (13), Meats (13), Cheeses (12), Creams (5), Yoghurts (4), Breads & rolls (3) Other foods (9)

Mean intakes of saturated fat in all consumer groups (11.6, 14.0 and 16.8 %E) were above the <10 %E recommendation. The difference in saturated fat intake between high and low consumers was 13 g/d. Dairy products (including milks, cheeses, creams and yoghurts) contributed 48 % of the difference in intakes between high and low consumers. ‘Biscuits, cakes & confectionery’, ‘fat spreads & oils’, and meats contribute a further 14, 13 and 13 % of the difference. These findings, together with emerging evidence on saturated fat sources and health will aid in the development of dietary strategies to improve intakes of saturated fat for young children in Ireland.

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