



Healthy Lifestyle  
in Europe  
by Nutrition  
in Adolescence



## EU project HELENA (Healthy Lifestyle in Europe by Nutrition in Adolescence)

***Adolescence is a crucial period in life and implies multiple physiological and psychological changes that affect nutritional needs and habits. Healthy (or unhealthy) life-long habits begin there. Many non-communicable diseases, like obesity, are thought to have their origins in this period of life. The number of EU schoolchildren who are overweight or obese is rising by about 400.000 per year. The concern is not only that young people are overweight or obese, but that obesity heightens the risk for many serious illnesses including diabetes, heart disease, hypertension or respiratory disease. However, the relationship between these diseases and the adolescent lifestyle and attitudes, physiology, genetics and environmental factors is complex and not well understood.***

The key to health promotion and disease prevention in the 21<sup>st</sup> century is to establish an environment that supports positive health behavior and healthy lifestyle. In order to do that, we have to first answer the following questions: Do European adolescents have healthy eating habits? Are they sufficiently physically active? Have they healthy lifestyles? This is within the purpose of the HELENA project (Healthy Lifestyle in Europe by Nutrition in Adolescence), a wide-ranging study financially supported by the European Union.

HELENA study is designed to understand and effectively enhance nutritional and lifestyle habits of adolescents in Europe. One of the strengths and innovative aspects of the project is the use of common methodology that will result in reliable and comparable data between the countries. The project involves 25 partners from academia and industry areas in 10 countries (Austria, Belgium, France, Germany, Greece, Hungary, Italy, Spain, Sweden and United Kingdom).

During the 3 years of the HELENA study, three main objectives will be attained. In the first place, the nutritional status of European adolescents between 13 and 16 years-old will be assessed through surveys, cross-country and cross-sectional studies in the different countries. The following aspects will be included:

- Dietary intake, nutrition knowledge and eating attitudes
- Food choices and preferences
- Body composition
- Plasma lipids and metabolic profile
- Vitamin status
- Immune function related to nutritional status
- Physical activity and fitness
- Genotype (to analyse gene-nutrient and gene-environment interactions)

This will provide insight on adolescents' knowledge and attitudes towards nutrition and physical activity, as well as identify the main determinants of their food choice and preference. Secondly, a Lifestyle Education Programme aiming at improving eating and lifestyle habits of this population segment will be developed and tested. And finally, in collaboration with the industry partners of the project, and based on the knowledge gathered on adolescents food choice and preferences, healthy foods that are appealing to adolescents will be developed.

Several **ESN members** are involved in two of the work packages, which involve **sensory** and **consumer** testing:

- WP11 "Food Choice and Preferences", and
- WP12 "Development of health promoting food products and assessment of their acceptability among adolescents".

## WP11 - Food Choice and Preferences (*CCFRA is work package leader*)

HELENA will provide data about attitudes towards nutrition, and the main determinants of the food choice and preference, among male and female European adolescents.

### Objectives

- Determine issues relating to food choice among adolescents and to identify how these may affect their behaviour towards food.
- Investigate attitudes towards nutrition among adolescents and to establish the main determinants of their food choice and preference.
- To highlight similarities and differences in attitudes and behaviours between and within countries.

### Approach

1. Focus Groups with 300 adolescents in 5 countries (Spain, UK, Sweden, Belgium, Hungary)

Partners involved: AINIA, CCFRA, SIK, MEURICE R&D, CCFRA-HUNGARY.

2. Quantitative Surveys with 3000 adolescents in 11 countries (Spain, France, Germany, Hungary, Crete, Italy, Belgium, Austria, Greece, Sweden, UK)

Partners involved: UNIZAR, UL2, FKE, PTE, UOC, INRAN, BE-TUG, AKH-WIEN, HUA, KI, CCFRA

## WP12 - Development of health promoting food products and assessment of their acceptability among adolescents (*SIK is work package leader*)

### Objectives

To develop three food products with

- Positive health effects for adolescents
- Sensory characteristics that are attractive to adolescents

### Approach

1. Founding the scientific and the technological basis for the product development
  - 'Voice of the experts' (interviews with nutrition and health experts)
  - 'Voice of the consumers' (from focus groups in WP11)
  - Discussions with ingredient suppliers
2. Product development for 3 product types
3. Acceptability studies in 5 countries (Spain, UK, Sweden, Belgium, Hungary)

Partners involved: AINIA, CCFRA, SIK, MEURICE R&D, CCFRA-HUNGARY, PASA, SERRANO, CEDERROTH, CEREALIA

For more information about the HELENA project, please consult <http://www.helenastudy.com>, or contact Ms. Chantal Gilbert ([c.gilbert@campden.co.uk](mailto:c.gilbert@campden.co.uk)) or Ms. Annika Åström ([ana@sik.se](mailto:ana@sik.se))

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The HELENA consortium consists of the following 25 partners:

<b>Participant No.</b>	<b>Participant name</b>	<b>Group</b>	<b>Participant short name</b>	<b>Country</b>
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2	Consejo Superior de Investigaciones Científicas	Instituto del Frio. Departamento de Metabolismo y Nutrición	CSIC	Spain
3	Université de Lille 2	Clinique de Pédiatrie, Hopital J de Flandre	UL2	France
4	Research Institute of Child Nutrition Dortmund		FKE	Germany
5	Pécsi Tudományegyetem	Department of Paediatrics. Medical Faculty	PTE	Hungary
6	University of Crete	Department of Social Medicine, School of Medicine, Preventive Medicine and Nutrition Clinic	UOC	Greece
7	Rheinische Friedrich Wilhelms Universität	Institut für Ernährungs- und Lebensmittelwissenschaften - Humanernährung	Uni Bonn	Germany
8	University of Granada	Department of Medical Physiology, Faculty of Medicine, Research Group EFFECTS 262	UGR	Spain
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10	University of Napoli "Federico II" Department of Food Science	Department of Food Science	DSA-UNINA	Italy
11	Ghent University	Department of Public Health. Faculty of Medicine and Health Sciences. Unit of Nutrition and Food Safety	BE-TUG	Belgium
12	University of Vienna	Department of Pediatrics, Division of Clinical Nutrition	AKH-WIEN	Austria
13	Harokopio University	Department of Nutrition and Dietetics	HUA	Greece
14	Institut Pasteur de Lille	INSERM-U508 et Service d'Epidemiologie et de Santé Publique	IPL	France
15	Karolinska Institutet	Department of Biosciences, Unit for Preventive Nutrition	KI	Sweden
16	Asociación de Investigación de la Industria Agroalimentaria	Laboratorio de Análisis Físico y Sensorial	AINIA	Spain
17	Campden & Chorleywood Food Research Association	Department of Consumer and Sensory Sciences	CCFRA	United Kingdom
18	SIK – Institutet foer livsmedel och bioteknik	Flavour and sensory evaluation	SIK	Sweden
19	Meurice Recherche & Developpement asbl	Institut Meurice - Departement De Technologie Alimentaire	Meurice R&D	Belgium
20	Campden & Chorleywood Food Development Institute, Hungary		CCFRA – Hungary	Hungary
21	Productos Aditivos SA	Research and Development	PASA	Spain
22	Carnicas Serrano SL	Research and Development	SERRANO	Spain
23	Cederroth International AB	Research and Development	Cederroth	Sweden
24	Cerealia R&D AB		Cerealia	Sweden
25	European Food Information Council		EUFIC	Belgium

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