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Dietary energy density of Irish teenagers aged 13 to 17 years

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The objective of the present research is to examine the dietary energy density (ED) of Irish teenagers aged 13 to 17 years. Data from the National Teens' Food Survey (NTFS) were used for this analysis (<http://www.iuna.net>).

Dietary intake data was analysed using WISP[®] (Tinuviel Software, Anglesey, UK), which contains McCance and Widdowson's The Composition of Foods, 6th edition⁽¹⁾. Dietary ED (kcal/g) was calculated using food only excluding all beverages (1.97 kcal/g). Participants were separated by tertiles of dietary ED (kcal/g) into low (<1.83), medium (1.83–2.11) and high (>2.11). Mean daily intakes (MDI) of energy, macronutrients as percent total energy (%TE), dietary fibre (DF) (g/10 MJ) and food group intakes as %TE, are reported across groups of dietary ED.

Split by tertile of ED	Low (n 147)	Medium (n 147)	High (n 147)	P
Micronutrients and fibre				
Energy (MJ)	8	8.4	8.5	NS
Energy (kcal)	1915	1998	2029	NS
Protein (%TE)	15.8	14.9	13.6	<0.001
Fat (%TE)	33.8	35.2	37.8	<0.001
Saturated fat (%TE)	14.2	13.6	13	<0.001
Carbohydrate (%TE)	49.8	49.2	48	<0.01
Total sugar (%TE)	20.4	20.2	20.6	NS
DF (g/10 MJ)	21.7	18.7	16	NS
Foodgroups intakes (%TE)				
White bread and rolls	7.2	8.3	9	<0.01
Wholemeal and brown bread and rolls	3.3	2	1.3	<0.001
Potatoes	3.8	3.1	2	<0.001
Potato products and chipped, fried and roasted potatoes	5.7	7.5	9.1	<0.001
Fruit	2.9	1	0.6	<0.001
Vegetables and vegetable dishes	2.7	1.7	1.5	<0.001
Carbonated beverages	2.4	3.6	5.2	<0.001
Confectionery (including biscuits, cakes, chocolate and non-chocolate confectionery and savoury snacks)	13.6	16.4	19.4	<0.001

Macronutrient and food group intakes positively associated with high ED diets are fat and saturated fat, white bread, processed potato products, carbonated beverages and confectionery. Macronutrient and food group intakes positively associated with low ED diets are carbohydrates and protein, wholemeal and brown bread, potatoes, fruit and vegetables.

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1. Food Standards Agency (2002) *McCance & Widdowson's The Composition of Foods*, 6th ed. Cambridge: Royal Society of Chemistry.