



# EU CHILDHOOD OBESITY PROGRAMME

Project Title: Childhood Obesity: Early Programming by Infant Nutrition?

Acronym: CHOPIN

Project Number: QLK1-2001-00389

[www.childhood-obesity.org](http://www.childhood-obesity.org)

## NEWSLETTER 2 - SUMMER 2003

"The EU Childhood Obesity Programme is investigating whether the protein/fat ratio in infant formula and complementary feeds has lasting effects on obesity risks."

### Focus on Work Package Three Development of diet, lifestyle and attitude questionnaires

#### Methodology

The Italian and German teams were responsible for the development of methods for the longitudinal assessment of nutrient intake and dietary habits of formula-fed and breast-fed infants. As these instruments for dietary evaluation have to be suitable from birth - 2yrs as well as for a novel cross cultural evaluation in the different European countries, a 3-day weighed food record coupled with a feeding habits questionnaire was thought to be best approach.

The food record will be validated by comparing energy intake calculated from the food records with the energy expenditure measured by the doubly labelled water method in a sub-group of babies ( WP5).

#### 3-day weighed food intake

Food intake will be recorded each month for the first 9 months of life and then at the end of month 12, 18 and 24 on three consecutive days (one at the weekend and two weekdays).

For the first 3 months, the focus will be on milk intake. Mothers already feeding fluids, other than the test formula or breast milk to their baby or complementary baby foods can record them as well as telling us when they first introduce them. Recording for months 4-9 is similar although the focus shifts to complementary food which will mostly be introduced after the baby is 6 months old. At 12, 18 and 24 months, there is the option to write down detailed recipes.

For the nutrient analysis a special food data base was developed, based on the German food data base BLS III. Details of special national baby foods have to be inputted by each of the five study centres.

#### Questionnaires

To assess more general aspects of the feeding habits of infants a dedicated questionnaire was developed which parents have to complete when the baby is 3, 6, 9, 12, 18 and 24 months old. Questions are asked about the type of milk, meal duration, intake of supplements, intake of solid foods, usual feeding pattern, child's behaviour during feeding, child's appetite and 'stress' state of the mother while feeding her baby. Since the dietary habits of the mother might have an impact on the child's weight gain, they are also given a questionnaire about their own diet when the child is one.

### Focus on Work Package Six Recruitment & monitoring of intervention trial

#### Recruitment

The original aim of the trial was to recruit 1250 babies (1000 formula-fed/250 breastfed) within the first 6 months of the project, starting in October 2002. Unfortunately, the recruitment of formula-fed babies has turned out to be more difficult than expected, due to the high breastfeeding rate in some of the participating countries, especially in Germany and Belgium.

After 6 months, we had recruited 497 babies (289 formula-fed/208 breastfed). The recruitment period was therefore prolonged from 6 to 9 months and the upper time boundary for inclusion of a baby was increased from 28 to 56 days of age. At the end of 9 months, a further 419 children had been recruited, giving a total of 916 infants in the trial, (559 formula-fed/357 breastfed).

Dropout rates are relatively high (17% formula-fed/28 % breastfed). We are trying to prevent dropouts by offering appropriate incentives for mothers to stay in the study.

#### Monitoring

Ours is a double blind randomised clinical trial. Each of the 5 study centres will be visited in order to ensure quality control according to good clinical practice guidelines.

Since data capture technology is used, the electronic case reports forms (eCRFs) can be continuously monitored by the central database, so that additional site visits are unnecessary. General monitoring problems will be discussed at the 'project co-ordination' meetings.



CHOPIN partners visit Chopin's birthplace at Zelazowa Wola during the project meeting in Warsaw in May 2003.

Left to right:

Back row: Jerzy Socha(PL), Ricardo Closa(E), Margaret Ashwell (GB), Dariusz Gruszczyński(PL), Anne Sengier(B), Emmanuel Perrin (F), Ilse Broekaert(D), Piotr Socha(PL)

Front row: Hans Demmelmair(D), Veronica Luque(E), Bert Koletzko(D), Marie Françoise Rolland Cachera(F), Doris Oberle(D), Sabine Verwied-Jorky(D).

(A. Stolarczyk(PL), S. Scaglioni(I) and E. Verduci(I) were also at the meeting but did not go on this trip).

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# Project Progress Meetings

## Spring 2003

This was held in Warsaw in May 2003. Representatives from seven of the eight CHOPIN partners attended. Progress in recruiting babies for the intervention trial and the monitoring of standard procedures was discussed and ways of improving recruitment rate suggested (see Focus on WP6).

Other items discussed extensively among the partners included the standardisation of urine collections, their storage and dispatch, standardisation of the renal ultrasound procedure, the standardised validation of the weighing machines and other anthropometric tools. A separate meeting for those personnel involved in diet assessment was held to discuss the standardisation of this methodology (see Focus on WP3). Progress in disseminating information about the project was discussed. Apart from the brochures, newsletters and website, the group were reminded that a set of slides and a poster were available for them. The group also discussed the importance of preparing early publications from the project even before any results were available. Such publications could cover remote data entry as a new instrument of data collection, a comparison of data from breastfed vs. formula fed infants relating behaviour of the child and allergies experienced and the use of the diet assessment methods for such young babies.

At the end of the meeting, many of the partners enjoyed a trip outside Warsaw to the birthplace of the composer CHOPIN in Zelazowa Wola and listened (to the accompaniment of raindrops on umbrellas) to a wonderful performance of Chopin's music played by Regina Smendzianka (who played inside the house in the dry!). Many thanks are due to the Polish partners for arranging such a successful meeting.

## Relevant meetings

**13<sup>th</sup> European Childhood Obesity Group Workshop** - Brindisi, September 25-27, 2003 - Satellite of the 9<sup>th</sup> European Nutrition Conference - [www.childhoodobesity.net](http://www.childhoodobesity.net)

**9th European Nutrition Conference (9 ENC)** sponsored by FENS, 1-4 October 2003 in Rome - [www.fens2003.org](http://www.fens2003.org)

**4th Nutrition and Health Conference** - London, UK, 21-22 November 2003

Contact: Nutrition & Health Conference, 16 Brownlow Court, Lyttelton Road, London, N2 OEA, UK  
Tel/Fax: + 44 (0)20 84556570 or +44 (0)20 84552126 - [www.nutritionandhealth.co.uk](http://www.nutritionandhealth.co.uk)

**The Society for the Study of Human Biology and the Biosocial Society Annual Symposium 2003 on Childhood Obesity** - December 15-17 2003, Loughborough University, UK. Programme and details from Professor Noel Cameron - [n.cameron@lboro.ac.uk](mailto:n.cameron@lboro.ac.uk)

**13<sup>th</sup> European Congress on Obesity** - Prague, 26-29 May 2004 - [www.eco2004.cz](http://www.eco2004.cz)

**Early Nutrition And Its Later Consequences: New Opportunities** - A scientific workshop (organised by the EU Infant Nutrition Cluster) to be held at the Palais des Congres, Paris on July 2nd and 3rd, 2004 - [www.metabolic-programming.org](http://www.metabolic-programming.org)

**2nd World Congress of Paediatric Gastroenterology, Hepatology, and Nutrition** hosted by Federation of the International Societies of Paediatric Gastroenterology, Hepatology and Nutrition (FISPGHAN), and the European Society for Paediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN) - July 3-7, 2004 in Paris - [www.wcpghn2004.com/gastroenterology.html](http://www.wcpghn2004.com/gastroenterology.html)

## Other related EU Projects

**QLK1-CT-2002-00372:** Trial to reduce IDDM in the genetically at risk (Nutritional Primary Prevention of Type 1 Diabetes)

**QLK1-CT-2001-00138:** Influence of Dietary Fatty Acids on the Pathophysiology of Intrauterine Foetal Growth and Neonatal Development

**QLK1-1999-00076:** Conjugated linoleic acid (CLA) in functional food: a potential benefit for overweight middle-aged Europeans.

**QLK1-1999-00916:** The role of social, genetic and environmental factors in healthy eating: a multicentre analysis of eating disorders and obesity.

**QLK1-2000-00083:** Early malnutrition and programming of adult degenerative diseases: experimental, epidemiological and preventive studies.

**QLK1-2000-00515:** Dietary and genetic influences on susceptibility or resistance to weight gain on a high fat diet.

**QLK1-2000-00618:** Nutrient-gene interactions in human obesity: Implications for dietary guidelines.

**QLRT-2001-002288:** Obesity and disease in ageing

### Editorial Co-ordinator:

Dr. Margaret Ashwell  
[www.ashwell.uk.com](http://www.ashwell.uk.com)

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## Partner profile

### The Spanish Team

The Spanish team has to recruit a full group of infants (300 to be fed with infant formula and another 75 control breastfed infants).

Also, after a reorganization of the workpackages, they will be one of the centers working on a subset of babies for energy measurement in close collaboration with the UK partner in Cambridge (WP5).

The group consists of one team working in Tarragona and another working in Reus, two different cities 10km apart. The Neonatal Units of these two centres are led by two senior pediatricians, Ricardo Closa (Hospital Universitario Joan XXIII de Tarragona) and Joaquin Escribano (Hospital Universitario Sant Joan de Reus), both working full time in a hospital setting. Both Hospitals are affiliated to the Universitat Rovira i Virgili and both maternity wards see about 1500 deliveries/year each.

Two full time dieticians (Veronica Luque and Georgina Méndez) are in charge of recruitment, following patients and families, and all the related tasks. A Biologist and a Chemistry student help the team during the weekend with recruitment. Another technician, Silvia Olivé, will be added to the group for the extra work on WP5, and she will work full time under the supervision of the main coordinators.

The CHOPIN project is a project for both Hospitals, so the CHOPIN team has the support of all of the pediatric staff.

