National Adult Nutrition Survey II

Summary Report

May 2024

Irish Universities Nutrition Alliance (IUNA)

National Adult Nutrition Survey II

Summary Report on:

Food and Nutrient Intakes, Body Weight, Physical Activity and Eating Behaviours in Adults Aged ≥ 19 Years in Ireland

Irish Universities Nutrition Alliance (IUNA)

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Research teams

Fieldwork and primary analysis of the survey data presented in this report were carried out by the following teams from Munster Technological University (MTU), University College Cork (UCC), University College Dublin (UCD) and Technological University Dublin (TU Dublin), as part of the Irish Universities Nutrition Alliance (www.iuna.net).

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Main Outcomes

Food and beverage intakes

Staple foods for adults aged ≥ 19 years in Ireland (i.e. foods consumed by practically all adults in amounts sufficient to make important nutritional contributions to the diet) were breads, potatoes, cereals, milks, meats, fruits and vegetables.

The average daily intake of bread was equivalent to approximately 2 slices in both adults aged 19-64 years (88g) and those aged 65 years and over (85g) with similar intakes of white and wholemeal/brown bread for both age-groups. The average daily intake of pasta, rice & savouries was 75g in adults aged 19-64 years and 46g in those aged 65 years and over. The average daily intake of potatoes & potato products was 83g in adults aged 19-64 years and for those aged 65 years and over it was 78g. This was mostly consumed as boiled, baked & mashed potatoes for both those aged 19-64 years (48g) and those aged 65 years and over (44g).

The average daily intake of milk was approximately one glass per day for both those aged 19-64 years (161g) and those aged 65 years and over (200g) with similar contributions from whole milk and reduced fat milks in both age groups. The average daily intake of non-dairy milk alternatives was just 5-6g across both age groups.

Meat was consumed by almost all adults with an average daily intake of 141g in adults aged 19-64 years and aged 65 years and over. This was generally consumed more as fresh meat and meat dishes than processed meat in both age groups. Chicken was the most popular type of fresh meat consumed, followed by beef.

Intakes of fruit & vegetables were low, approximately 3.5 servings per day, well below the recommended 5-7-a-day in both those aged 19-64 years and those aged 65 years and over. Just 21% of adults aged 19-64 years and 20% of adults aged 65 years and over met the recommended minimum intake of at least 400g/d of fruit & vegetables.

The main beverages consumed were water, tea, coffee and soft drinks (more as 'no added sugar' than as sugar-sweetened) in both age groups with water being the most common among those aged 19-64 years and tea among those aged 65 years and over.

Overall, 52% of adults aged 19-64 years and 59% of those aged 65 years and over used a food supplement, with 'multivitamins and/or minerals' and 'single vitamin D' supplements being the most common types consumed for both age groups.

Dietary changes that have occurred since the National Adult Nutrition Survey (NANS) in 2008-10 include a lower intake of bread, potatoes, meat and a higher intake of pasta, rice & savouries, fruit & vegetables and higher supplement use in both age groups.

Main Outcomes

Energy and nutrient intakes

Important sources of calories in the diet were meats, breads, cereal products and milk & dairy products. For both adults aged 19-64y and those aged 65 years and over, approx. one fifth of calories were provided by 'top shelf' foods that are low in essential nutrients (i.e. 'sugars, confectionery, preserves and savoury snacks', 'biscuits, cakes and pastries', and 'sugar-sweetened soft drinks'). The proportion of energy intake from food and drinks obtained from outside the home was 15% for those aged 19-64 years and 13% for those aged 65 years and over.

Saturated fat accounted for 14% of total energy intake in both age groups which exceeds the recommendation of no more than 10%. The key sources of saturated fat intake were meat & meat products, milk & yogurt, biscuits, cakes & pastries and cheeses.

Mean intake of total sugars was 17% of total energy intake in those aged 19-64 years and 18% in those aged 65 years and over. The key sources of total sugars were fruit & fruit juices, sugars, confectionery, preserves & savoury snacks, milk & yogurt, beverages, and biscuits, cakes & pastries.

Average daily dietary fibre intake (18g) for both those aged 19-64 years and those aged 65 years and over was lower than the recommendation by the European Food Safety Authority (EFSA) for adults (25g). The key contributors to dietary fibre intake were breads, vegetables & vegetable dishes, fruit & fruit juices, breakfast cereals, grains, rice, pasta & savouries and potatoes.

Mean salt intake (estimated from urinary output) was 9.5g in males and 7.8g in females aged 19-64 years and was 9.4g in males and 6.5g in females aged 65 years and over and exceeded the target maximum daily level set by the Food Safety Authority of Ireland (FSAI) for all sex and age groups (6g). Meats, especially cured and processed meats, breads and soups & sauces were the main contributors to salt intake.

Significant numbers of adults aged both 19-64 years and 65 years and over have inadequate intakes of vitamin D, vitamin C, folate, calcium, zinc, vitamin B6, riboflavin, vitamin A and iron (particularly for females). Important sources of vitamins and minerals were dairy & dairy products, meats, breads, cereals, especially fortified breakfast cereals and fruits & vegetables.

Main Outcomes

Body weight

Overall, 55% of adults aged 19-64 years and 59% of those aged 65 years and over were classified as having overweight and obesity, while 44% and 40%, respectively were within the normal weight range.

A higher proportion of males compared to females were classified as having overweight or obesity across both age groups (62% versus 48% in those aged 19-64 years and 65% versus 54% in those aged 65 years and over).

The prevalence of overweight and obesity in those aged 19-64 years and those aged 65 years and over is unchanged since the previous survey conducted in 2008-10, however a small decrease in the prevalence of adults classified as having obesity was observed.

Physical activity & Sedentary behaviours

Median energy expenditure decreased with age with those aged 65 years and over reporting the lowest overall energy expenditure compared to those aged 19-64 years. The median time spent in moderate and vigorous intensity activities was 12.9hrs/week and 0.6hrs/week, respectively for those aged 19-64 years and 11.8hrs/week and 0.0hrs/week, respectively for those aged 65 years and over.

Median time spent in sedentary behaviours was 41.8hrs/week for those aged 19-64 years (55% attributable to screen time) and 28.8hrs/week for those aged 65 years and over (89% attributable to screen time). A high proportion (62%) of adults exceeded the amount of time spent in sedentary behaviours which may increase their risk of cardiovascular disease (generally accepted as exceeding 4 hours and 30 minutes per day).

Overall, these results suggests that a high proportion (95%) of adults living in Ireland are meeting physical activity recommendations (at least 150-300 minutes of moderate intensity aerobic physical activity or at least 75-150 minutes of vigorous-intensity aerobic physical activity throughout the week). However, time spent being sedentary remains high and should be limited.

Eating behaviours

A large proportion of adults (82%) ranked taste or nutrition/health as the leading factor influencing their food choices while convenience and cost were predominantly ranked as the third factor. Most adults had a high level of interest in healthy eating, however, just over half of adults felt it was difficult to eat a healthy diet at least some of the time. The main perceived barriers to healthy eating were convenience (48%), likes or dislikes (37%), cost (27%) and availability (26%).

Introduction

This Summary Report describes the methods and main findings on food and beverage consumption, nutrient intakes, body weight, and factors associated with eating behaviours in adults from the National Adult Nutrition Survey II (NANS II). The NANS II was a cross-sectional survey designed to assess the food and nutrient intakes of adults aged ≥19 years, representative of this age group in the population of the Republic of Ireland.

The NANS II was carried out by the Irish Universities Nutrition Alliance (IUNA), an alliance of the nutrition centres at academic institutions in Ireland including Munster Technological University, University College Cork, University College Dublin and Technological University Dublin, which is committed to joint initiatives in research and teaching. To date, the IUNA has carried out several comprehensive national nutrition surveys: The North/South Ireland Food Consumption Survey (2001) of adults aged 18 to 64 years; The National Children's Food Survey (2005) of children aged 5 to 12 years; The National Teens' Food Survey (2006) of teenagers aged 13 to 17 years; The National Adult Nutrition Survey (2011) of adults aged 18 to 90 years; The National Preschool Nutrition Survey (2012) of children aged 1 to 4 years; The National Children's Food Survey II (2019) of children aged 5-12 years and The National Teens' Food Survey II (2021) of teenagers aged 13 to 18 years (all available at www.iuna.net).

The NANS II was designed to provide detailed data on food and beverage consumption in adults in Ireland and is suitable for a wide range of applications related to food safety and nutrition. These include assessment of exposure to chemical and biological hazards in foods, development and implementation of food and nutrition policy and food product development and promotion.

Findings from the NANS II may be compared with those from the National Adult Nutrition Survey (NANS) of 1000 adults aged 18-90 years carried out by IUNA researchers in 2008-10.

A more detailed 'Main Survey Report' containing additional survey methodology and detailed data tables may be found at www.iuna.net.

Summary of methods used

A sample of 1000 adults (489 males, 511 females) aged ≥19 years from across the Republic of Ireland took part in the NANS II. Ethical approval for the study was obtained from the Clinical Research Ethics Committee of the Cork Teaching Hospitals and the Human Ethics Research Committee of University College Dublin.

A database of addresses obtained from An Post Geodirectory DAC was used to randomly select addresses from pre-determined clusters across the Republic of Ireland to provide a demographically balanced sample with respect to urban/rural divide and socio-economic grouping. An introductory pack with information regarding the survey was sent to all selected addresses with individuals invited to opt-in. A hierarchical method for random selection of participants was used to screen for eligible participants in the household to prevent sampling bias. Fieldwork was carried out from April 2021 to August 2022, giving a seasonal balance. Where an individual opted in, a researcher contacted them via telephone to explain the survey in more detail and a suitable time was arranged for the researcher to call to their house to drop off materials required for the study. Written informed consent was collected from all participants before they commenced the study. The overall response rate for the survey was 61%.

Food and beverage intake data were collected via two independent 24-h telephone dietary recalls (at least 7 days apart) with each day of the week accounted for in the sampling plan. To assist with the dietary recall, older participants (≥65 years) were asked to record their foods the day before the recall). Participants were asked to provide detailed information (at brand level) on the types of foods and beverages consumed including details on cooking methods, packaging size and type and the details of recipes. Data were also collected on the time of each eating or drinking occasion, definition of the eating or drinking occasion, the location of preparation and eating of the meal/snack etc. Participants were encouraged to keep the packaging labels of all foods, beverages and food supplements to facilitate quantification and coding of foods. A photographic food atlas was provided to each participant before their scheduled dietary recall and this method was used to quantify 55% of foods and beverages. Foods and beverages which were not quantified using the food atlas were quantified using manufacturers' weights (20%), household measures (16%), standard portion sizes (5%), weighed by participants (4%) or estimated (<0.1%). Nutrient intakes were estimated from food and beverage consumption using tables of food composition. Usual intakes of foods and nutrients were estimated using the validated National Cancer Institute (NCI-Method) using SAS Enterprise Guide© for the total population. Participants also completed a food propensity questionnaire to capture information on their frequency of consumption of food groups and these data were included in the NCI-method for food group intakes in the total population as appropriate. For consumers only, (proportion of consumers and amounts), data were calculated based on intakes over the two recall days using SPSS©.

Physical measurements (height and weight) were self-measured by the participants using detailed instructions provided by the researcher. Physical activity levels were estimated using the validated EPIC Physical Activity Questionnaire (EPAQ2). Participants also completed questionnaires on general health and lifestyle and determinants of food choice and eating behaviours.

A single first-void urine sample was collected during the recording period to estimate salt intake and participants were invited to provide a fasting dried blood spot sample to assess the nutritional status of adults in Ireland with respect to vitamin D, folate and iron.

Demographic analysis of the sample showed it to be representative of adults in Ireland with respect to sex and urban/rural divide when compared to Census 2022 data. However, the sample contained a higher proportion of professional workers and a lower proportion of semi-skilled and unskilled workers than the national population and all data in this report have been weighted to account for these differences.

Chapter 1 Food and beverage intakes

Introduction

This chapter describes the food and beverage intakes of adults aged ≥19 years in Ireland and reports on the proportions of adults who consumed different foods and beverages and the amounts that they consumed **(Tables 1-6)**. Usual intakes of foods and beverages were estimated using the validated National Cancer Institute (NCI-Method) using SAS Enterprise Guide© for the total population. For consumers only (proportion of consumers and amounts consumed) data were calculated based on intakes over the two recall days using SPSS©.

Breads, cereals & potatoes

Bread was a staple food in the diets of adults in Ireland, consumed by 93% of adults aged 19-64 and 95% of those aged 65 years and over. The average daily intake of bread in the total population was 88g among those aged 19-64 years and 85g among those aged 65 years and over (approximately 2 slices of bread per day in both age-groups) **(Table 1)**. Among those aged 19-64 years, the average daily intake of bread was comprised of 42g white bread, 36g of wholemeal/brown bread and 10g of other breads (e.g. garlic breads, fruit breads). Among those aged 65 years and over the average daily intake of bread comprised of 34g white bread, 41g of wholemeal/brown bread and 10g of other breads **(Figure 1)**.

Pasta, rice & savouries was consumed by 65% of adults aged 19-64 years and 44% of those aged 65 years and over with an average daily intake in the total population of 75g for adults aged 19-64 years and 46g for adults aged 65 years and over **(Figure 2).**

Potatoes & potato dishes were consumed by 67% of adults aged 19-64 years and 86% of adults aged 65 years and over with an average daily intake in the total population of 83g for adults aged 19-64 years and 78g for those aged 65 years and over **(Figure 2).** Among both age groups, potatoes & potato dishes were mostly consumed as boiled, baked & mashed potatoes rather than chipped, fried & roasted or potato products **(Table 1)**.

Breakfast cereals were consumed by 60% of adults aged 19-64 years with 39% consuming ready-to-eat breakfast cereals and 30% consuming hot oat cereals such as porridge. Among those aged 65 years and over, 79% consumed breakfast cereals with 44% consuming ready-to-eat breakfast cereals and 47% consuming hot oat cereals such as porridge. The average daily intake of ready-to-eat breakfast cereals in the total population was 13g among those aged 19-64 years and 14g among those aged 65 years and over **(Figure 3)**. The average daily intake of porridge and other hot oat cereals was 48g among those aged 19-64 years and 83g among those aged 65 years and over **(Table 1)**.

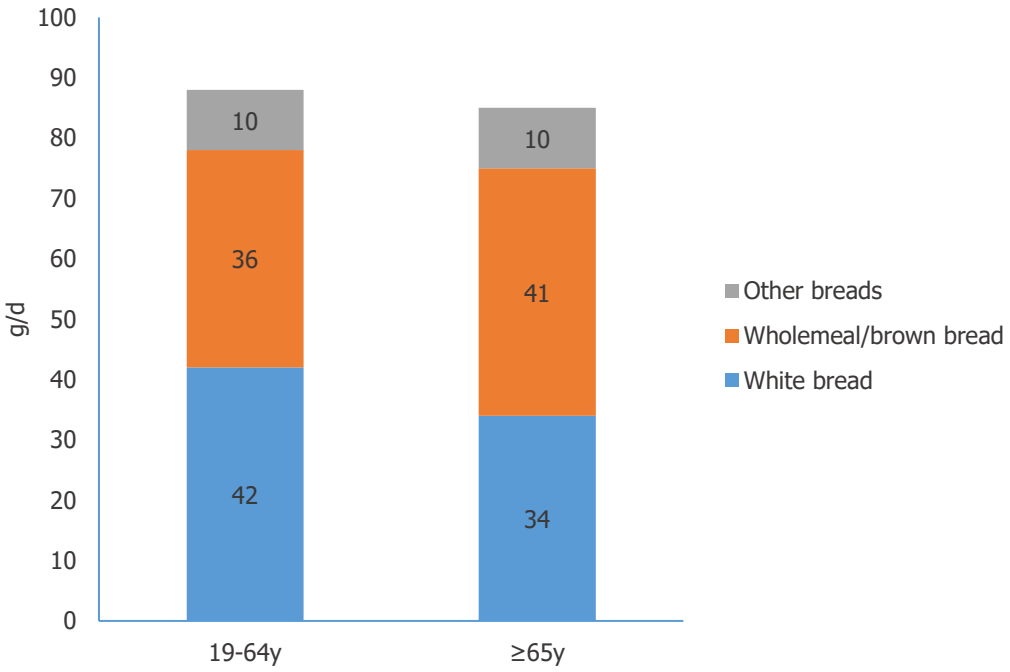

Figure 1. Mean intakes of white, wholemeal/brown and other breads in adults in Ireland

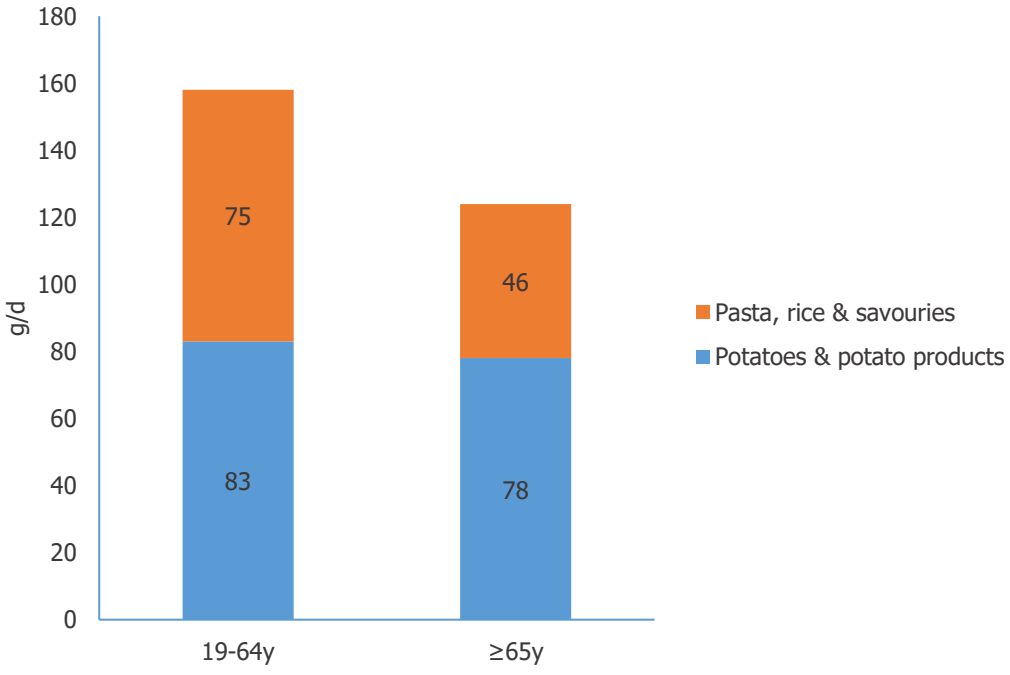

Figure 2. Mean intakes of pasta, rice & savouries and potatoes & potato products in adults in Ireland

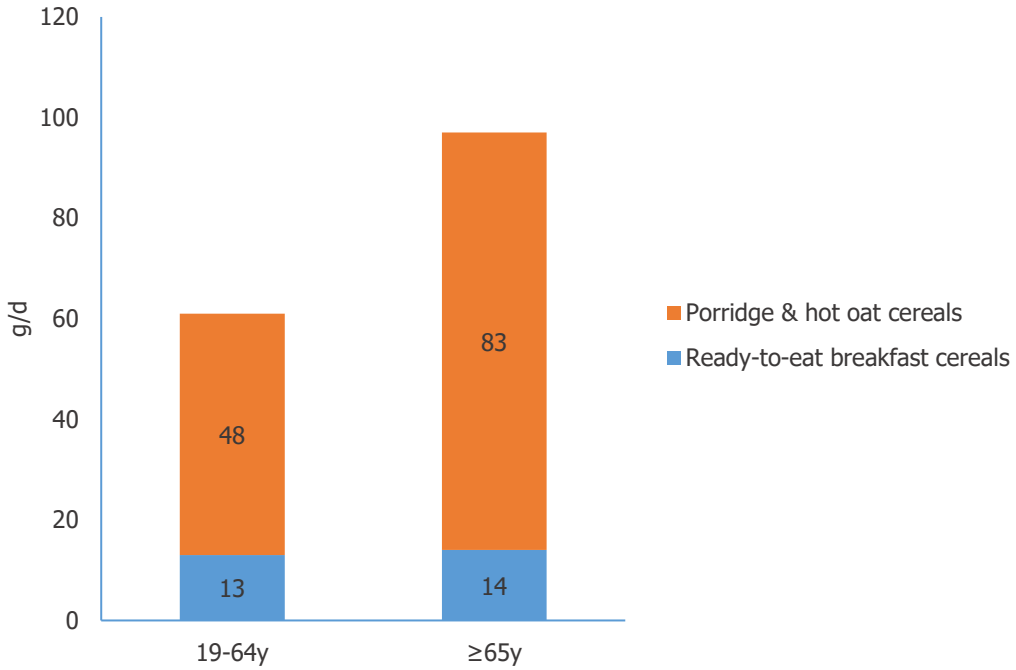

Figure 3. Mean intakes of porridge & hot oat cereals and ready-to-eat breakfast cereals in adults in Ireland

Milk, dairy products & spreading fats

Milk was a staple food in the diets of adults in Ireland, consumed by 84% of adults aged 19-64 years and 90% of those aged 65 years and over. The average daily intake of milk in the total population was 161g among those aged 19-64 years and 200g among those aged 65 years and over (just under one serving (200ml)) **(Table 2)**.

Among those aged 19-64 years, the average daily intake of milk was comprised of 81g whole milk and 73g of low-fat milk, 1% or skimmed milk. Among those aged 65 years and over, the average daily intake of milk comprised of 99g whole milk and 96g of low-fat milk, 1% or skimmed milk indicating relatively similar ratios of whole milk to reduced fat milk for both age-groups **(Figure 4)**. Non-dairy milk alternatives were consumed by 11% of adults aged 19-64 years and 7% of those aged 65 years and over with an average daily intake of 5-6g across age groups.

Cheese was consumed by 62% of adults aged 19-64 years and 54% of those aged 65 years and over, with an average daily intake in the total population of 14g for adults aged 19-64 years and 12g for those aged 65 years and over **(Table 2)**.

Yogurt was consumed by 38% of adults aged 19-64 years and 43% of those aged 65 years and over, with an average daily intake in the total population of 39g for adults aged 19-64 years and 36g for those aged 65 years and over.

Average daily intake of butter & spreading fats in the total population was 8g for adults aged 19-64 years and 9g for those aged 65 years and over **(Table 2)**.

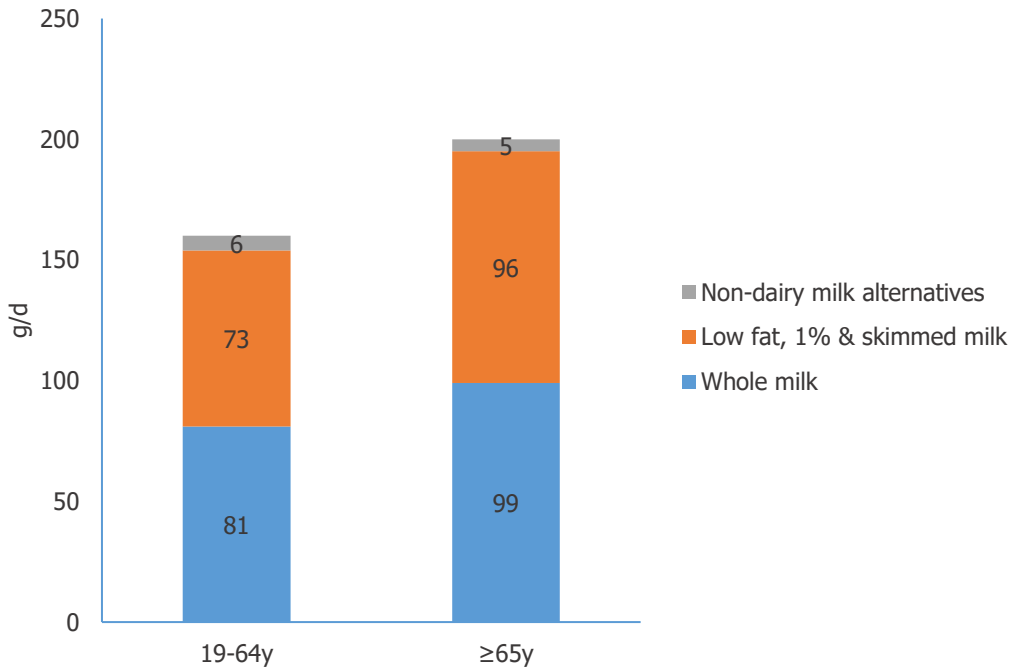

Figure 4. Mean intakes of whole milk, reduced fat milks and non-dairy milk alternatives in adults in Ireland

Meat, fish, eggs, nuts & seeds

Meat was a staple food in the diets of adults in Ireland consumed by 90% of adults aged 19-64 years and 87% of those aged 65 years and over. The average daily intake of meat in the total population was 141g for both adults aged 19-64 years and those aged 65 years and over **(Table 3)**.

Among those aged 19-64 years, total meat intake comprised of fresh meat (56g), meat dishes (49g), processed meat (36g) and meat alternatives including dishes (14g) **(Figure 5)**. Of the fresh meat, poultry (mainly chicken) was the most popular type consumed, followed by beef. Of the processed meat, 22g came from meat products (e.g. chicken pieces, burgers and sausages) and 15g from bacon and ham.

Among those aged 65 years and over, total meat intake comprised of meat dishes (56g), fresh meat (53g), processed meat (32g) and meat alternatives including dishes (13g) **(Table 3)**. Of the fresh meat, poultry (mainly chicken) was the most popular type consumed followed by beef. Of the processed meat, 19g came from meat products (e.g. chicken pieces, burgers and sausages) and 13g from bacon and ham.

Fish & fish dishes was consumed by 34% of adults aged 19-64 years and 41% of those aged 65 years and over, with an average daily intake in the total population of 28g for those aged 19-64 years and 26g for those aged 65 years and over **(Table 3)**.

Eggs & egg dishes was consumed by 41% of adults aged 19-64 years and 44% of those aged 65 years and over, with an average daily intake in the total population of 28g for those aged 19-64 years and 22g for those aged 65 years and over **(Table 3)**.

Nuts & seeds was consumed by 33% of adults aged 19-64 years and 37% of those aged 65 years and over, with an average daily intake in the total population of 6g for those aged 19-64 years and 5g for those aged 65 years and over **(Table 3)**.

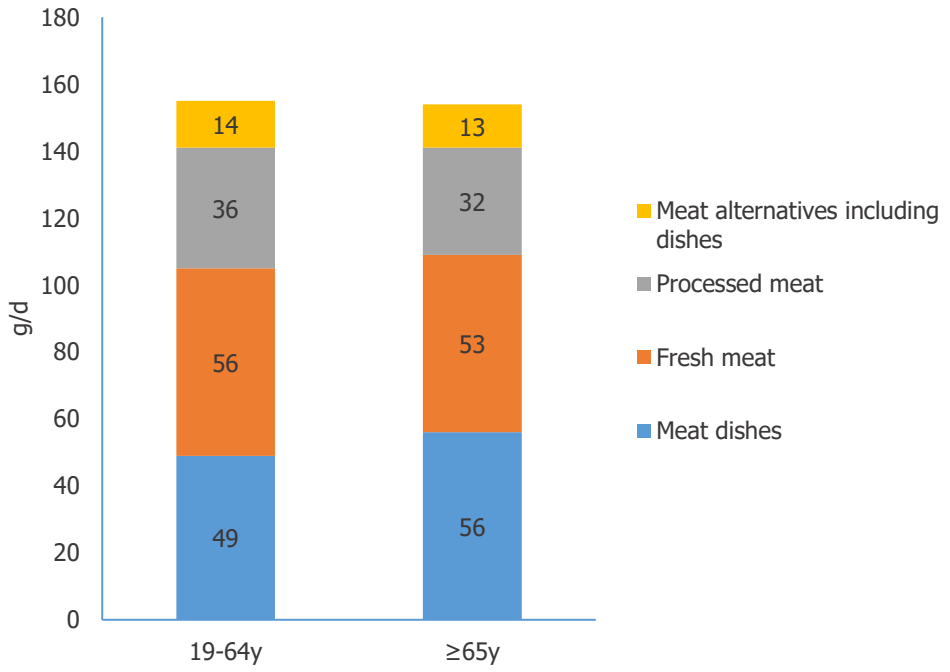

Figure 5. Mean intakes of meat dishes, processed meat and fresh meat in adults in Ireland

Fruit & vegetables

Fruit & vegetables was a staple food in the diets of adults in Ireland, consumed by 96% of adults aged 19-64 years and 99% of those aged 65 years and over **(Table 4)**. Adults aged 19-64 years had an average daily intake of 278g of fruit & vegetables which comprised of 123g discrete fruit, 39g of fruit juices & smoothies, 98g of discrete vegetables and 18g of vegetable & legume dishes **(Figure 6)**.

Adults aged 65 years and over had an average daily intake of 276g of fruit & vegetables which comprised of 126g discrete fruit, 32g of fruit juices & smoothies, 102g of discrete vegetables and 18g of vegetable & legume dishes **(Figure 6)**.

Overall, intake of fruit & vegetables was low for adults aged 19-64 years and for those aged 65 years with an average daily intake of approximately 3.5 servings per in both age groups which is well below the recommended 5-7 servings a day. This included about one and a half servings of vegetables and two servings of fruit including juices.

When compared to the recommended intake of at least 400g of fruit & vegetables per day (fruit juice & smoothies limited to 150g/d), just under one-fifth of adults met the recommended minimum intake (19-64 years: 18%, ≥65 years: 17%).

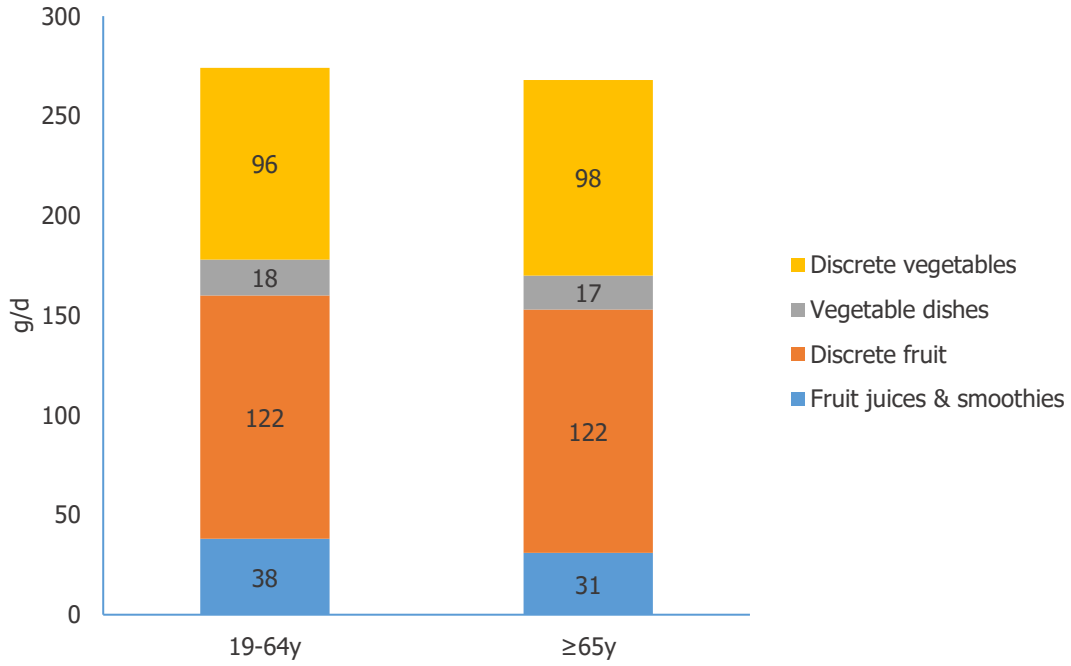

Figure 6. Mean intakes of fruit and vegetables in adults in Ireland

Biscuits, cakes, confectionery & savoury snacks

Biscuits, cakes, confectionery & savoury snacks were consumed by 95% of adults aged 19-64 years and 96% of those aged 65 years and over with an average daily intake in the total population of 74g for adults aged 19-64 years and 65g for those aged 65 years and over **(Table 5)**. Confectionery and snacks were consumed in all forms with the most commonly consumed among both age groups being biscuits, cakes & pastries, chocolate, preserves, and savoury snacks. Cereal & protein bars were consumed by 12% of adults aged 19-64 years with an average intake of 7g while just 3% of adults aged 65 years and over consumed cereal and protein bars with an average intake of 6g.

Beverages

Water was the most commonly consumed beverage among those aged 19-64 years (91% consumers) while tea was the most commonly consumed beverage among those aged 65 years and over (90% consumers) **(Table 6)**. Soft drinks (with and without added sugar) were consumed by 48% of adults aged 19-64 years with an average daily intake in the total population of 176g with 143g coming from the no-added sugar variety and 33g coming from the sugar-sweetened variety. Soft drinks (with and without added sugar) were consumed by 29% of adults aged 65 years and over with an average daily intake in the total population of 101g, with 77g coming from the no-added sugar variety and 24g coming from the sugar-sweetened variety.

Alcoholic beverages were consumed by 34% of adults aged 19-64 years and 39% of those aged 65 years and over with an average daily intake in the total population of 27g in both age groups. Non-alcoholic alternative beverages (e.g. 0% alcohol) were consumed by just 2% of adults aged 19-64 years and 1% of those 65 years and over.

Food supplements

Overall, 52% of adults aged 19-64 years and 59% of those aged 65 years and over consumed a food supplement on at least one of the recall days. Among those aged 19-64 years, multivitamins and minerals were the most common type of food supplement used (27% of all supplements recorded), followed by single vitamin D supplements (18%) and then fish/linseed/primrose oils (15%) **(Figure 7)**. Among those aged 65 years and over, single vitamin D supplements were the most common type of food supplement used (22%) followed by multivitamin and minerals (15%), fish/linseed/primrose oils (15%) and then vitamin D & calcium supplements (14%) **(Figure 8)**.

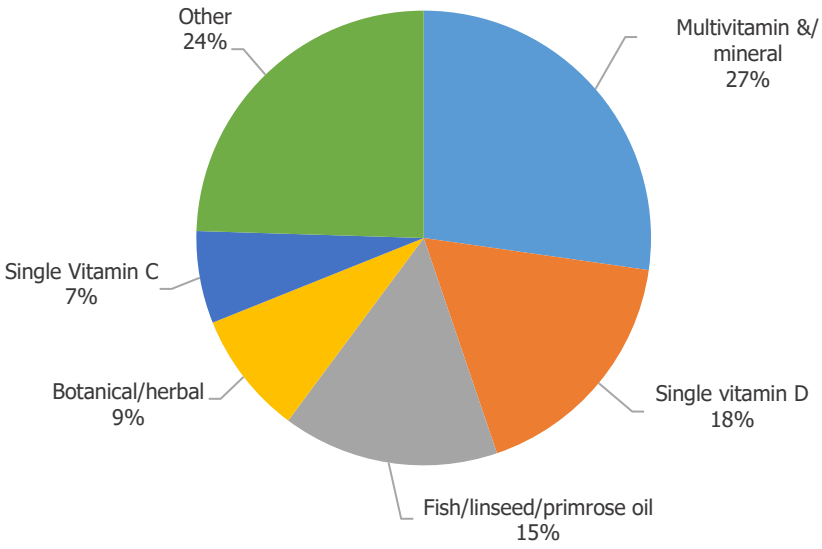

Figure 7. Categories of food supplements consumed by adults aged 19-64 years in Ireland

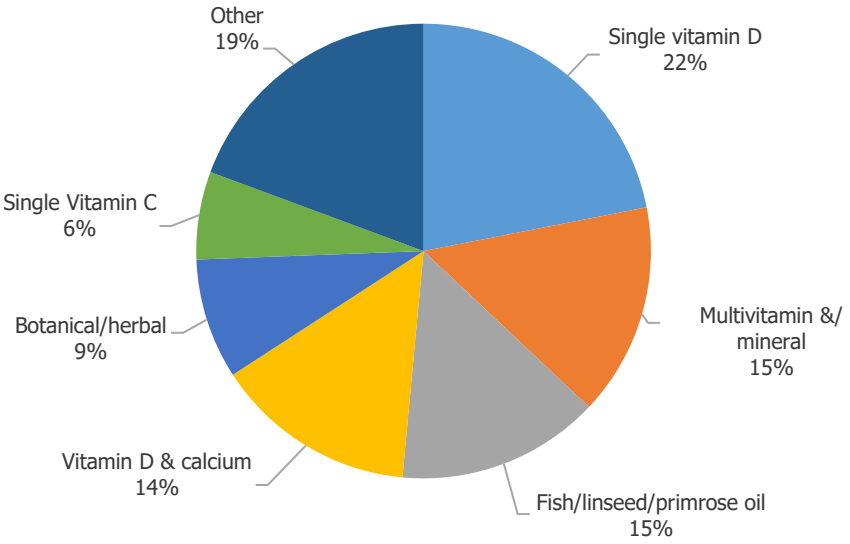

Figure 8. Categories of food supplements consumed by adults aged ≥65 years in Ireland

Table 1. Intakes of bread, cereals & potatoes (g/d) in adults aged 19-64 years and ≥65 years in Ireland

	19-64y (*n* 718)						**≥65y** (*n* 282)					
	Population			Consumers only*			Population			Consumers only*		
	Mean	SD	Median	%	Mean	SD	Mean	SD	Median	%	Mean	SD
Total bread	88	68	73	93	97	55	85	63	74	95	93	49
of which												
White bread	42	30	36	66	67	44	34	26	28	57	57	39
Wholemeal & brown bread	36	31	29	53	67	41	41	31	37	70	68	41
Other breads (e.g. garlic bread, fruit breads, scones)	10	18	3	21	48	43	10	18	3	21	44	29
Breakfast cereals	61	92	36	60	107	97	96	137	55	79	136	118
of which												
Ready-to-eat breakfast cereals	13	17	6	39	34	25	14	17	6	44	33	27
high-fibre cereals (≥6g/100g)	10	17	2	29	34	26	10	16	3	33	32	28
low-fibre cereals (<6g/100g)	3	2	3	12	27	17	4	2	3	17	23	22
Porridge and hot oats cereals (made up)	48	86	24	30	172	90	83	131	42	47	200	107
Pasta rice & savouries	75	50	62	65	131	121	46	32	39	44	76	64
of which												
Rice & pasta, flours, grains & starch	37	29	29	45	91	77	29	22	24	27	81	55
Savouries including pasta & rice dishes	38	26	31	34	130	122	17	12	15	20	60	68
Potatoes & potato products	83	57	67	67	100	70	78	52	64	86	103	62
of which												
Boiled, baked & mashed potatoes	48	40	36	39	99	62	44	36	34	63	103	62
Chipped, fried & roasted potatoes	21	16	17	37	61	43	20	15	16	34	57	37
Processed & homemade potato products	14	2	14	9	67	54	14	2	14	10	39	27

*Note: consumer only data (% consumers and amounts) were calculated based on intakes over the two recall days using SPSS© while intakes in the total population are modelled using the NCI-method for estimating usual intakes in a population group including information from the food propensity questionnaire as appropriate.

Table 2. Intakes of milk, dairy products & spreading fats (g/d) in adults aged 19-64 years and ≥65 years in Ireland

	19-64y (*n* 718)						**≥65y** (*n* 282)					
	Population			Consumers only*			Population			Consumers only*		
	Mean	SD	Median	%	Mean	SD	Mean	SD	Median	%	Mean	SD
Total milk	161	291	41	84	189	205	200	341	55	90	230	184
of which												
Whole milk	81	155	19	49	164	203	99	177	25	54	189	171
Low fat, 1% and skimmed milk	73	138	16	43	154	184	96	164	24	44	219	196
Non-dairy milk alternatives	6	7	4	11	119	113	5	6	4	7	131	117
Sweetened milk drinks (e.g. flavoured milks, hot chocolate)	8	4	7	6	205	189	7	3	7	4	206	160
Dairy Products												
Yogurts & fromage frais	39	47	18	38	100	55	36	42	18	43	95	64
Cheeses	14	9	12	62	25	21	12	8	11	54	23	20
Ice-creams	5	2	5	17	37	27	5	2	5	19	35	23
Dairy desserts (e.g. rice pudding, custard)	4	1	4	3	69	58	5	1	5	12	58	37
Creams	2	1	2	6	25	18	2	1	2	10	19	24
Butter & spreading fats	8	9	4	70	10	9	9	9	6	85	11	9

*Note: consumer only data (% consumers and amounts) were calculated based on intakes over the two recall days using SPSS© while intakes in the total population are modelled using the NCI-method for estimating usual intakes in a population group including information from the food propensity questionnaire as appropriate.

Table 3. Intakes of meat, fish, eggs, nuts & seeds (g/d) in adults aged 19-64 years and ≥65 years in Ireland

	19-64y (*n* 718)						**≥65y** (*n* 282)					
	Population			Consumers only*			Population			Consumers only*		
	Mean	SD	Median	%	Mean	SD	Mean	SD	Median	%	Mean	SD
Total meat	141	70	126	90	163	102	141	68	128	87	151	94
of which												
Fresh meat	56	22	51	58	90	60	53	19	50	64	85	60
Poultry	30	19	25	41	75	51	25	16	21	32	75	60
Beef	14	5	13	18	75	50	16	5	15	25	70	42
Lamb	6	1	6	3	89	67	7	1	7	9	78	61
Pork	5	0	5	7	78	41	6	0	6	11	59	27
Meat dishes	49	25	44	41	133	88	56	31	51	32	143	85
Processed meat	36	29	28	66	61	50	32	25	25	57	54	45
Meat products	22	16	18	46	55	45	19	14	15	36	45	39
Bacon and ham	15	15	10	44	34	34	13	13	9	41	37	34
Meat alternatives including dishes	14	3	14	7	86	62	13	3	13	2	49	38
Fish & fish dishes	28	23	22	34	86	63	26	20	21	41	72	43
Eggs & egg dishes	28	24	21	41	66	43	22	19	16	44	52	31
Nuts & seeds	6	12	2	33	19	22	5	10	1	37	17	23

*****Note: consumer only data (% consumers and amounts) were calculated based on intakes over the two recall days using SPSS© while intakes in the total population are modelled using the NCI-method for estimating usual intakes in a population group including information from the food propensity questionnaire as appropriate.

Table 4. Intakes of fruit, fruit juices & vegetables (g/d) in adults aged 19-64 years and ≥65 years in Ireland

	19-64y (*n* 718)						**≥65y** (*n* 282)					
	Population			Consumers only*			Population			Consumers only*		
	Mean	SD	Median	%	Mean	SD	Mean	SD	Median	%	Mean	SD
Total fruit & vegetables	274	247	204	96	281	201	268	229	205	99	302	191
Fruit & fruit juices	160	153	117	80	196	148	153	137	117	90	188	144
Discrete fruit	122	98	99	77	157	111	122	93	103	87	155	108
of which												
Bananas	38	35	25	44	85	44	38	34	25	49	82	44
Citrus fruits	19	33	4	26	72	60	21	37	5	28	84	54
Tinned fruits	2	0	2	6	26	29	2	0	2	7	25	19
Other fruits (e.g. berries, apples, grapes)	63	49	54	61	106	80	60	47	55	73	95	67
Fruit juice & smoothies	38	71	9	25	145	135	31	60	6	27	127	127
Total vegetables	114	103	84	89	127	120	115	101	86	97	134	114
Discrete vegetables	96	77	76	87	108	107	98	76	77	95	120	105
of which												
Salad vegetables	27	21	22	58	47	50	29	21	24	67	48	42
Legumes (peas, beans & lentils)	14	16	9	30	46	50	10	11	6	37	31	28
Green vegetables	15	14	11	32	47	42	16	15	11	39	46	28
Carrots	8	7	6	29	25	25	10	8	8	48	27	19
Pickled & oily vegetables	2	1	2	7	19	29	2	1	2	12	18	17
Other vegetables	30	26	23	59	51	67	31	29	24	66	56	73
Vegetable & legume dishes	18	33	6	27	69	62	17	32	6	21	79	97

***Note: consumer only data (% consumers and amounts) were calculated based on intakes over the two recall days using SPSS© while intakes in the total population are modelled using the NCI-method for estimating usual intakes in a population group including information from the food propensity questionnaire as appropriate.

Table 5. Intakes of biscuits, cakes, confectionery & savoury snacks in adults aged 19-64 years and ≥65 years in Ireland

	19-64y (*n* 718)						**≥65y** (*n* 282)					
	Population			Consumers only*			Population			Consumers only*		
	Mean	SD	Median	%	Mean	SD	Mean	SD	Median	%	Mean	SD
Total Confectionery	73	56	57	95	76	62	63	46	50	94	69	54
of which												
Biscuits & crackers	16	17	11	53	28	26	15	15	10	62	31	33
Cakes, pastries & buns	16	12	13	33	46	32	14	12	12	41	45	34
Chocolate confectionery	11	11	8	41	27	20	7	7	5	34	22	21
Sugars, sweeteners, preserves & spreads	10	11	6	60	16	19	11	12	7	66	17	18
Desserts (e.g. cheesecake, mousse)	5	1	5	11	53	47	5	1	5	12	41	23
Savoury snacks	7	11	3	30	28	38	4	6	1	12	18	14
Cereal & protein bars	7	2	7	12	29	16	6	2	6	3	20	14
Sugar confectionery	1	0	1	13	30	37	1	0	1	8	15	8

***Note:** consumer only data (% consumers and amounts) were calculated based on intakes over the two recall days using SPSS© while intakes in the total population are modelled using the NCI-method for estimating usual intakes in a population group including information from the food propensity questionnaire as appropriate.

Table 6. Intakes of beverages (g) in adults aged 19-64 years and ≥65 years in Ireland

	19-64y (*n* 718)						**≥65y** (*n* 282)					
	Population			Consumers only*			Population			Consumers only*		
	Mean	SD	Median	%	Mean	SD	Mean	SD	Median	%	Mean	SD
Water as a beverage	1013	712	904	91	1188	805	664	492	575	81	693	523
Milk as a beverage	50	28	44	14	263	267	50	27	44	14	209	105
Sweetened milk drinks	8	4	7	6	205	189	7	3	7	4	206	160
Soft drinks±	175	275	60	48	268	258	101	160	38	29	195	161
of which												
Soft drinks, added sugar	33	29	25	25	264	238	24	17	20	14	195	128
Soft drinks, no added sugar	142	267	19	31	208	200	76	156	9	19	165	159
Teas	376	325	337	69	547	410	618	403	575	90	744	436
Coffees	278	231	263	69	423	266	202	187	175	58	363	251
Smoothies	30	6	26	5	199	121	29	6	29	3	132	86
Fruit juice	8	18	3	21	123	120	9	18	4	25	121	129
of which												
Fruit juice (100%)	7	14	3	21	121	120	8	14	4	24	99	76
Alcoholic beverages	233	356	99	34	696	718	112	191	37	39	323	408
Non-alcoholic alternative beverages (e.g. 0% alcohol)	27	3	27	2	269	194	27	3	26	1	318	134

*Note: consumer only data (% consumers and amounts) were calculated based on intakes over the two recall days using SPSS© while intakes in the total population are modelled using the NCI-method for estimating usual intakes in a population group including information from the food propensity questionnaire as appropriate.

±carbonated beverages, energy drinks, fruit juice drinks, squashes and cordials

Chapter 2 Energy and nutrient intakes

Introduction

This chapter describes the average daily intakes of energy, dietary fibre and nutrients of adults aged 19-64 years and those aged 65 years and over in Ireland. For energy, dietary fibre and selected nutrients, the key dietary sources are also shown (note shortened food group names are presented – see **Appendix I** for full detail). Energy and nutrient intakes were estimated using food composition tables, updated with current manufacturers' information where applicable.

Energy and macronutrients

Average daily intakes of energy and macronutrients for adults aged 19-64 years and those aged 65 years and over in Ireland are reported in **Table 7**. On average, adults aged 19-64 years consumed 1889 kcals of energy per day and those aged 65 years and over consumed 1701 kcals per day. The main sources of energy for both age groups were meat & meat products, bread & bread products, grains, rice, pasta & savouries, milk & yogurt and fruit & fruit juices contributing 50% of energy intake in adults aged 19-64 years and 52% in those aged 65 years and over **(Figure 9)**. Approximately one-fifth of energy intake for both age-groups was provided by 'top shelf' foods (i.e. 'sugars, confectionery & savoury snacks', 'biscuits, cakes & pastries' and sugar-sweetened drinks). The percentage of energy intake from foods and beverages obtained from outside the home environment was 15% for adults aged 19-64 years and 13% for those aged 65 years and over.

The average percentage of energy coming from protein was 18% of total energy (TE) for both adults aged 19-64 years and those aged 65 years and over and the main sources of protein intake were meat & meat products, bread & bread products, and milk & yogurt contributing approximately 50% of protein intake in both age-groups **(Figure 10)**.

The average percentage of energy from fat was 36%TE for adults aged 19-64 years and 35%TE for those aged 65 years and over, which is above the UK Department of Health recommendation of approximately 35%TE. Less than 1% of adults in both age groups had fat intakes below the lower end of the reference intake (RI) range from EFSA of 20%TE while 68% of adults aged 19-64 years and 65% of those aged 65 years and over had total fat intakes above the upper end of the RI range of 35%TE. The average contribution of saturated fat to energy intake in adults aged 19-64 years and those aged 65 years and over (14%TE for both age groups) was higher than recommended by the UK Scientific Committee on Nutrition (less than 10%TE). The key sources of saturated fat intake were meat & meat products, milk & yogurt, cheeses, and butter & spreading fats contributing 45% of saturated fat intake in adults aged 19-64 years and 51% in those aged 65 years and over **(Figure 12)**. 'Top shelf' foods (i.e. 'biscuits, cakes & pastries' and 'sugars, confectionery & savoury snacks') contributed 18%TE of saturated fat intakes in adults aged 19-64 years and 17%TE in those aged 65 years and over.

The average percentage of energy from carbohydrate was 42%TE for adults aged 19-64 years and 43%TE for those aged 65 years and over which is below the recommendation from the UK Scientific Committee on Nutrition of approximately 47%TE. Over two-thirds of adults aged 19-64 years (68%) and those aged 65 years and over (65%) had carbohydrate intakes below the lower end of the RI range from EFSA of 45%TE while less than 1% in both age groups had intakes above the upper end of the RI range of 60%TE. The main sources of carbohydrate intake were bread & bread products, grains, rice, pasta & savouries, fruit & fruit juices and sugars, confectionery & savoury snacks contributing 51% of carbohydrate intakes in adults aged 19-64 years and 47% in those aged 65 years and over **(Figure 13)**.

The average intake of total sugars was 17%TE in adults aged 19-64 years and 18%TE in those aged 65 years and over. The main sources of total sugars intake were fruit

& fruit juices, milk & yogurt and vegetables & vegetable dishes contributing 42% of total sugars intakes in adults aged 19-64 years and 49% in those aged 65 years and older. 'Top shelf' foods (i.e. 'sugars, confectionery & savoury snacks', 'sugar-sweetened drinks' and 'biscuits, cakes & pastries') contributed to 37% of total sugars intakes in adults aged 19-64 years and 29% in those aged 65 years and over **(Figure 14)**.

Overall intakes of energy, macronutrients, saturated fat and total sugars were generally similar to that reported in the previous NANS (2008-10) for adults aged 19-64 years and those aged 65 years and over.

Table 7. Usual intakes of energy, dietary fibre and macronutrients in adults aged 19-64 years and ≥65 years in Ireland

		19-64y (*n* 718)		**≥65y** (*n* 282)	
		Mean	SD	Mean	SD
Total energy	MJ	7.9	2.2	7.1	1.8
	kcal	1889	536	1701	428
Food energy	MJ	7.6	2.1	6.8	1.7
	kcal	1805	495	1627	401
Protein	g	81.9	24.0	74.8	18.1
	(%TE)	17.8	3.0	18.2	3.0
Total fat	g	76.1	24.2	68.0	20.8
	(%TE)	35.9	5.3	35.4	5.2
Saturated fat	g	28.5	10.2	26.7	9.1
	(%TE)	13.5	3.1	14.0	3.1
Carbohydrate	g	209	64.7	191	54.8
	(%TE)	42.2	5.9	42.7	5.8
Total sugars	g	85.9	31.0	82	28.4
	(%TE)	17.3	4.1	18.2	4.1
Dietary fibre	g	18.3	6.1	17.8	5.8
	g/10MJ	24.4	6.7	26.0	6.7
Alcohol	g	13.0	18.6	8.8	12.8
	(%TE)	4.0	5.5	3.1	4.5

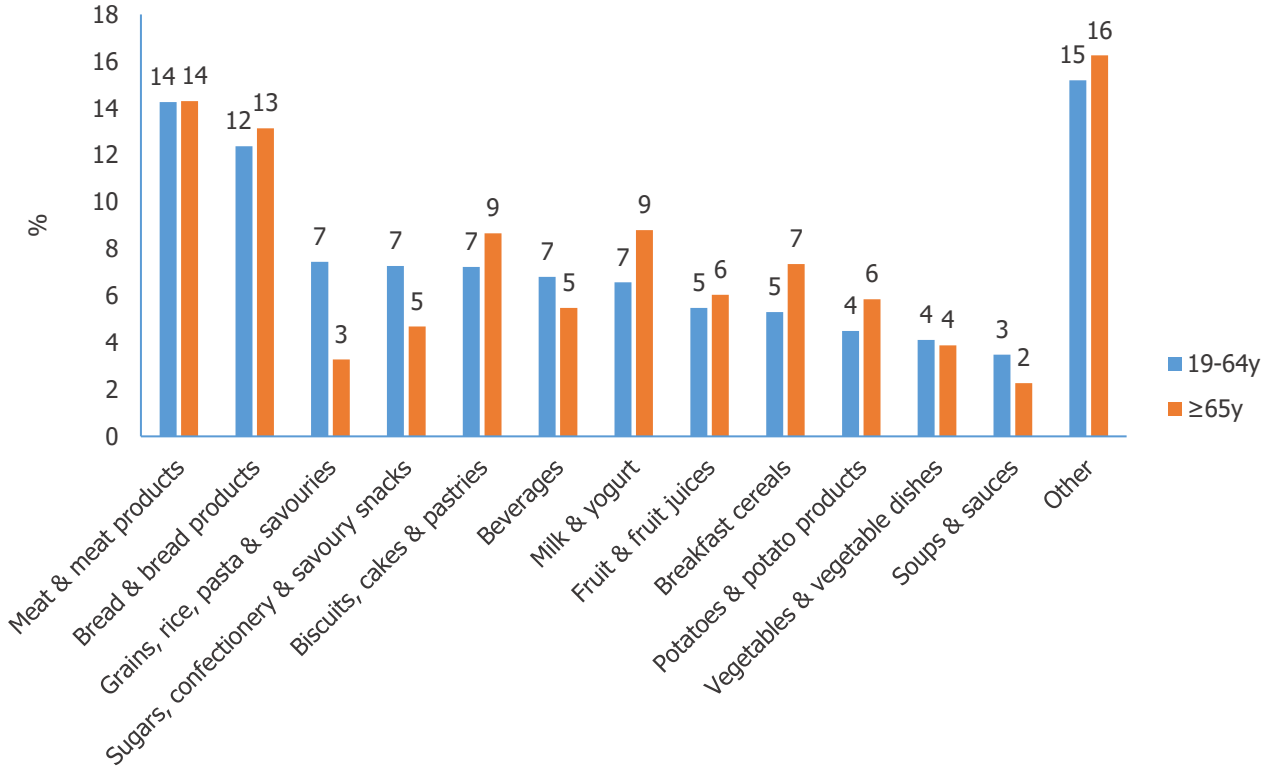

Figure 9. Sources of energy in adults in Ireland

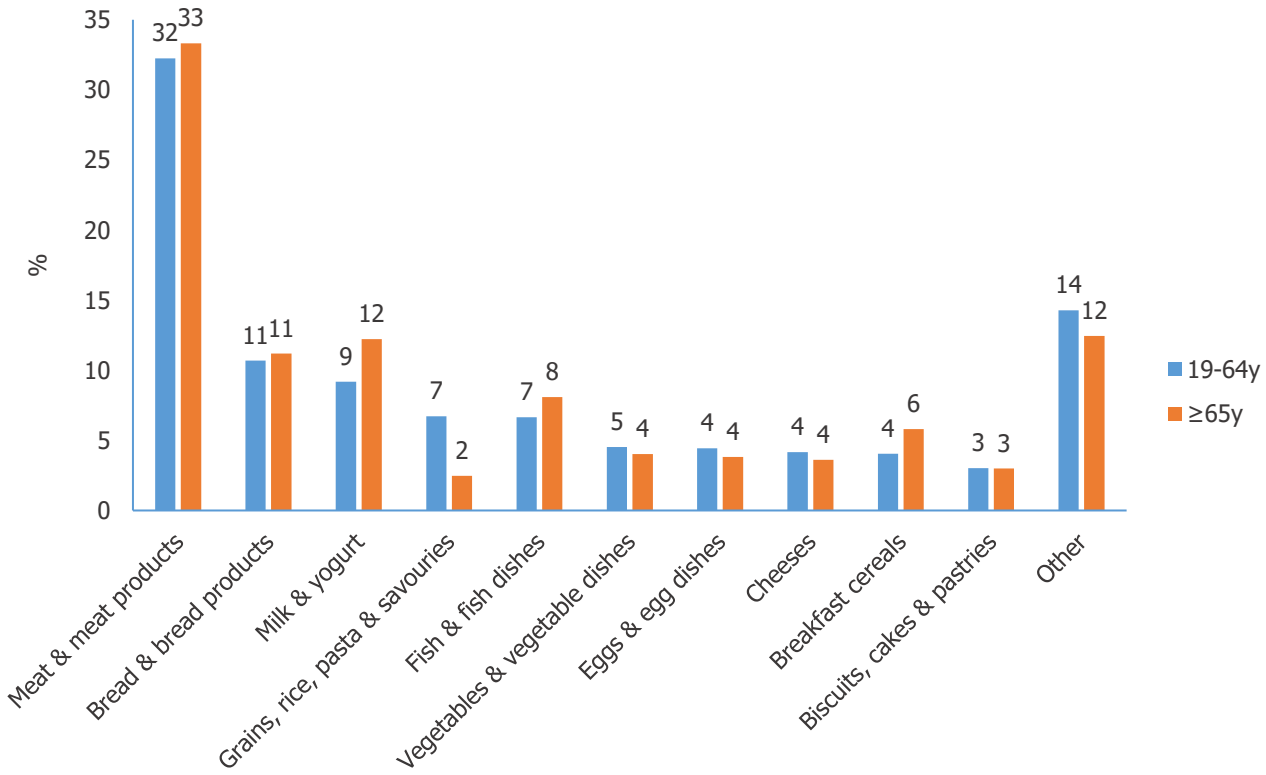

Figure 10. Sources of protein in adults in Ireland

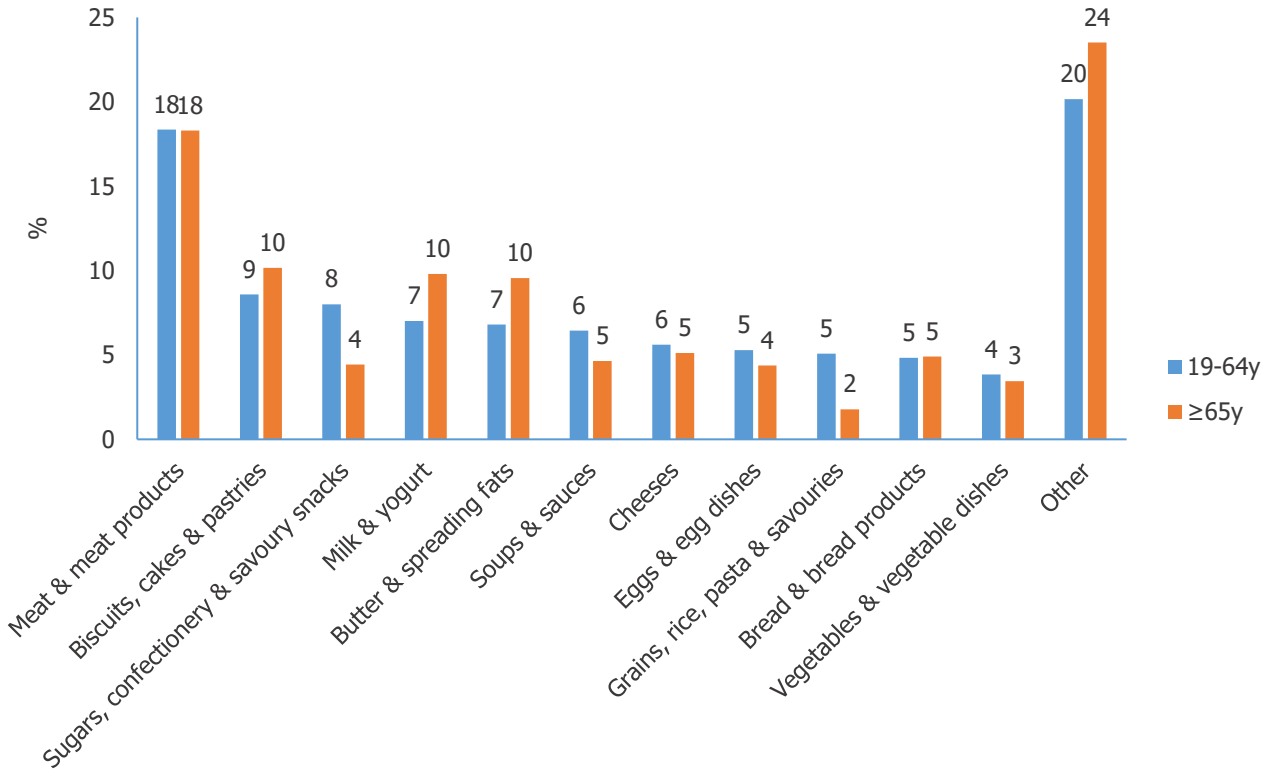

Figure 11. Sources of total fat in adults in Ireland

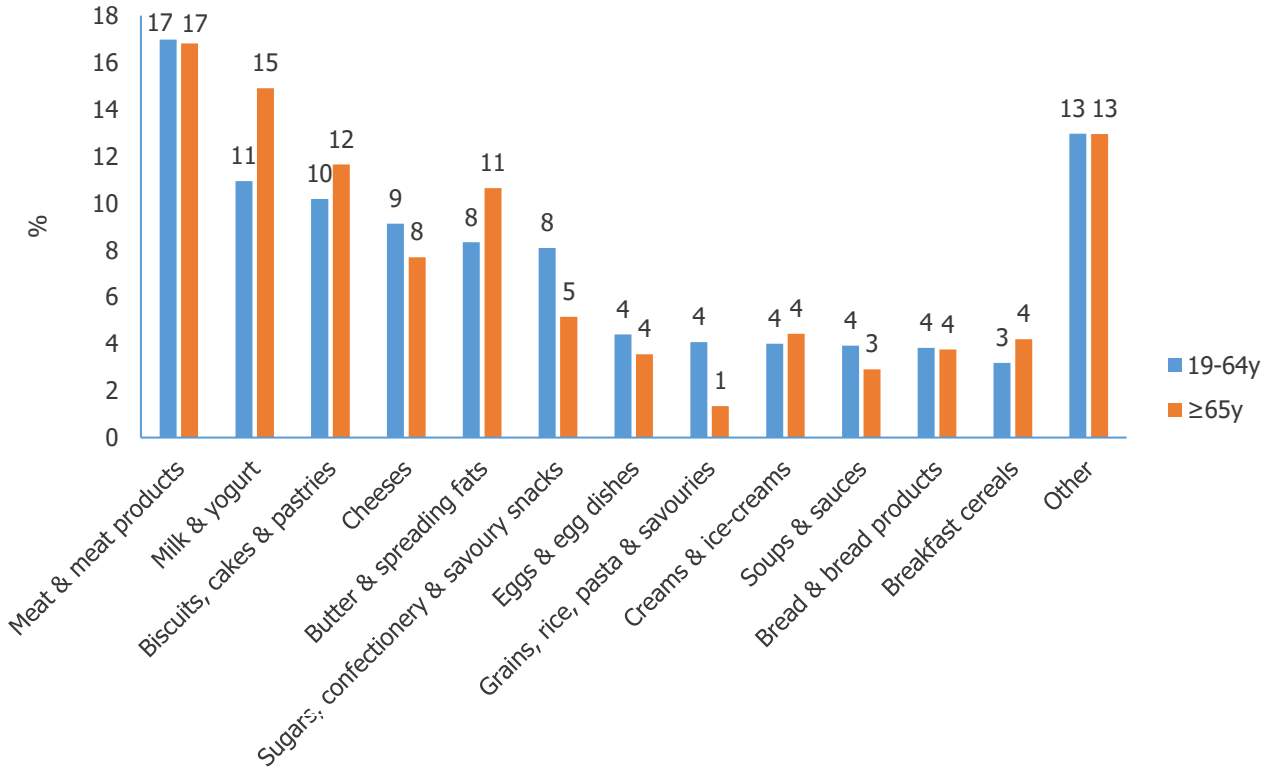

Figure 12. Sources of saturated fat in adults in Ireland

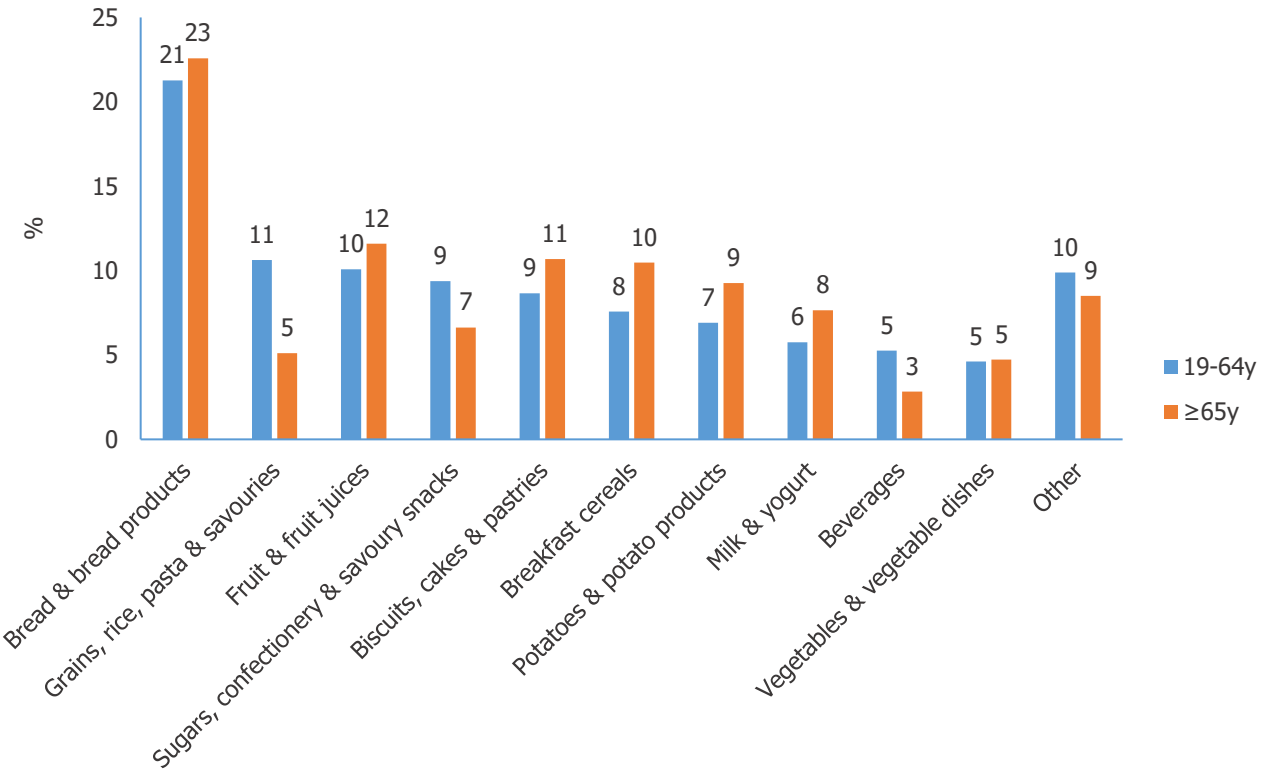

Figure 13. Sources of carbohydrate in adults in Ireland

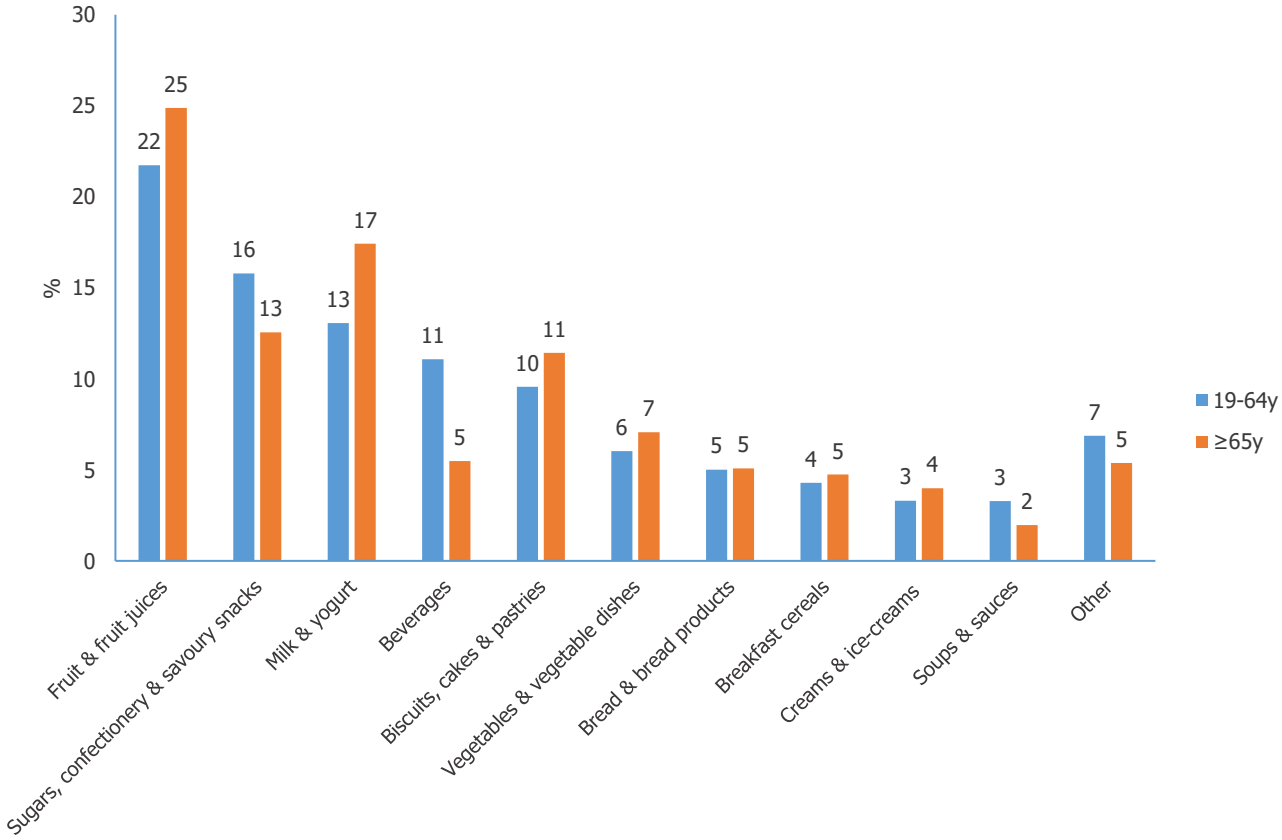

Figure 14. Sources of total sugars in adults in Ireland

Dietary fibre

Dietary fibre plays a role in normal bowel function and is required in the diet to prevent constipation. The average daily intake of dietary fibre in both adults aged 19-64 years and those aged 65 years and over was 18g **(Table 7)**. The main sources of dietary fibre were bread & bread products, vegetables & vegetable dishes, fruit & fruit juices, breakfast cereals, grains, rice, pasta & savouries and potatoes & potato products **(Figure 15)**.

The average dietary fibre intake in the NANS II was similar to that in the previous NANS (2008-10) (18g for both adults aged 18-64 years and those aged 65 years and over) with intakes still below the adequate intake established by the European Food Safety Authority (25g per day) for normal bowel function in adults.

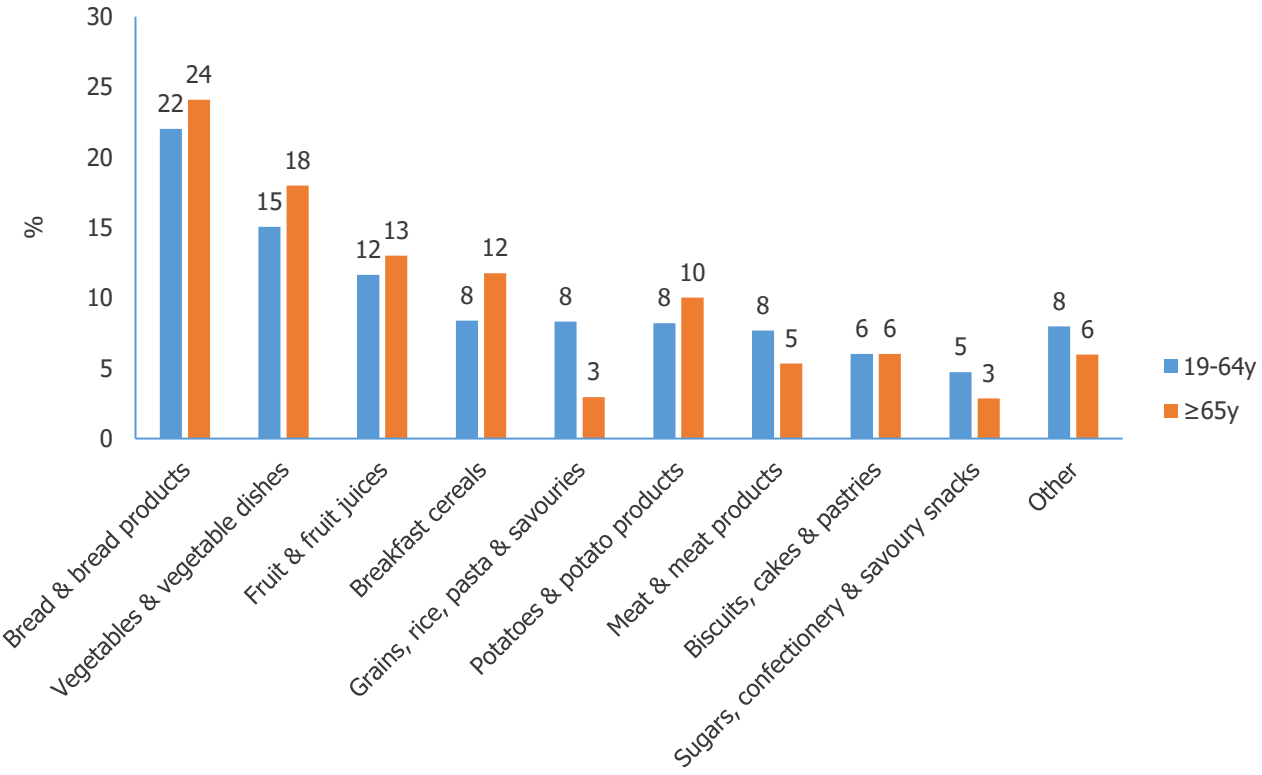

Figure 15. Sources of dietary fibre in adults in Ireland

Salt

High intakes of dietary sodium (salt) are associated with increased blood pressure. Mean salt intake (estimated from urinary output) was 9.5g in males and 7.8g in females aged 19-64 years and was 9.4g in males and 6.5g in females aged 65 years and over and exceeded the target maximum daily level set by the FSAI for adults (6g).

Salt intake from food sources only (excluding discretionary salt i.e. that added in cooking or at the table) was also estimated and the main dietary sources of salt intake in adults in Ireland are shown in **Figure 16** with meat & meat products, bread & bread products and soups & sauces contributing 51% of salt intakes in adults aged 19-64 years and 53% in those aged 65 years and over.

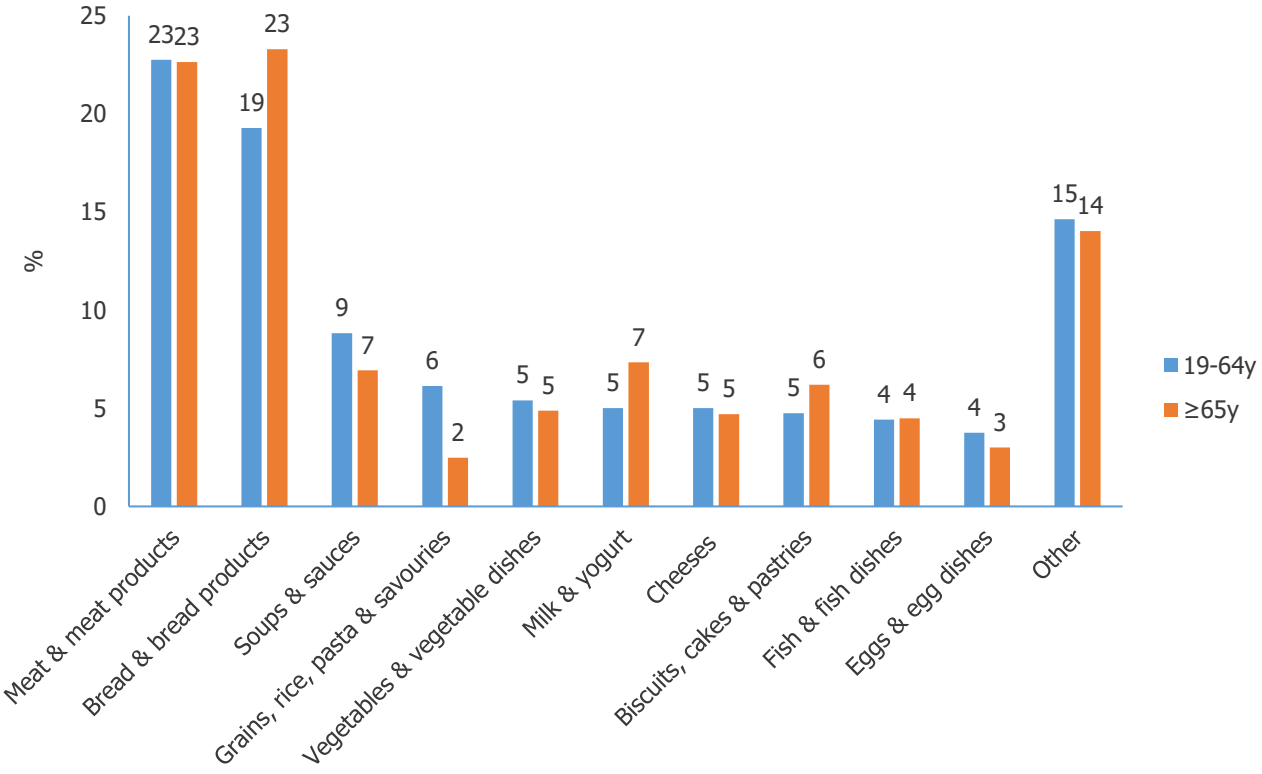

Figure 16. Sources of salt in adults in Ireland

Vitamin and mineral intakes

Adequate micronutrient intakes are necessary for general health and wellbeing. Average daily intakes of selected vitamins and minerals in adults aged 19-64 years and those aged 65 years and over are reported in **Table 8**. The key sources of vitamins A, D, C, riboflavin, vitamin B6, vitamin B12, folate, calcium, iron and zinc are displayed in **Figures 17-26** (note shortened food group names are presented – see **Appendix I** for full detail). Estimates of micronutrient intakes include contributions from natural sources, food supplements and fortified foods. The prevalence of inadequate intakes was calculated using Estimated Average Requirements (EAR) as cut-points (excluding energy-under reporters). A large proportion of adults aged 19-64 years had inadequate intakes of vitamin D (61%), vitamin C (41%), folate (37%), calcium (32%), zinc (28%), vitamin B6 (26%), riboflavin (23%) and vitamin A (16%) Furthermore, 14% of females aged 19-64 years had inadequate intakes of iron. Similarly, a large proportion of adults aged 65 years and over had inadequate intakes of vitamin D (48%), vitamin C (43%), folate (36%), zinc (35%), calcium (31%), vitamin B6 (29%), riboflavin (21%) and vitamin A (13%), while 13% of females aged 65 years and over had inadequate intakes of iron.

Table 8. Usual intakes of vitamins and minerals in adults aged 19-64 years and ≥65 years in Ireland

	19-64y (*n* 718)		**≥65y** (*n* 282)	
	Mean	SD	Mean	SD
Vitamins				
Total Vitamin A (µg)	874	371	929	386
Retinol (µg)	401	242	418	243
Carotene (µg)	2832	1710	3056	1788
Vitamin D (µg)	12.0	14.0	17.5	18.4
Vitamin E (mg)	12.9	9.3	10.9	7.9
Thiamin (mg)	2.3	1.6	2.5	1.7
Riboflavin (mg)	2.6	1.9	2.8	1.9
Total Niacin Equivalents (mg)	42.6	15.2	37.4	11.3
Pantothenate (mg)	8.2	4.8	8.4	4.7
Biotin (µg)	56.5	33.9	55.8	32.6
Vitamin B6 (mg)	2.7	1.9	2.5	1.7
Vitamin B12 (µg)	11.5	14.4	13.4	15.7
Total Folate (µg)	307	145	309	143
Dietary Folate Equivalents (DFE) (µg)	361	208	365	206
Vitamin C (mg)	137	116	134	110
Minerals				
Sodium (mg)	2143	670	1734	528
Potassium (mg)	2980	762	3015	713
Calcium (mg)	965	394	996	379
Iron (mg)	11.8	4.7	10.6	4.1
Magnesium (mg)	317	109	299	97.5
Zinc (mg)	11.1	4.9	10.8	4.5
Copper (mg)	1.2	0.4	1.1	0.4
Phosphorous (mg)	1329	397	1274	336

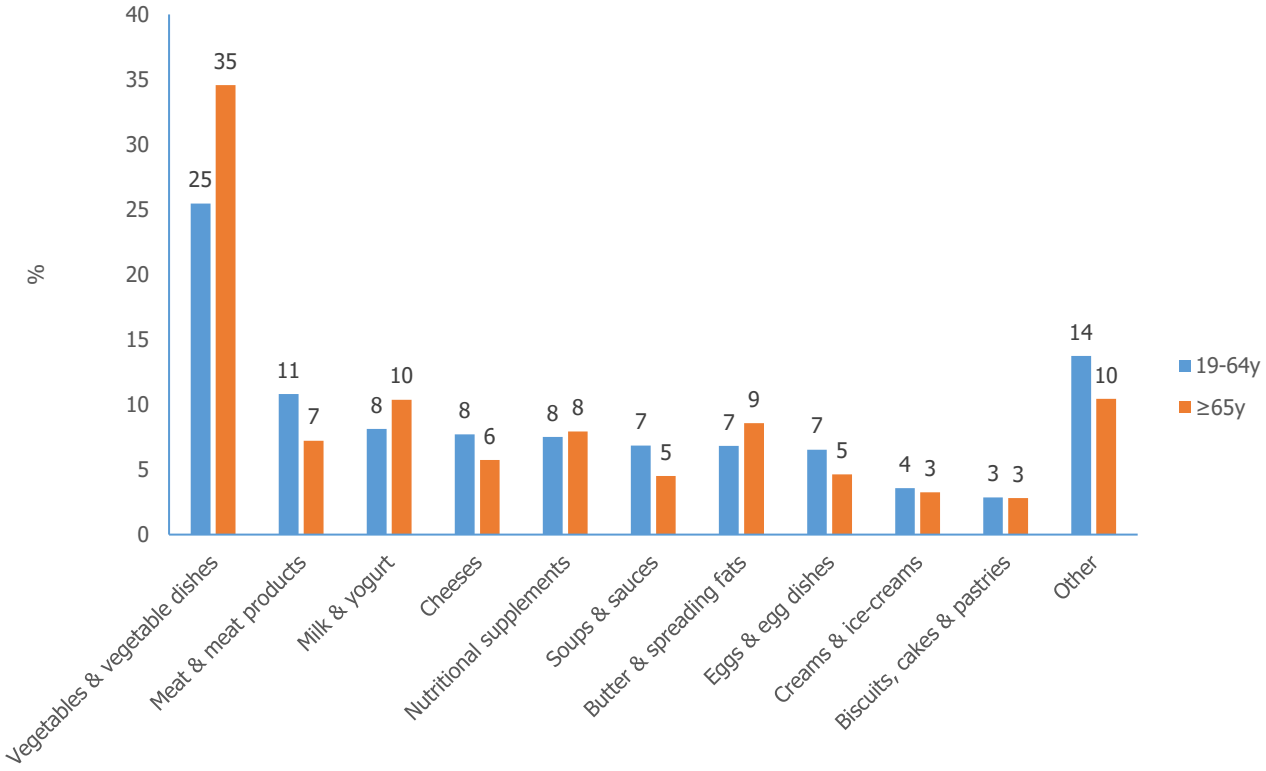

Figure 17. Sources of vitamin A in adults in Ireland

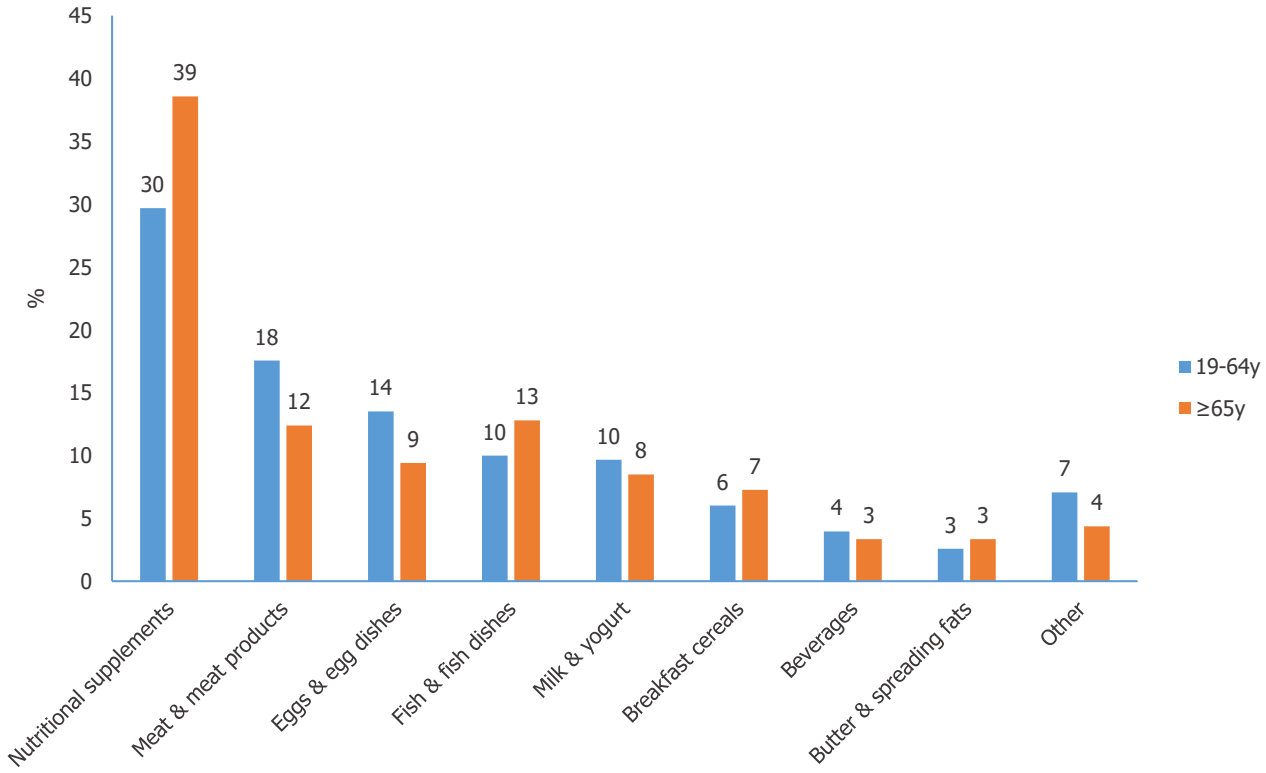

Figure 18. Sources of vitamin D in adults in Ireland

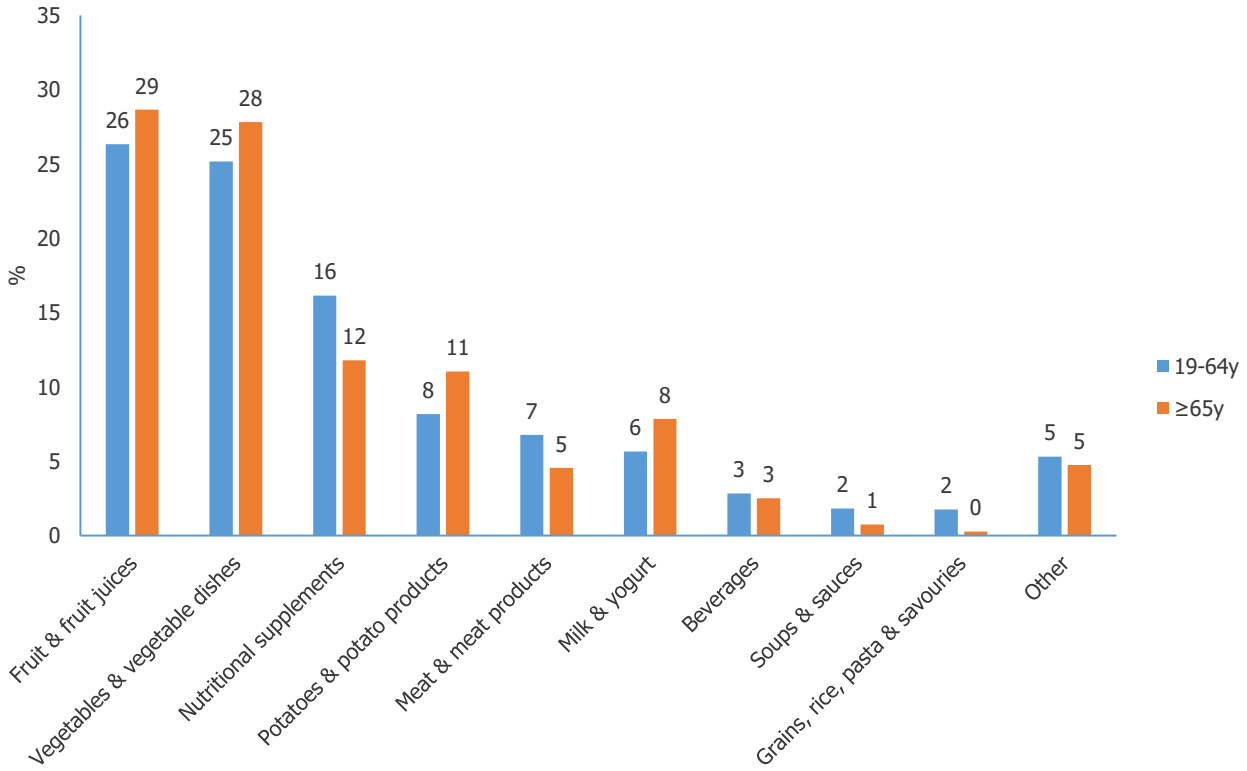

Figure 19. Sources of vitamin C in adults in Ireland

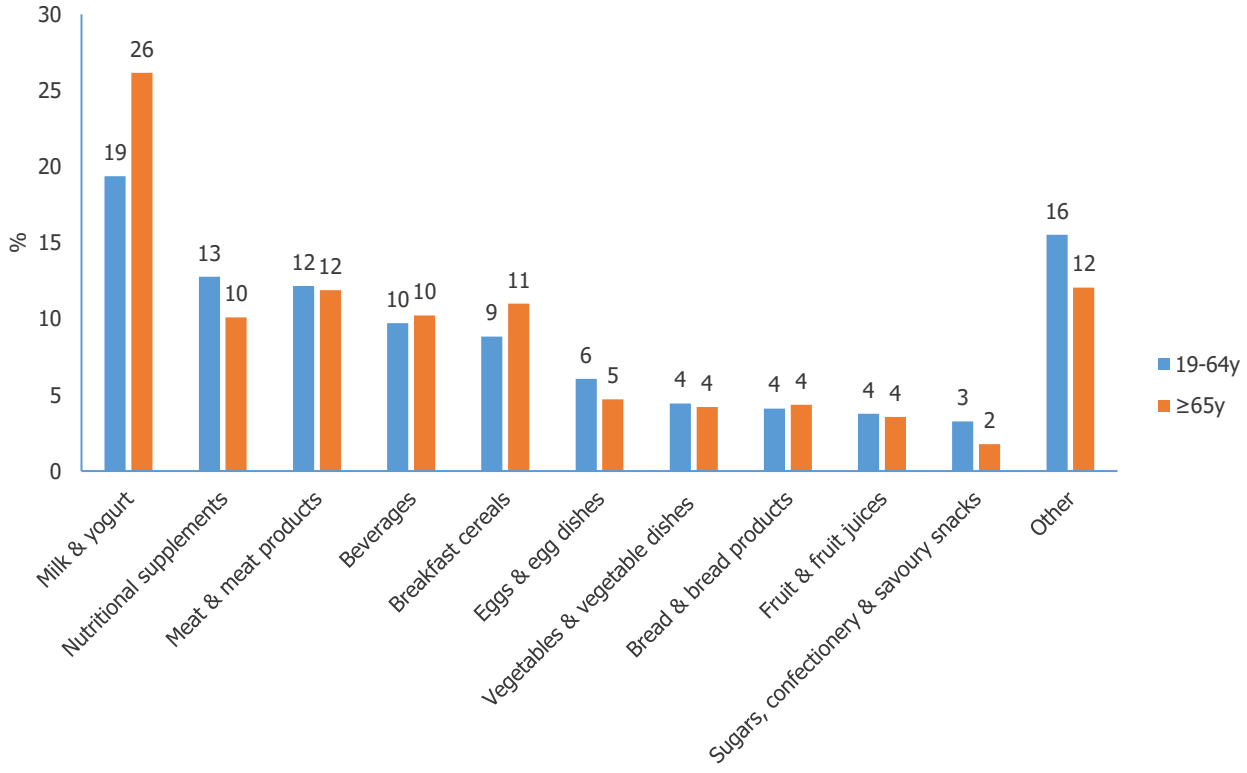

Figure 20. Sources of riboflavin in adults in Ireland

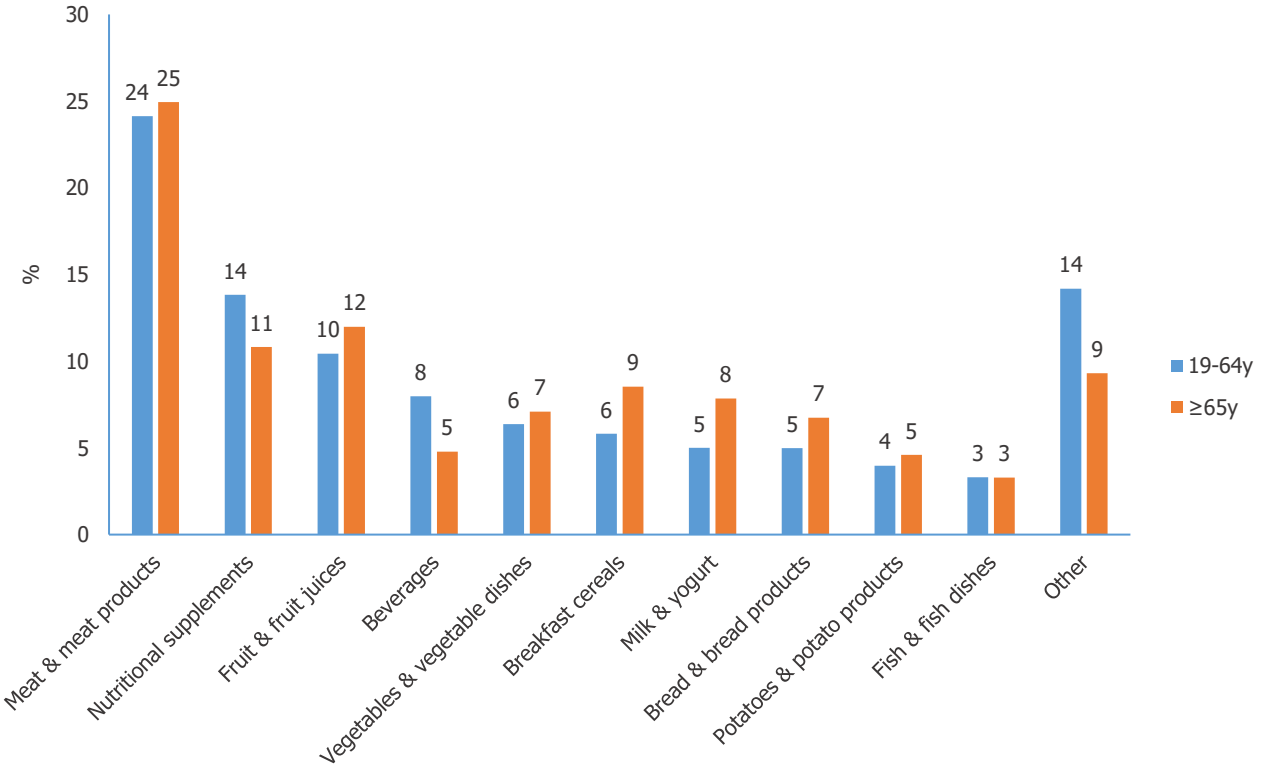

Figure 21. Sources of vitamin B6 in adults in Ireland

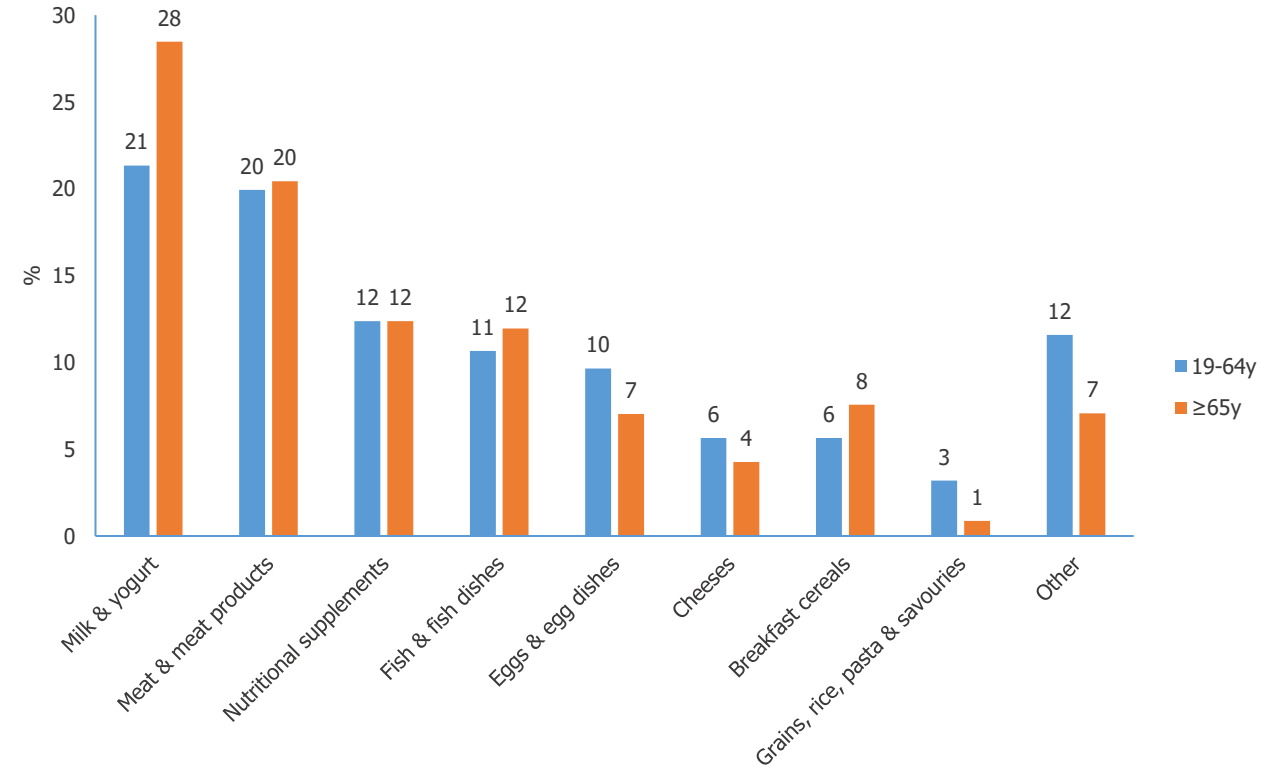

Figure 22. Sources of vitamin B12 in adults in Ireland

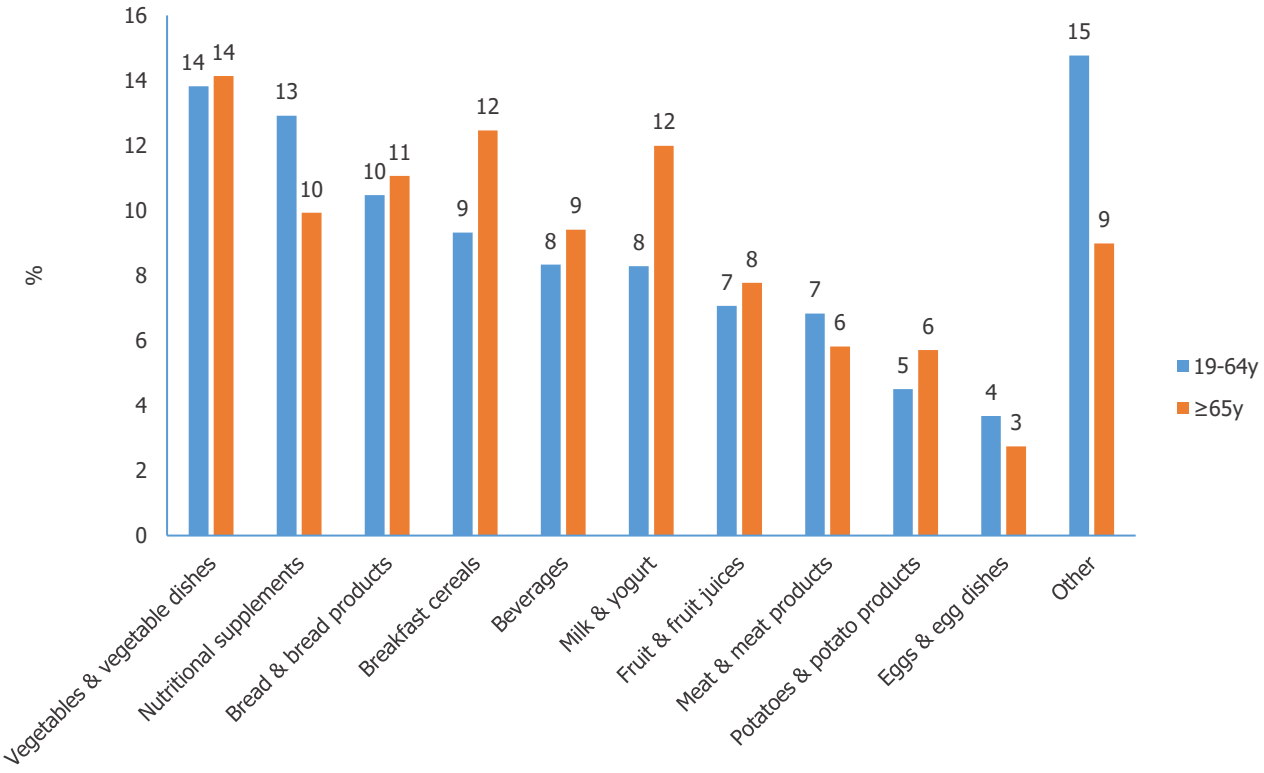

Figure 23. Sources of folate (dietary folate equivalents) in adults in Ireland

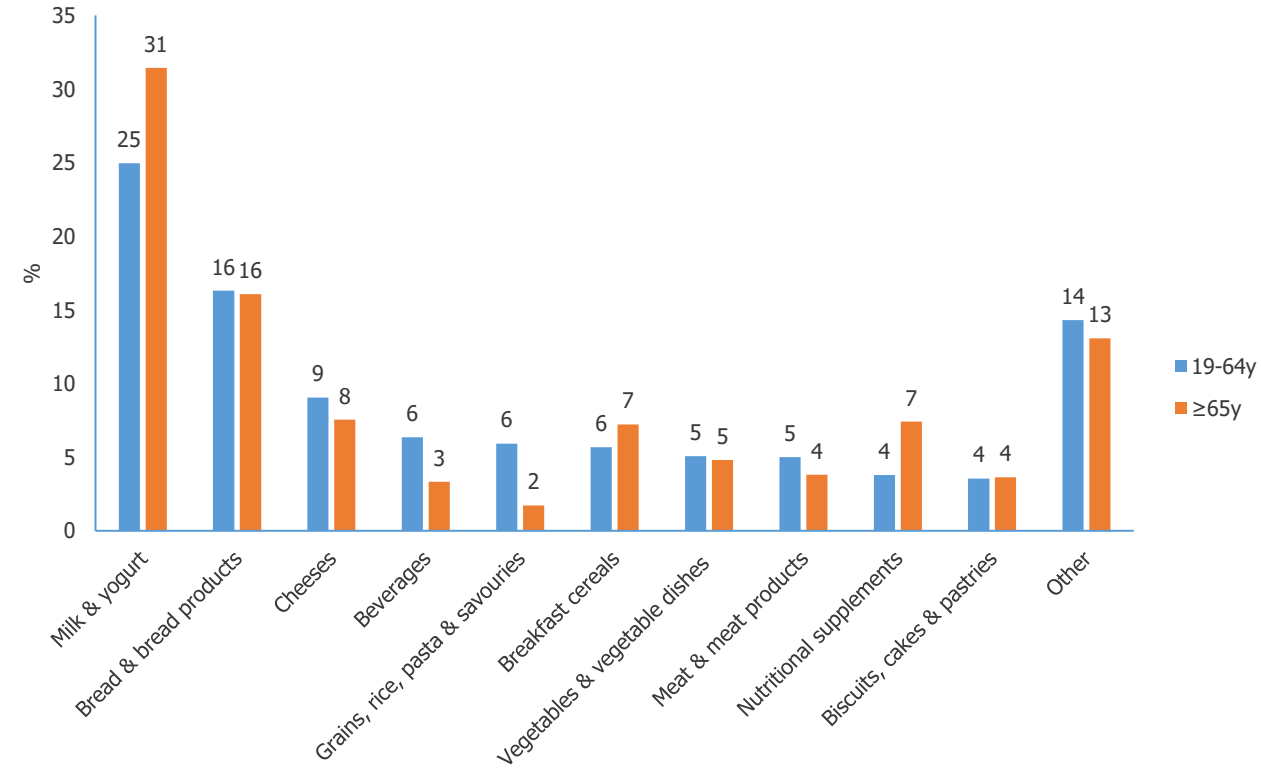

Figure 24. Sources of calcium in adults in Ireland

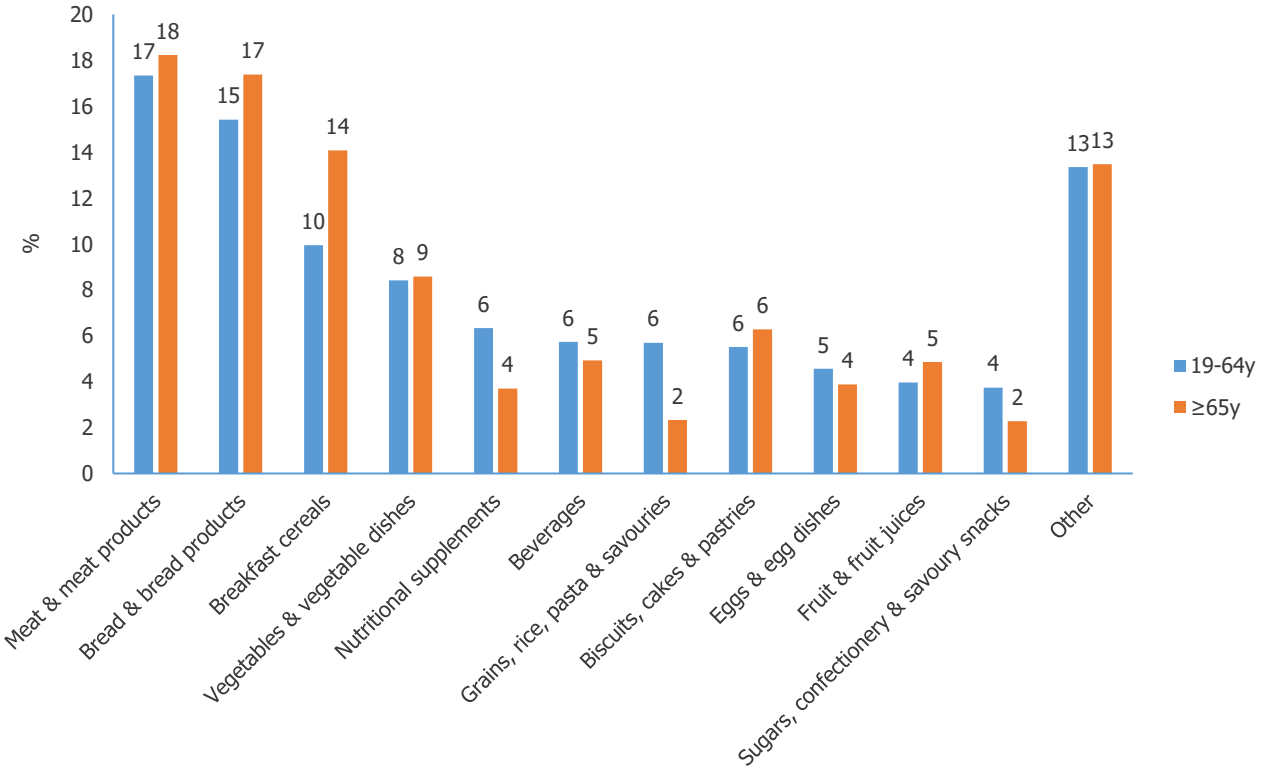

Figure 25. Sources of iron in adults in Ireland

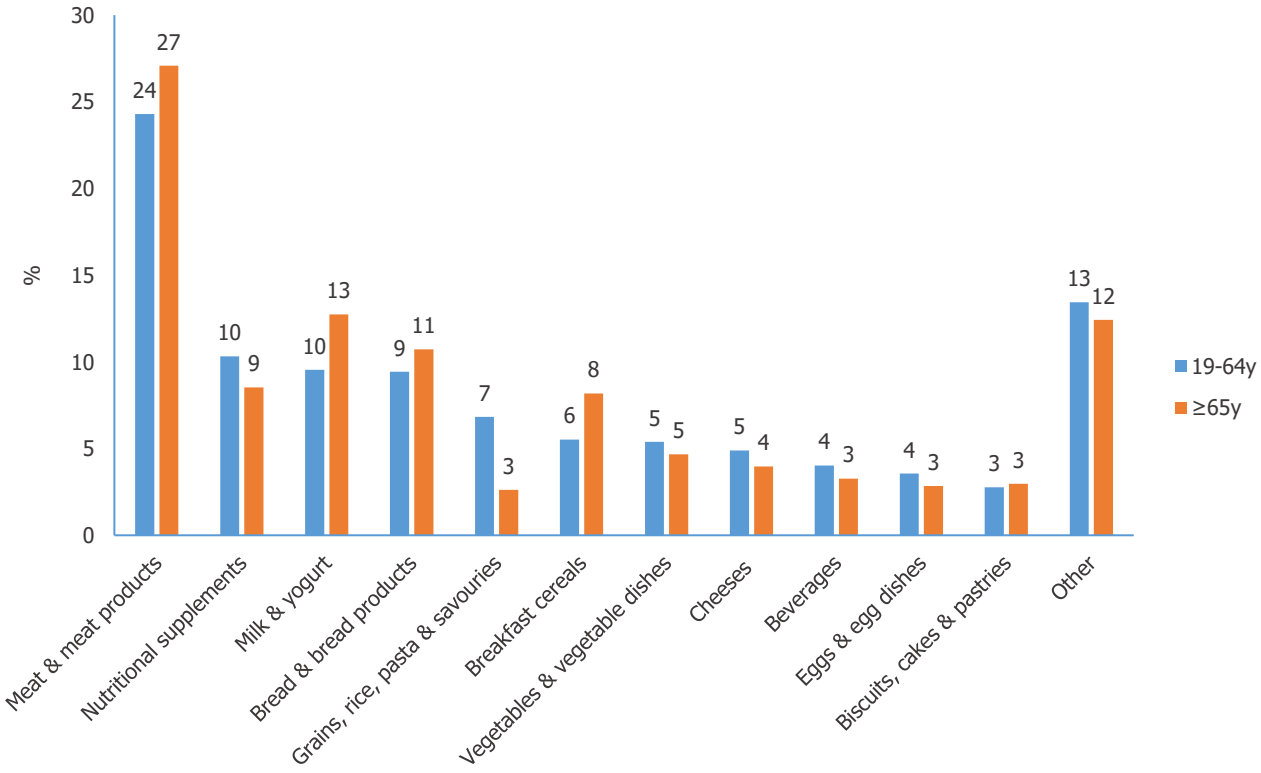

Figure 26. Sources of zinc in adults in Ireland

Chapter 3 Body weight and physical activity

Weight status

Average weights, heights and BMIs, for the total population and stratified by sex and age group are presented in **Table 9**. The proportion of adults in Ireland who fall into each of the four BMI categories classified by the World Health Organisation (WHO) are displayed in **Table 10**.

According to WHO definitions, 2% of adults aged 19-64 years were classified as underweight and 44% were classified within the normal weight range, while 38% and 17% were classified as having overweight or obesity, respectively. Just 1% of those aged 65 years and over were classified as underweight, 40% were classified within the normal weight range and 40% and 19% were classified as having overweight or obesity, respectively.

A higher proportion of males compared to females were classified as having overweight or obesity across both age groups (62% versus 48% in those aged 19-64 years and 65% versus 54% in those aged 65 years and over). In contrast, a higher proportion of females were in the normal weight range compared to males across both age groups (50% versus 37% in those aged 19-64 years and 44% versus 36% in those aged 65 years and over). A higher proportion of females across both age groups were also classified as underweight.

When examining the trends in overweight and obesity over time between the previous NANS (2008-2010) and the current NANS II (2021-2022), overall, for both sexes there has been no change in the proportion of the total population classified as having overweight. However, a small decrease in the prevalence obesity is observed from 26% to 18% in males and 21% to 17% for females **(Figure 27)**.

Although these results are promising, the prevalence of those classified as having overweight or obesity remains high and is similar to rates observed in other Irish cohorts[1] and in other European countries[2].

Table 9. Mean and median self-measured weight and height and BMI for adults in Ireland split by sex and age group

	19-64y (*n* 718)				**≥65y** (*n* 282)			
	n	Mean	Median	SD	*N*	Mean	Median	SD
Total Population								
Height (m)	*716*	1.71	1.72	0.10	*282*	1.67	1.67	0.10
Weight (kg)	*711*	77.1	76.0	16.4	*281*	75.8	74.1	18.1
BMI (kg/m^2)	*710*	26.2	25.4	5.3	*281*	27.2	26.2	6.2
Males								
Height (m)	*346*	1.79	1.79	0.07	*142*	1.74	1.74	0.08
Weight (kg)	*344*	84.6	83.0	13.6	*141*	83.7	80.6	17.0
BMI (kg/m^2)	*343*	26.5	26.0	3.9	*141*	27.7	26.9	5.9
Females								
Height	*370*	1.65	1.65	0.08	*140*	1.60	1.60	0.07
Weight (kg)	*367*	70.0	67.5	15.6	*140*	67.9	65.1	15.5
BMI (kg/m^2)	*367*	25.9	24.7	6.3	*140*	26.6	25.4	6.3

BMI; Body Mass Index

1. Healthy Ireland Survey (2022) www.gov.ie
2. World Health Organisation (2022) www.who.int

Table 10. Percentage of adults in Ireland in four weight categories split by sex and age group

	19-64y	≥65y
	%	
Total Population (*n* 991)		
Underweight	1.5	1.1
Normal weight	43.7	39.9
Overweight and obese	54.7	59.1
of which		
Overweight	37.7	39.9
Obese	17.0	19.2
Males (*n* 484)		
Underweight	0.6	0.0
Normal	37.3	35.5
Overweight and obese	62.1	64.6
of which		
Overweight	45.8	42.6
Obese	16.3	22.0
Females (*n* 507)		
Underweight	2.5	2.1
Normal	49.6	44.3
Overweight and obese	47.9	53.5
of which		
Overweight	30.2	37.1
Obese	17.7	16.4

BMI; Body Mass Index
BMI was classified as per WHO cut-offs; underweight (<18.5 kg/m2), normal weight (18.5-24.9 kg/m2), overweight (25.0-29.9 kg/m2) and obese (≥30.0 kg/m2)

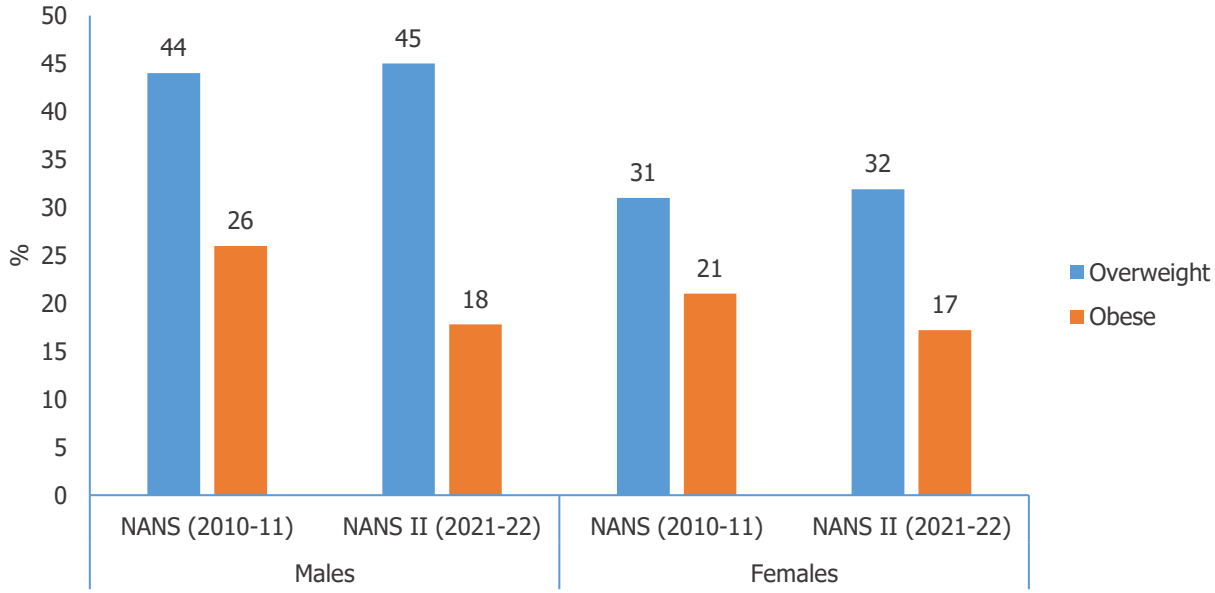

Figure 27. The prevalence of overweight and obesity in the NANS and NANS II split by sex

Physical Activity

The World Health Organization recommends that all adults aged ≥18 years should partake in at least 150-300 minutes of moderate intensity aerobic physical activity or at least 75-150 minutes of vigorous-intensity aerobic physical activity (or an equivalent combination of both) throughout the week. In addition, the guidelines also advise that fundamental health benefits are associated with limiting the time spent on sedentary behaviours, including screen time, which is a well-established risk factor in the development of obesity[3].

Table 11 displays the energy expenditure by the total population of adults in Ireland split by age group and sex. Median energy expenditure was lower in those aged 65 years and older compared to those aged 19-64 years (44.3 versus 63.8 kJ/kg/day). This pattern was similar across all energy expenditure domains.

When split by sex, no major differences in overall energy expenditure were observed between males and females. However, males aged 19-64 years did use more energy in occupational activities compared to females aged 19-64 years (16.7 versus 12.4 kJ/kg/day) who were more active in the home, expending 27.5 kJ/kg/day on home-based activities. In contrast, both males and females aged 65 years and over tended to spend more energy expenditure in the home, albeit females did have a higher amount compared to males in this age group (25.8 versus 19.3 kJ/kg/day).

Table 12 displays the median time spent engaging in sedentary behaviours, moderate and vigorous activities split by age group and sex. The median time spent in moderate physical activities was 12.9 hrs/week for those aged 19-64 years and 11.8 hrs/week for those aged 65 years and over. The median time spent in vigorous intensity activities was 0.6 hrs/week for those aged 19-64 years and 0.0 hrs/week for those aged 65 years, which was similar across males and females.

Those aged 19-64 years engaged in sedentary activities for a median time of 41.8 hrs/week, 55% of which was attributed to screen time. Whereas those aged 65 years and over, spent a median time of 28.8 hrs/week in sedentary activities, 89% of which was attributed to screen time. This pattern was observed across males and females in both age groups however, females did have a lower amount of time spent in sedentary behaviours compared to their male counterparts.

For sedentary behaviours, the WHO recommends limiting time spent being sedentary, however there is no official recommended cut off time. Nonetheless, exceeding 4 hours and 30 minutes per day is generally accepted as resulting in an increased risk of CVD[4,5]. Using this cut-off, it was noted that 62% of adults in Ireland exceeded this amount of time in sedentary behaviours.

Overall, these results suggests that a high proportion (95%) of adults living in Ireland are meeting physical activity recommendations. However, time spent being sedentary remains high and should be limited.

3. WHO (2020) www.who.int
4. Pinto Pereira S.M. et al. (2012) Plos One 7:e31132
5. Dunstan D.W. et al. (2010) Circulation 121:384–91

Table 11. Median Energy Expenditure (kJ/kg/day) in adults in Ireland split by sex and age group

	19-64y (*n* 714)		≥65y (*n* 280)	
	kJ/kg/day			
	Median	IQR	Median	IQR
Total Population (*n* 994*)				
Overall Energy Expenditure	63.8	49.4-86.4	44.3	32.0-63.0
of which				
Home Energy Expenditure	24.3	16.9-33.2	22.5	14.8-30.2
Occupational Energy Expenditure	14.6	8.4-30.6	0.0	0.0-0.0
Recreational Energy Expenditure	16.3	9.0-27.7	15.8	8.9-28.7
Men (*n* 485)				
Overall Energy Expenditure	64.5	49.7-91.7	42.6	32.2-63.2
of which				
Home Energy Expenditure	20.2	14.2-29.7	19.3	12.1-26.7
Occupational Energy Expenditure	16.7	11.3-34.1	0.0	0.0-0.0
Recreational Energy Expenditure	19.3	10.0-31.2	17.9	10.1-30.6
Females (*n* 509)				
Overall Energy Expenditure	62.5	49.2-83.1	46.1	31.8-62.2
of which				
Home Energy Expenditure	27.5	20.1-35.8	25.8	18.8-34.1
Occupational Energy Expenditure	12.4	5.2-27.9	0.0	0.0-0.0
Recreational Energy Expenditure	14.7	8.0-24.2	15.4	8.1-27.5

*6 participants did not complete an EPAQ questionnaire

Table 12. Median amount of time (hours/week) spent in moderate and vigorous physical activities and sedentary behaviour in adults in Ireland split by sex and age group

	19-64y (*n* 714)		≥65y (*n* 280)	
	Hours/week			
	Median	IQR	Median	IQR
Total Population (*n* 994*)				
Sedentary Behaviour	41.8	28.0-58.6	28.0	19.1-35.0
of which				
Recreational screen time (TV, tablets, laptop)	23.0	16.0-30.0	24.8	17.5-32.0
Moderate Intensity Physical Activities	12.9	7.3-20.1	11.8	5.9-18.2
Vigorous Intensity Physical Activities	0.6	0.0-2.4	0.0	0.0-0.8
Men (*n* 485)				
Sedentary Behaviour	46.7	30.2-62.6	30.0	21.0-42.0
of which				
Recreational screen time (TV, tablets, laptop)	23.0	16.0-30.0	25.0	17.5-34.8
Moderate Intensity Physical Activities	12.7	7.1-21.1	13.0	6.2-19.0
Vigorous Intensity Physical Activities	1.1	0.0-3.2	0.0	0.0-1.2
Females (*n* 509)				
Sedentary Behaviour	38.2	26.2-54.5	26.0	18.0-33.0
of which				
Recreational screen time (TV, tablets, laptop)	23.0	16.0-30.0	24.5	17.5-31.0
Moderate Intensity Physical Activities	13.0	7.5-18.6	10.9	5.7-17.6
Vigorous Intensity Physical Activities	0.2	0.0-1.6	0.0	0.0-0.6

*6 participants did not complete an EPAQ questionnaire

Chapter 4 Factors associated with eating behaviours

Introduction

In addition to knowing what adults in Ireland eat, it is also important to understand '*why*' they make the food choices they do. To do this, the NANS II included a food choice behaviour questionnaire to examine motivations and attitudes towards food choices in adults in Ireland.

Food choice motives

Overall, a large proportion of adults (82%) ranked taste or nutrition/health as the leading factor influencing their food choices with 42% ranking taste as the most important and 40% ranking nutrition/health as the most important **(Figure 29).** Convenience and cost were predominantly ranked as the third most important factor, while the impact on the environment and sport/optimal performance were the least important factors for most adults. Some notable differences were found across demographic groups. For instance, females, adults aged ≥65 years and participants with higher social class were more likely to rank nutrition/health as the most important factor. These findings suggest that health is an important priority for adults in Ireland, but few will compromise on taste when making food choices.

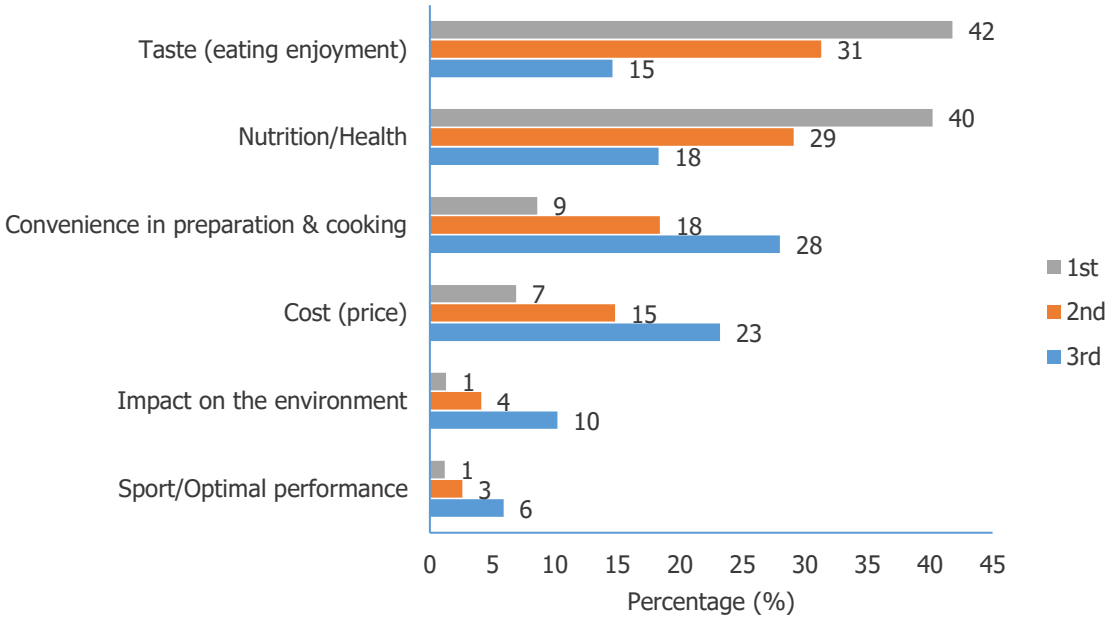

Figure 29. Ranking of food choice motives in adults in Ireland

Perceived barriers to healthy eating

Most adults in Ireland reported a high interest in healthy eating. Overall, 37% agreed that their diet was healthy enough and did not need to change. Whereas just over half of those aged 19-64 years (53%) and over three quarters of those aged 65 years and over (70%) felt it was difficult to eat a healthy diet at least some of the time **(Figure 30)**. The perceived difficulty in eating healthily was similar between males and females, and between people with different social classes. However, adults aged 65 years and over were the least likely to find it difficult to eat a healthy diet (9% said 'yes') when compared to adults aged 19-64 years (19% said 'yes') The main factors that were associated with difficulties in achieving a healthy diet were convenience (48%), likes and dislikes (37%) and cost (27%) **(Figure 31)**.

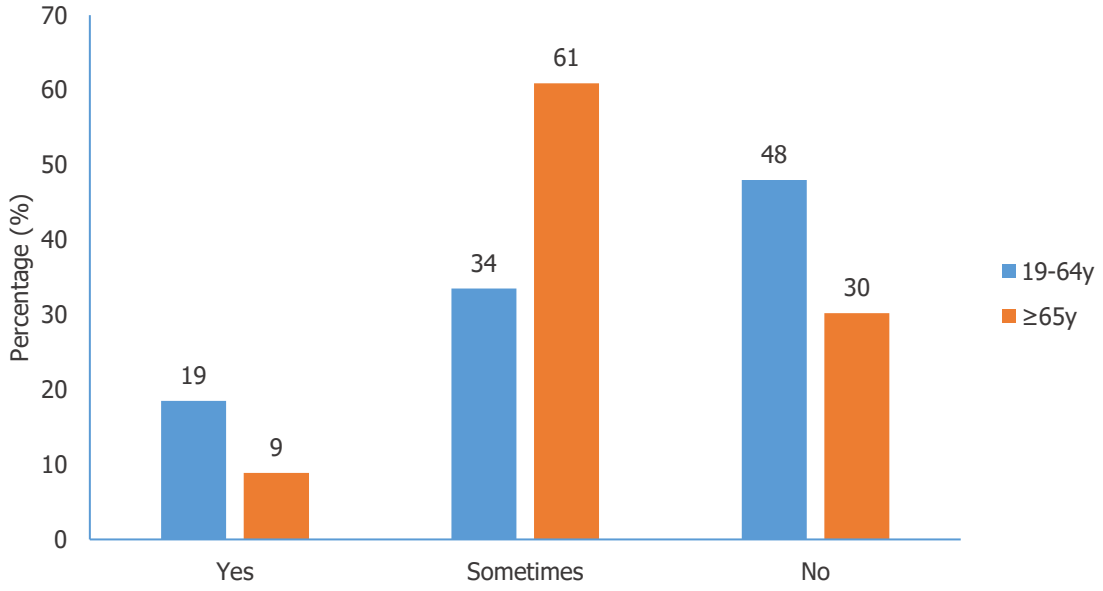

Figure 30. Opinions on whether it is difficult to eat a healthy diet

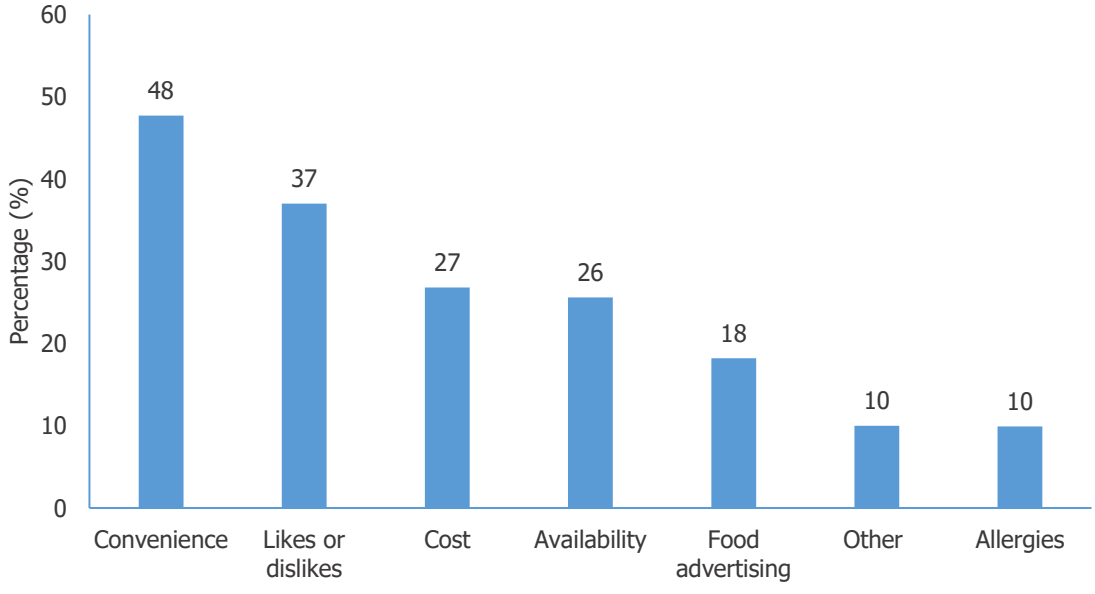

Figure 31. Percentage of adults in Ireland who agree that this factor makes it difficult to eat a healthy diet

Most willing sustainable actions

Participants were asked to select the one action they would be most willing to adopt to live more sustainably (**Figure 32**). By far the most common response to this question was minimising food waste. Almost half of adults aged 19-64 years (44%) and aged 65 years and over (50%) felt minimising food waste was an action they would be most willing to adopt to live more sustainably. Other less common but notable actions included buying energy-efficient home appliances, decreasing meat consumption and buying foods produced by eco-friendly production. Results were broadly consistent across demographic groups.

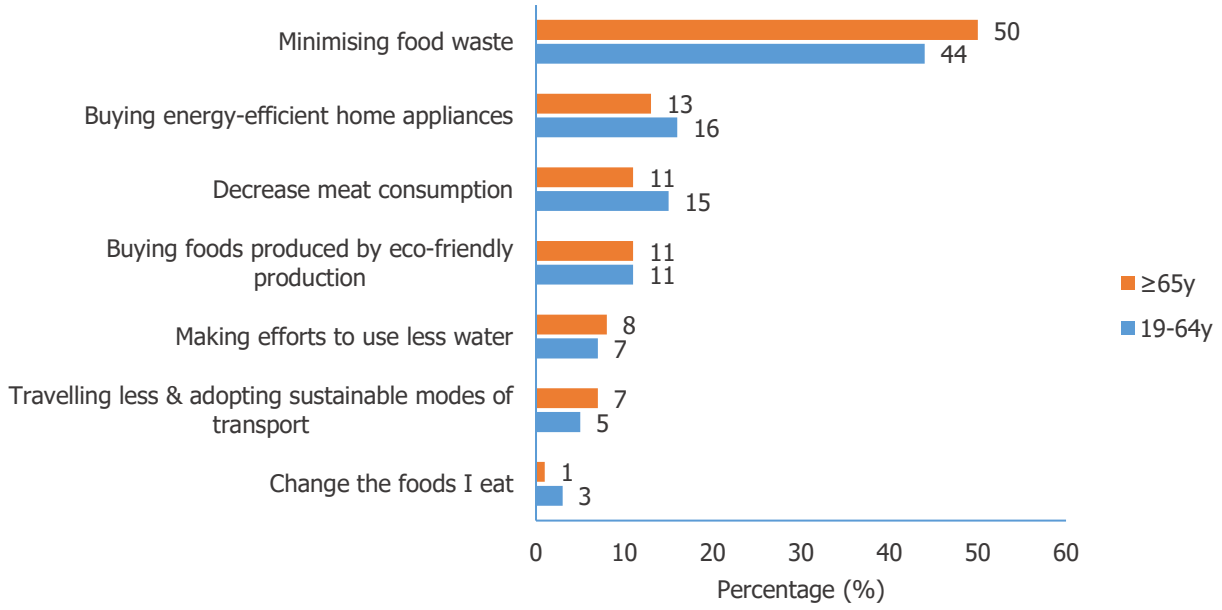

Figure 32. Actions that adults in Ireland are willing to adopt to live more sustainably

Appendix I

Food Group Names

Full Food Group Name	Abbreviated Food Group Name
Grains, rice, pasta & savouries	Grains, rice, pasta & savouries
Bread & bread products	Bread & bread products
Breakfast cereals	Breakfast cereals
Biscuits, cakes & pastries	Biscuits, cakes & pastries
Milk & yogurt including non-dairy alternatives	Milk & yogurt
Creams, ice-creams & chilled desserts	Creams & ice-creams
Cheeses including non-dairy alternatives	Cheeses
Butter, spreading fats & oils	Butter & spreading fats
Eggs & egg dishes	Eggs & egg dishes
Potatoes & potato products	Potatoes & potato products
Vegetables & vegetable dishes including meat alternatives	Vegetables & vegetable dishes
Fruit & fruit juices	Fruit & fruit juices
Fish & fish dishes	Fish & fish dishes
Meat & meat products	Meat & meat products
Beverages	Beverages
Sugars, confectionery, preserves & savoury snacks	Sugars, confectionery & savoury snacks
Soups, sauces & miscellaneous foods	Soups & sauces
Nutritional supplements	Nutritional supplements
Nuts, seeds, herbs & spices	Nuts & seeds

Notes

Notes

Irish Universities Nutrition Alliance (IUNA)

www.iuna.net