Switzerland - National Nutrition Survey menuCH

Center for Primary Care and Public Health (Unisanté), University of Lausanne, Switzerland (Unisanté), Swiss Federal Food Safety and Veterinary Office (FSVO)

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Identification

SURVEY ID NUMBER
CHE-FSVO-MENUCH-2014-2015_V5.1

TITLE
National Nutrition Survey menuCH

TRANSLATED TITLE
Nationale Ernährungserhebung menuCH = Enquête nationale sur l'alimentation menuCH = Sondaggio nazionale sull'alimentazione menuCH

COUNTRY

Name	Country code
Switzerland	CHE

ABSTRACT
National Nutrition Survey menuCH

Nutrition and physical activity directly affect health and quality of life. But what do people living in Switzerland usually eat and drink? The National Nutrition Survey menuCH pursued these questions and collected data concerning nutrition and physical activity behaviors of the Swiss population.

menuCH inquired men and women aged between 18 and 75 years living in the German, French or Italian parts of Switzerland, about what they ate the previous day (i.e., 24-hour dietary recall) and their eating and drinking habits but also about their physical activity. Anthropometric measurements were taken in addition. Survey participation was voluntary.

menuCH inquired 2000 participants in 10 study centers. The study centers were located all over Switzerland so that most participants could reach them within reasonable time. The survey took place between January 2014 and February 2015.

Aims

„What and how much do people living in Switzerland usually eat and drink, when and where?" With this and other questions regarding eating and drinking habits, it should possible to...

- evaluate better the nutrition situation;

- keep high and improve food safety;

- detect faster possible risks associated with food;

- verify and adapt if necessary the present dietary recommendations;

- improve the food range and composition;

- develop and implement effective nutrition strategies and measures to promote health and quality of life;

- support research and development in the fields of nutrition, food and behavior sciences with up-to-date and nationally representative data.

For more information see :
https://www.blv.admin.ch/blv/de/home/lebensmittel-und-ernaehrung/ernaehrung/menuCH.html (German)
https://www.blv.admin.ch/blv/fr/home/lebensmittel-und-ernaehrung/ernaehrung/menuCH.html (French)
https://www.blv.admin.ch/blv/it/home/lebensmittel-und-ernaehrung/ernaehrung/menuCH.html (Italian)

The list of publications on menuCH data can be found under the following link :
https://www.blv.admin.ch/blv/de/home/lebensmittel-und-ernaehrung/ernaehrung/menuCH/menuch-publikationen-daten-forschung.html

UNIT OF ANALYSIS
Individuals

Version

VERSION DESCRIPTION
Fifth version of menuCH 2014-2015 Data suitable for micronutrients and macronutrients analyses. Some variables may change and some others may be added in the future.

VERSION DATE
2022-07-04

Scope

KEYWORDS

Keyword
Nutrition survey
Dietary survey
Swiss diet
24h dietary recall
Switzerland

Coverage

GEOGRAPHIC COVERAGE
Switzerland (46° 57' N, 7° 25' E)

UNIVERSE
Food consumption of Swiss residents, male and female from three language regions, between 18 and 75 years of age

Producers and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
Center for Primary Care and Public Health (Unisanté), University of Lausanne, Switzerland (Unisanté)	UNIL
Swiss Federal Food Safety and Veterinary Office (FSVO)	FDHA

PRODUCERS

Name	Affiliation	Role
Center for Primary Care and Public Health (Unisanté), University of Lausanne, Switzerland (Unisanté)	UNIL	Original producer
Institut für Sozial- und Präventivmedizin (ISPM)	University of Bern	Survey collaborator
Swiss Federal Food Safety and Veterinary Office (FSVO)	The Federal Department of Home Affairs (FDHA)	Data proprietary and data linkage with Swiss Food Composition Database

FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
Swiss Federal Food Safety and Veterinary Office	FSVO	Primary Funder
Swiss Federal Office of Public Health	FOPH	Co-Funder

OTHER IDENTIFICATIONS/ACKNOWLEDGMENTS

Name	Affiliation	Role
Center for Primary Care and Public Health (Unisanté), University of Lausanne, Switzerland (Unisanté)	UNIL	Survey management, data cleaning and hosting, weighting strategy
Institut für Sozial- und Präventivmedizin (ISPM)	University of Bern	Survey collaboration
Fachbereich Gesundheit	Bern University of Applied Sciences (BUAS)	Survey collaboration, data cleaning
Swiss Federal Food Safety and Veterinary Office (FSVO)	The Federal Department of Home Affairs (FDHA)	Survey management, survey collaboration, data linkage and documentation

Sampling

SAMPLING PROCEDURE

Sampling was carried out by the Federal Statistical Office (FSO) using the sampling frame for individual and household surveys (SRPH, Stichprobenrahmen für Personen und Haushaltserhebungen, https://www.data.blv.admin.ch//catalog/4/download/87) database. The three-step sampling procedure for the survey was as follows:

1. The first stratum consisted of the seven Swiss major regions (Lake Geneva region, Midland, Northwest Switzerland, Zurich, Eastern Switzerland, Central Switzerland and Ticino*). To facilitate logistics, only the most populous cantons of each major region were considered. The number of cantons was chosen so that they represent at least half of the population of the corresponding major region (Table 1). The sampling frame of the main study consisted of participants living in the cantons of Vaud (VD), Geneva (GE), Neuchâtel (NE), Jura (JU), Berne (BE), Basel-Land (BL), Basel-Stadt (BS), Zürich (ZH), St. Gallen (SG), Aargau (AG), Luzern (LU) and Ticino (TI).
* Source : Swiss Federal Statistical Office, Available : https://www.data.blv.admin.ch//catalog/4/download/90

Table 1. Major regions of Switzerland and cantons selected for menuCH
https://www.data.blv.admin.ch//catalog/4/download/80

2. Within the first stratum, a second stratification was conducted, taking into account gender- and age groups. For each major region, the final sample aimed to achieve a comparable number of men and women, with an age group distribution comparable to the one observed within the administrative regions.
3. The 24-hour dietary recall interviews were as evenly distributed as possible throughout the week in order to capture all days of the week. The number of interviews conducted on Mondays was twice as large as for the other days, in order to cover the food consumption on Saturdays and Sundays. For participants interviewed on Mondays, the day of the interview (Saturday or Sunday) was randomly chosen.

Overall, the target was to recruit a total of 2'000 participants with two appointments/interviews each, following quotas by canton of residence (Table 2; Table 3).

Table 2. Survey sampling frame overall and by linguistic region
https://www.data.blv.admin.ch//catalog/4/download/81

Table 3. Target number of participants by administrative region and canton of residence
https://www.data.blv.admin.ch//catalog/4/download/82

WEIGHTING

As in most sampling surveys, subjects do not all have the same probability to be part of the sample. This is why weights must be considered and applied to the data. The principle of weighting is about assigning different weights to survey

participants based on their probabilities of inclusion in the sample and participation in the survey.

Weighting strategy in menuCH involves three steps:
1. Calculation of the sampling weights
2. Correction of non-response
3. Calibration on marginal totals of the sampling frame

These three steps define, for each person who participated in the survey, an extrapolation weight. This latter is used to extrapolate the results of the investigation to the target population.

In addition, food consumption data from 24-hour dietary recalls can be weighted to provide information that is balanced across seasons (and weekdays).

Detailed description of methods and calculations are available here: https://www.data.blv.admin.ch//catalog/4/download/85 and under “documentation” section.

Data Collection

DATES OF DATA COLLECTION

Start	End
2014-01-27	2015-02-28

DATA COLLECTION MODE
Computer Assisted Personal Interview [capi]

DATA COLLECTION NOTES
The Federal Office of Statistic (FSO) provided a population-based random sample of 13,606 addresses of adults, aged 18-75 years from seven administrative regions representing the three main linguistic regions of Switzerland (German, French, Italian). The invitation letter, sent to the sampled addresses, included a reply card to either specify the preferred way and time of contact, in case of participation interest or else to declare no interest. Then, potential participants were contacted by phone from a centrally located recruitment center (CATI Laboratory) to arrange the first of two appointments.
Trained dietitians collected data on food consumption between January 2014 and February 2015. The first 24-hour dietary recall was administered face-to-face and the second by telephone on two non-consecutive days, that is, at least two weeks apart and if possible on different weekdays. The 24-hour period was defined as from when the participant got up the day prior to the face-to-face/telephone interview date until the time the respondent got up on the interview day. Since interviews were conducted from Monday to Saturday only, on Monday either the food intake of Saturday (for participants with even ID number) or Sunday (for participants with uneven ID number) was assessed. No detailed information on dietary supplement use was collected.

Several computer-assisted as well as paper-based instruments were used in the survey:

Scheduling Tool
In order to allocate the survey participants to the 15 dieticians across the 10 study centers at different days of the week in a well-coordinated and efficient way, a web-based Scheduling Tool was developed.

Anthropometry
Body weight (kg), height (cm), waist (cm) and hip (cm) circumferences were measured using calibrated devices according the WHO-MONICA protocol, available at https://www.data.blv.admin.ch//catalog/4/download/86

GloboDiet® (formerly EPIC-Soft®)
The software GloboDiet® developed by the International Agency on Research on Cancer (Slimani et al. 1999; https://doi.org/10.1016/S0169-2607(98)00088-1) allows the standardized collection and management of 24-hour dietary recall data. Applying GloboDiet® survey participants are asked to describe consumed foods and beverages according to a predefined sequence of questions/facets with pre-defined answers/descriptors (see lists of facets (available: https://www.data.blv.admin.ch//catalog/4/download/89) and descriptors (available: https://www.data.blv.admin.ch//catalog/4/download/88) available for menuCH). For menuCH, about seventy common and country-specific GloboDiet® databases on foods, recipes, quantification methods and coefficients were customized to Swiss

specific needs and requirements, and translated into German, French and Italian to form the trilingual Swiss version of GloboDiet®. GloboDiet allows choosing among the following six different quantification methods to quantify consumed amounts: gram, volume, standard unit, household measure, photo and shape. Consumed amounts are given in grams after application of conversion factors, if necessary.

Picture book for the estimation of portion sizes
Based on a thoroughly validated and widely applied international picture book for the estimation of portion sizes (Van Kappel AL, Amoyel J, Slimani N, Vozar B and Riboli E. Epic-Soft Picture Book for estimation of Food Portion Sizes. Lyon: International Agency for Research on Cancer; 1995) a Swiss specific picture book was developed and used to help participants estimate the consumed food portions (Camenzind-Frey, E. and Zuberbuehler, C.A. (2014) menuCH - SCHWEIZERISCHES FOTOBUCH / LIVRE PHOTO SUISSE / MANUALE FOTOGRAFICO SVIZZERO. 2. Auflage., Bern, Switzerland: Federal Office of Public Health (FOPH) & Federal Food Safety and Veterinary Office (FSVO)).

Questionnaires

QUESTIONNAIRES
Non-participant questionnaire (available here https://www.data.blv.admin.ch//catalog/4/download/26)
A short non-participant questionnaire was applied orally by the recruiters during the contact call when it became clear that the contacted person was unwilling to participate.

Nutrition behavior and physical activity questionnaire (available in English under the documentation section of this website or in German: https://www.data.blv.admin.ch//catalog/4/download/14 ; French: https://www.data.blv.admin.ch//catalog/4/download/15 and Italian: https://www.data.blv.admin.ch//catalog/4/download/16)

Eating and physical activity behavior were assessed by a 49 question paper/written questionnaire available in three languages. The questionnaire has been developed by FOPH/FSVO and was pre-tested using cognitive interviews. For physical activity, the short version of the IPAQ - International Physical Activity Questionnaire - was considered. For health related questions, reference was made to questions of the Swiss Health Surveys and for diet related questions also standard questions from other nationally or internationally used questionnaires had been included. Thus, comparisons with other studies are possible. The questionnaire was amended by a selection of socio-economic and -demographic questions from the most current Swiss Health Survey 2012, with very few changes applied due to experiences from regional surveys (CoLaus and Bus santé studies).
The questionnaire was sent to the participants by postal delivery together with the confirmation of the first appointment and the instruction to complete it at home and bring it to the appointment. Upon handover, the questionnaire was checked by the dietitian for completeness and clarity. At the end of the appointment the dietitian keyed the information into a central on-line database.

Data Processing

DATA EDITING
Data editing took place at a number of stages throughout the processing, including:
a) During data entry
b) Structure checking and completeness
c) Secondary editing
d) Structural checking of SQL and STATA data files

Data Appraisal

ESTIMATES OF SAMPLING ERROR
See the document "Weighting strategy” available under "Technical documents” and the document "Codebooks” available under “Other materials” in the “Documentation" section.
Remarks:
1. The variables “sampling_w”, “nonresponse_w” and “nonresponse_w_2rec” are given for information only. These variables should not be used for extrapolation as they correspond to intermediate steps in the calculation of the calibrated weights.
2. For extrapolation always use calibrated weights. As season and weekday influence nutrition, it is preferable to use

"sw_calibrated_w" weights rather than "calibrated_w" weights.
3. The statistical program SPADE requires two 24HDR per person for usual intake analyses. For this reason the variables “calibrated_w_2rec” and “sw_calibrated_w_2rec” are provided (see chapter “Weighting for SPADE” in the document “Weighting strategy”).

Access policy

CONTACTS

Name	Email
Swiss Federal Food Safety and Veterinary Office (FSVO)	datarepository@blv.admin.ch

CONFIDENTIALITY

Confidentiality of respondents is guaranteed by Articles 4 to 15 of the Federal Act on Data Protection (FADP) of 19 June 1992 (Status as of 1 January 2014). Anonymisation and de-identification: the data anonymisation and de-identification was performed by Unisanté team with the help of FSVO collaborators. This dataset contains only de-identified data following the standard for de-identification of protected health information, Section 164.514(a) of the Privacy Rule of the Health Insurance Portability and Accountability Act (HIPAA) (http://www.hhs.gov/hipaa/for-professionals/privacy/special-topics/de-identification/#standard). Under this standard, health information is not individually identifiable if it does not identify an individual and if the covered entity has no reasonable basis to believe it can be used to identify an individual. This is done by removing or recoding, direct and indirect, identifiers in the data. The following types of identifiers are examples, such as those identified by HIPAA, that should be considered for removal or recoding to prevent the risk of association of a participant to his / her data. The list includes, but is not limited to, the following: 1) Names and initials, 2) All elements of dates (except year) which can be directly associated with a specific individual (birthdate, etc.), 3) Kit numbers (diagnostic kits) and device numbers (devices used in the trials), 4) Geographic information such as place of work, trial site location, addresses, zip codes, etc., 5) Telephone numbers, 6) Email addresses, 7) Fax numbers, 8) Account numbers, 9) Social security numbers, 10) Health plan beneficiary numbers, 11) Medical record numbers, 12) Vehicle identifier numbers and serial numbers including license plate numbers, 13) Certificate / license numbers (marriage licenses, etc.) 14) Biometric identifiers including such as MRI, hand voice prints, etc. 15) Full face photographic images or comparable images 16) Web Universal Resource Locators (URLs), 17) Internet Protocol (IP) addresses, and 18) Any other unique identifying number, code or characteristic. All of these 18 items should be considered to be removed from the data set excepting some geographic information about the country of birth and the nationality of participants. This information has been aggregated into larger regions according to WHO regions (http://www.who.int/about/regions/en/ and a new special group for Switzerland and Liechtenstein) not giving away sufficient information to identify individuals: 1. African / Eastern Mediterranean Region, 2. European Region (excepting Switzerland and Liechtenstein,) 3. Western Pacific / South-East Asia Region, 4. Region of the Americas - Switzerland and Liechtenstein. The original subject id of the study was replaced with a new random subject id. Other sensitive information about health status or religion diets have been removed or aggregated in more general groups. The variables having undergone an anonymization treatment could be identified by the term "recoded" added at the end of their name. Before being granted access to the dataset, all users have to formally agree: 1. To make no copies of any files or portions of files to which s/he is granted access except those authorized by the data depositor. 2. Not to use any technique in an attempt to learn the identity of any person, establishment, or sampling unit not identified on public use data files. 3. To hold in strictest confidence the identification of any establishment or individual that may be inadvertently revealed in any documents or discussion, or analysis. Such inadvertent identification revealed in her/his analysis will be immediately brought to the attention of the data depositor. This statement does not replace a more comprehensive data agreement (see Access conditions).

ACCESS CONDITIONS

Licensed datasets, accessible under conditions

To request access to licensed datasets, please register to the website to continue (https://www.data.blv.admin.ch/index.php/auth/register). Once your registration will be approved you must login and go to the "GET MICRODATA" tab and fill in the application form for access to the licensed dataset.

This form must be filled and submitted by the Lead Researcher in order to initiate the review process. Lead Researcher refers to the person who serves as the main point of contact for all communications involving this agreement. Access to licensed datasets will only be granted when the Lead Researcher is an employee of a legally registered receiving agency (university, research company, research centre, national or international research organization, etc.) on behalf of which access to the data is requested. The Lead Researcher assumes all responsibility for compliance with all terms of this Data Access Agreement by all researchers involved in the respective research project.

This request will be reviewed by the FSVO team, who may decide to approve the request, to deny access to the data, or to request additional information from the Lead Researcher. If your request is reviewed positively, you will receive by e-mail a separate “Data Protection Agreement” to be signed and returned by the Lead Researcher. The FSVO will only then grant access to data download.

Before filling and submitting the request form, please consult the 5 codebooks in order to find out whether or not the available data provide the variable(s) you would need for your project. If in doubt you may contact the FSVO by email (datarepository@blv.admin.ch) for clarification.

CITATION REQUIREMENTS

"Swiss National Nutrition Survey menuCH 2014-2015, Version 5.0 of the research use dataset (July 2022), provided by the Swiss Federal Food Safety and Veterinary Office (FSVO). www.blv.admin.ch"

ACCESS AUTHORITY

Name	Affiliation	URL
Swiss Federal Food Safety and Veterinary Office (FSVO)	The Federal Department of Home Affairs (FDHA)	Link

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Metadata production

DDI DOCUMENT ID

DDI-CHE-FSVO-MENUCH-2014-2015_V5.1

PRODUCERS

Name	Abbreviation	Affiliation	Role
Center for Primary Care and Public Health (Unisanté), University of Lausanne, Switzerland	Unisanté	UNIL	Survey management
Swiss Federal Food Safety and Veterinary Office	FSVO	FDHA	Survey management, survey collaboration, data linkage and documentation

DDI DOCUMENT VERSION

Version 5.1 (November 2023)

Data Dictionary

Data file	Cases	Variables