



# Collection of food consumption data in EFSA

Collegio Europeo - Seminar on EU Nutrition Policy  
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## REGULATION (EC) N° 178/2002

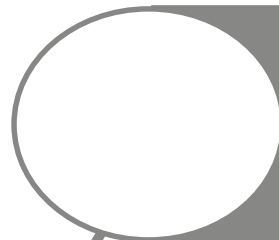


- EFSA “shall search for, collect, collate, analyse and summarise relevant scientific and technical data in the fields within its mission. **This shall involve in particular the collection of data relating to food consumption** and the exposure of individuals to risks related to the consumption of food”;
- EFSA “shall work **in close cooperation with all organisations operating in the field of data collection**, including those from applicant countries, third countries or international bodies”.

# SUMMARY



Food consumption data in  
EFSA



EU Menu project

# EFSA SCIENTIFIC COLLOQUIUM



“A common database on food consumption would improve the consistency and reliability of exposure assessments carried out by the various EFSA Panels and other experts in Europe”

# NETWORK ON FOOD CONSUMPTION DATA COLLECTION

Representatives of national competent authorities, hearing experts & observers



Platform to:

- Harmonise food consumption data collection methodologies in Europe
- Promote collection of harmonised food consumption data in Europe
- Agree on reporting and data submission formats



Meeting minutes and list of members: <https://www.efsa.europa.eu/en/data/networks>

# EFSA COMPREHENSIVE EUROPEAN FOOD CONSUMPTION DATABASE

The EFSA Comprehensive European food consumption database contains data:

- 24-hour recall or dietary record method
- data collected at individual level
- most recent data within each country
- random sample at national level
- different age classes, from infants to elderly
- special population groups



The screenshot shows the EFSA website interface. At the top left is the EFSA logo. To the right, there is a 'Calendar' icon and a language dropdown set to 'english (en)'. Below this is a search bar labeled 'Search site'. A navigation menu includes 'About', 'News', 'Discover', 'Science', 'Publications', 'Applications', and 'Engage'. The main content area has a breadcrumb trail: 'Home > Science > Data collection and analysis > Food consumption > Comprehensive database'. On the left, a sidebar lists 'Data collection and analysis' with sub-items: 'Food consumption', 'Comprehensive database' (highlighted), 'Biological hazards', and 'Chemical hazards'. The main content area features the title 'The EFSA Comprehensive European Food Consumption Database' and a descriptive paragraph: 'The Comprehensive Food Consumption Database is a source of information on food consumption across the European Union (EU). It contains detailed data for a number of EU countries. The database plays a key role in the evaluation of the risks related to possible hazards in food in the EU and allows estimates of consumers' exposure to such hazards, a fundamental step in EFSA's risk assessment work. The database is also relevant to other fields of EFSA's work, such as the assessment of nutrient intakes of the EU population.' To the right of this text is a 'See also' box with a link: '> The EFSA DWH access rules'.

<https://www.efsa.europa.eu/en/food-consumption/comprehensive-database>

# MAGNITUDE OF THE COMPREHENSIVE DATABASE

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<b>Member States</b>	<b>23</b>
Dietary surveys	51
Population groups	128
Subjects: infants to very elderly	94,532
Different national food codes	127,912
Different standard food codes	1,578
Consumption records	10,470,332

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Use of the EFSA Comprehensive European Food Consumption Database in Exposure Assessment:

<https://www.efsa.europa.eu/en/efsajournal/pub/2097>

# AGE CLASSES

Age class	Age range (years)	Number of surveys*	Number of countries*
Infants	0 – 1	6	6
Toddlers	1 – 3	11 (10)	10 (9)
Children	3 - 10	20 (18)	17 (15)
Adolescents	10 - 18	20 (17)	17 (14)
Adults	18 - 65	22 (17)	21 (16)
Elderly	65 - 75	16 (14)	15 (13)
Very elderly	> 75	14 (12)	14 (12)
Special population group		2 (2)	2 (2)









\* In parenthesis only surveys with more than one day per subject











# SUMMARY STATISTICS

Summary food consumption statistics (chronic and acute) available for each country, survey, age group (from infants to elderly) and FoodEx food group (over 1,500) in g/day and g/kg bw per day.

## Chronic food consumption statistics

Intake	All subjects	Consumers only
grams per day* (g/day)	 	 
grams per day per kilogram of body weight* (g/kg bw per day)	 	 

## Acute food consumption statistics

Intake	All days	Consuming days only
grams per day* (g/day)	 	 
grams per day per kilogram of body weight* (g/kg bw per day)	 	 

## DIETARY SURVEY METHODOLOGY

Examples of methodological differences between different dietary surveys in different countries

- 24 h dietary recall vs. food record
- from 1 to 7 days per subject
- from 28% to 98% response rate
- sample size and sampling design
- week end days not always evenly represented
- seasonality not always covered
- body weight and height measured or estimated
- food classification

# SUMMARY



## WHAT'S ON THE MENU IN EUROPE



Towards **more harmonised** food consumption data at EU level to address methodological differences in the comprehensive food consumption database

## EU MENU PROJECT (2011-2022)

### EFSA provides financial support & guidance to Member States

- Aims to collect food consumption data from new dietary surveys following a more harmonised methodology
- in different age classes (from infants to elderly)
- in all 28 Member States (minimum 80,000 subjects in total) + pre-accession countries
- Using methods allowing the comparison of the results

### Interaction through EFSA's network on food consumption data

## GUIDANCE OF EFSA

### Guidance on the EU Menu methodology<sup>1</sup>

European Food Safety Authority<sup>2,3</sup>

European Food Safety Authority (EFSA), Parma, Italy

#### ABSTRACT

The availability of detailed, harmonised and high-quality food consumption data for use in dietary exposure assessments is a long-term objective of EFSA. In 2009, the EFSA guidance on “General principles for the collection of national food consumption data in the view of a pan-European dietary survey” was published, and a pan-European food consumption survey, also known as the “EU Menu”, was launched. Based on the 2009 EFSA guidance, two EU Menu feasibility pilot studies and two methodological projects, EFSA has updated the former guidance document to cover the EU Menu methodology and therefore facilitate the collection of more harmonised food consumption data from all European Union Member States by the year 2020. This guidance has been developed by the EFSA Evidence Management Unit (DATA) and the EU Menu Working Group with Advisory Function, and has been endorsed by the EFSA Network on Food Consumption Data. It provides recommendations for the collection of more harmonised food consumption data among the EU Member States for use in dietary exposure assessments of food-borne hazards and nutrient intake estimations under the remit of EFSA’s scientific panels. Food consumption information should be collected for two non-consecutive days. The 24-hour food diary method, followed by a computer-assisted personal or telephone interview (CAPI/CATI), should be used to collect data from infants and children. For all other age groups, the 24-hour dietary recall CAPI/CATI method should be used. The reported foods should be described in accordance with the EFSA FoodEx2 food classification system. A short food propensity questionnaire should be used to collect information on the consumption of some less frequently eaten foods and the consumption frequencies of food supplements. Information on the weight, height and physical activity levels of participants should also be collected in the survey.

© European Food Safety Authority, 2014

#### KEY WORDS

EU Menu, pan-European dietary survey, food consumption, exposure assessment, 24-hour recall, food diary, harmonisation

## SCOPE OF THE GUIDANCE

Methods and procedures described in the present guidance are recommended as suitable for the collection of **harmonised** and **high-quality** food consumption and related data within the EU.



**Other methods could also provide high-quality food consumption data**, but if these are used only in certain countries the level of data harmonisation would be reduced.

## MAIN POINTS

- **Children**: dietary record method
- **All other subjects**: 24-hour recall method
- **Two** non-consecutive **days**
- **Interviewers Nutritionists/Dieticians**
- **Detailed food description** - Composite foods to be broken down to ingredients
- First interview **face to face**, the second can be administered via telephone; Meetings preferably at home
- Use of different **portion-size measurement aids**
- Country-specific, validated **picture books** are recommended and age-appropriate tools
- Actual **measurement** of body weight and height
- Questionnaire to assess **physical activity** levels
- **Food propensity questionnaire** (FPQ)



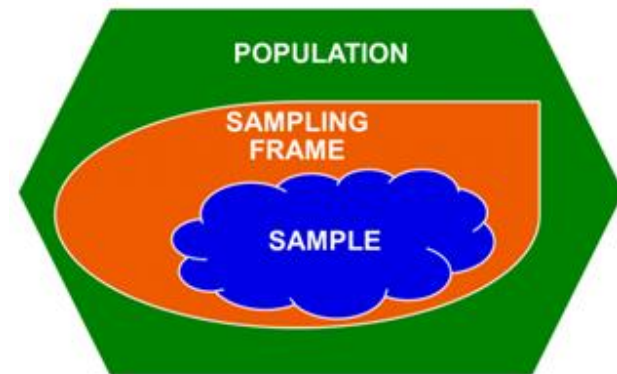
## STUDY ORGANISATION AND PLANNING

- evaluation of the **survey plan** and **procedures** by ethics committees
- preparation of the **dietary software** and **country specific databases**
- **recruitment** and **training** of survey interviewers
- a **pilot study** (about 5–10 % of the total sample)

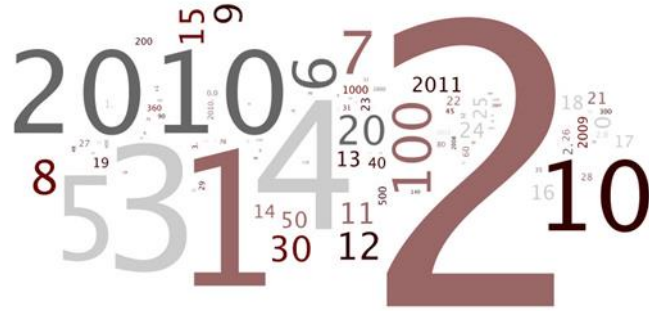


## SAMPLING METHOD AND FRAME

- Probability sampling strategy with pre-defined age and sex classes to define strata
- The sampling frame should cover the entire defined target population
- Recommended sampling frame: The national population register
- Any bias should be identified and described at the country level




# SAMPLE SIZE



- Variability in dietary patterns should be considered and clearly described at country levels
- **At least 260 participants** (130 males and 130 females) **per country and age class** (from infants to the elderly).
- The inclusion of **more than the minimum number of subjects** in the study is **strongly recommended**

## RECRUITMENT AND PARTICIPATION RATE

Subject burden low  participation rates high  
To monitor non-response throughout the survey, information per population strata should be registered on:

- sample size
- eligible sample size
- number of refusals (non-participation)
- number of non-contactable persons (non-participation), number of complete participants, and
- number of partial participants



## DIETARY ASSESSMENT METHOD

### Children aged 3 months to 9 years

The two non-consecutive one-day food diaries followed by an interview with the parent/caretaker completing, checking and entering the data

### Adolescents, adults and elderly

The 24-hour recall interview including two non-consecutive days should be used

+ short, non-quantitative  
Food Propensity Questionnaire (FPQ)



# DIETARY SOFTWARE










- The software needs to ensure the collection of high-quality data within the survey
- The food list should be updated regularly so that new foods, recipes and other information reported but the study subjects can be added

# QUANTIFICATION OF COMPOSITE DISHES

**Food as consumed**

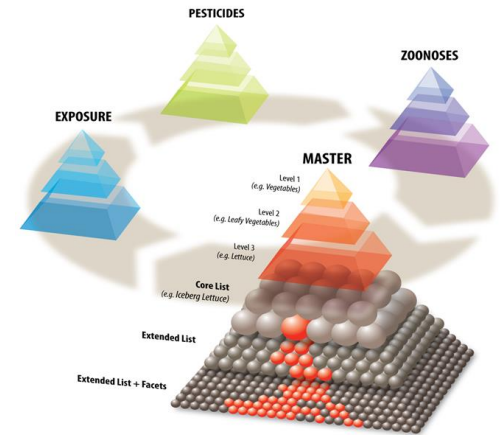


297 grams

Cooked	Ingredients	Raw
210 grams		120 grams
73 grams		94.5 grams
7.8 grams		7.8 grams
1.7 grams		2.7 grams
0.5 grams		0.8 grams
3 grams		3 grams
1 gram		1 gram

# FOOD DESCRIPTION

All foods recorded in the national dietary survey should be classified in accordance with the FoodEx2 food classification system developed by EFSA.



## Minimum set of facet descriptors

- Source
- Part-nature
- Sweetening agent
- Fortification
- Qualitative information
- Packaging material
- Process



# DETERMINATION OF PORTION SIZES

The parallel use of different country and age-appropriate and validated portion size measurements aids is needed to obtain best estimates on quantities consumed for different foods.



## FOOD SUPPLEMENTS

Detailed information on the responder's use of food supplements and medicines containing high concentration of nutrients should be collected

- Name/type of food supplement
- Brand name
- Strength/concentration per unit
- Type and number of units consumed
- Unit quantification in grams



# NON-DIETARY INFORMATION

## Minimum set of background information

- Date of the data collection
- Sex and age of the respondent
- Geographical information
- Special conditions (e.g. pregnant, chronic disease, etc.)
- Special diet (e.g. vegetarian, slimming, health conditions)
- Size of household
- Labour status
- Professional status
- Education level
- Physical activity level
- Person provided the answers (in case of children)



# BODY WEIGHT AND HEIGHT

## Children aged 3 months to 9 years

- Weight and height information should be measured

## Adolescents, adults and the elderly aged

- The weight and height information can be collected through self-reporting by the subjects or measured during the interview





# QUALITY ASSURANCE



- Quality assurance plans should be prepared at the country level
- The assessment of the prevalence of misreporting (i.e. under- and over-reporting of dietary energy intakes) should also be performed taking into account the physical activity levels of the subjects

Project started in	Dietary survey on	
	Children	Adults
2011	France	France
	Estonia	
2012	Latvia	Latvia
	Netherlands	Netherlands
	Portugal	Portugal
	Spain	Estonia
	Belgium	Belgium
2013	Cyprus	Cyprus
		Greece
		Spain
2014	Hungary	Hungary
	Italy	Italy
	Slovenia	Slovenia
	Greece	Austria
		Romania
2015		Finland
	Poland	Poland
2016	Croatia	
	Serbia	Serbia
	FYROM	Montenegro
		Bosnia & Herzegovina
<b>Number of dietary surveys</b>	<b>16</b>	<b>19</b>

## EFSA Support to the EU Menu

-  EU Member States
-  Pre-accession Countries



0 550 1,100  
Kilometers

## NEXT EU MENU CALL 2017

Support to National Dietary Surveys in Compliance with the EU Menu methodology (seventh support)

- Lot 1 – “The children’s survey”, including subjects from three months up to 9 years old,
- Lot 2 – “The adults’ survey”, including subjects from 10 to 74 years old

**Procurement procedure:** Open call

*To be launched in May 2017*

**EFSA guidance for tenderers available at :**

<http://www.efsa.europa.eu/en/calls/procurement>



# THANK YOU



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