

Statement of Statistical Sources for National Diet and Nutrition Survey (NDNS) Northern Ireland reports

Statistical end-product

Title of the statistical product derived from an administrative/management source

National diet and nutrition survey (Northern Ireland).

Name of the organisation responsible for this statistical end-product

Published by the Food Standards Agency.

Name/email address of contact point for this product

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Periodicity of release

The National Diet and Nutrition Survey rolling programme: report for Years 5-9 (combined) for Northern Ireland (2012/13-2016/17) report was published in April 2019.

Underlying survey

Name/title of the original data source

National Diet and Nutrition Survey (NDNS) rolling programme

The purpose of the survey

The NDNS Rolling Programme (RP) provides the only source of high quality nationally representative data on the types and quantities of foods consumed by individuals, from which estimates of nutrient intake for the population are derived. Results are used by Government to develop policy and monitor progress on diet and nutrition objectives of UK Health Departments. The food consumption data are also used to assess exposure to chemicals in food, as part of the risk assessment and communication process in response to a food emergency or to inform negotiations on setting regulatory limits for contaminants.

The aims of the NDNS RP include: providing quantitative data on the food and nutrient intakes, sources of nutrients and nutritional status of the UK population; providing information on trends in food consumption, nutrient intake and nutritional status in different age groups; describing the characteristics of individuals with intakes of specific nutrients above/below the national average; monitoring the extent to which the diets of population sub-groups vary from expert recommendations; measuring blood/urine indices that provide evidence of nutritional status/dietary biomarkers; monitoring the diet of the population to establish the extent to which it is adequately nutritious/varied; and assessing total energy expenditure and physical activity levels/patterns in the study population.

Survey Description

A repeated cross-sectional study using a UK representative multi-stage stratified random sample of around 500 adults (aged 19 years and older) and 500 children (aged 1.5 to 18 years) per year.

The study includes dietary data obtained from an unweighed four-day food diary and information from the face-to-face interview on eating habits, smoking and drinking, general health, and physical measurements (height and weight). A nurse interview is also conducted, which collects physical measurements, blood pressure, information on medicines, blood and urine samples.

Name of the organisation responsible for the survey

Public Health England (PHE) and the UK Food Standards Agency (FSA) jointly fund the UK NDNS. Boosted samples are gathered to achieve representative data specific for Northern Ireland. The Northern Ireland boost was co-funded by three partners: the FSA, the Department of Health and safefood.

Data supplier

The current contract is delivered by a consortium led by National Centre for Social Research (NatCen). Fieldwork in Northern Ireland is carried out by the Northern Ireland Statistics and Research Agency (NISRA).

Unit of inquiry (for example, households, individuals, product)

Individuals, (Families/households for some questions).

Intended coverage of survey

All individuals aged 1.5 years and over living in private households in Northern Ireland.

Completeness that is actual coverage (for example, take-up rate)

For Years 5 and 6, the overall response rate was 53% for those completing a diary.

Geographical coverage of the statistical product

Northern Ireland.

Lowest level of geographical coverage

Northern Ireland.

Previous arrangements longer in place of the current survey

The National Diet and Nutrition Survey (NDNS) programme was initially established in 1992 and started off as a joint initiative between the then Ministry of Agriculture, Fisheries and Food (MAFF) and the Department of Health. The initial phase of surveys included four cross-sectional surveys which covered separate age groups: children and young people (see SNs 3481 and 4243); adults (SN 5140); and people aged 65 years and over (SN 4036). In 2008, a new continuous cross-sectional survey was started.

Data definitions used

The Main Food Provider (MFP) is the person in the household with the main responsibility for shopping and preparing food.

The 'Household Reference Person' (HRP) was defined as the householder (a person in whose name the property is owned or rented) with the highest income.

Classification systems used

The occupations of HRPs were coded to sub-major groups using the Standard Occupational Classification (SOC 2010) and Standard Industrial Classification of Economic Activities (SIC).

Arrangements to publish releasing underlying data and metadata

The underlying datasets are available in full via the UK Data Archive.

Data collection process

Periodicity/ timing of fieldwork

Four quarterly waves each year

Quality assurance, checks and validation

All interviewers and nurses working on the NDNS RP were briefed and trained before undertaking an assignment and were monitored during their assignment. Fieldworkers were also issued with comprehensive written instructions covering survey procedures and measurement protocols. Information was collected via face-to-face interviews using a Computer Assisted Personal Interview (CAPI) method.

Interviewers undertook three visits with each participant. At the first visit, the interviewer placed the diary and explained the method. The second was a brief visit to check for compliance, answer questions or deal with problems and review the diary to identify and edit possible omissions and missing detail. The third visit was to collect the diary and again review and edit possible omission, no later than three days after the last diary day.

Access arrangements prior to publication

All aspects of coding and data preparation were carried out by specialist staff at NatCen. Only Department of Health, safefood and FSA staff engaged in the publication of the release had access to the report or the underlying data prior to publication.

Dissemination procedures (& publication procedures where appropriate)

The datasets are available in full via the UK Data Archive.

Nature of changes to the survey which can impact on the statistics

Self-reported dietary intake in nutrition studies tends to report a range of energy intakes that are not representative of the respondents' habitual intakes. The degree of mis-reporting can vary depending on the approach taken (e.g. food frequency questionnaires, 24 hr recalls, weighed and unweighed diaries). So, any variation in the mode of collection could influence the final results. Similarly, changes to survey questions can affect their accuracy and item non-response (and so are usually kept to a minimum).

Change Process (Procedures for changing definitions, scope, etc)

Any problems or deviation from the agreed project protocol are referred to the NDNS Project Board to resolve. Its members include representatives of the funders, the contractors and the Scientific Advisory Committee on Nutrition, plus an independent expert. Its responsibilities also include reviewing the need for changes to the components or method in the light of changing priorities or methodological developments.

The subsequent statistical production process

Level of quality required

A high level of quality is required. Data checks are carried out throughout the project and, finally, by the Research Director at NatGen.

Validation procedures (who does what and when to ensure quality) Diaries were returned from the field to be coded by trained coders and editors. At the start of the coding process, editors checked ten complete diaries for each coder and gave them individual feedback and additional training if required. For a random 10% of all diaries the editors undertook a further 100% check of all food and portion code entries.

At the end of coding and editing, checks were performed to highlight any missing data fields, extreme portion sizes and extreme energy and nutrient intakes. All errors found were corrected to their appropriate entry as reflected by the diary entry. Intakes as a percentage of the dietary reference value for each nutrient were also calculated.

The data was weighted to minimise any bias in the observed results which may be due to differences in the probability of households and individuals being selected to take part; and to attempt to reduce non-response bias. The statistical analysis was performed using the survey package in the statistical program R to account for the complex survey design.

Quality assessment

The survey is regularly monitored to check if the targets for response rate are (i.e. that 55% of those selected provide 3 or 4 days of the diary, and sufficient numbers have a nurse visit).

Potential impact of changes to the survey on the statistics

Changes in the way that food records are captured and coded could affect the observed levels of intake. The choice of laboratory analytical method can affect the nutritional level seen in blood and urinary biomarkers.

Procedures for mitigating such discontinuities.

When the analytical method was changed for urinary sodium in 2014, the Year 1 to 4 reports were republished with corrected salt intakes to bring the data it onto a comparable basis with the data from later surveys.