



# EARNEST

## THE EARLY NUTRITION PROGRAMMING PROJECT



### What is early nutrition programming?

Early nutrition programming is an exciting new idea. Conditions in early life, either in the womb or just after birth, might permanently affect a person's future metabolism and health. This is where nature and nurture overlap! It is where the environment interacts with the genetic makeup of a developing fetus and young infant to determine the default setting for different physiological and metabolic functions and thus possibly long-term health.

The EARNEST project involves scientists from 40 different research institutions across 16 European countries investigating various aspects of early nutrition programming from different angles. The European Commission has invested over 13 million euros in the project over 5 years. It is coordinated by Professor Berthold Koletzko from the Children's Hospital, University of Munich in Germany.

### What is EARNEST doing?

The EARNEST consortium is following up children and teenagers who were previously involved in various intervention studies in their early life, either while their mother was pregnant or in the first few months of their life, to find out the longer term effects of these interventions. Their ages now range from 5 years to nearly adulthood. The EARNEST team are looking at markers of cardiovascular disease, obesity, immunological function and cognitive development.

Other EARNEST researchers are following up large groups of pregnant women and their children to understand better how reported differences in diet and lifestyle at early stages can lead to differences in health later on.

It is also important to get a better understanding of the mechanisms by which early life conditions might programme future disease risk. So, other EARNEST scientists are looking at the consequences of making changes to the diets of different animals, either during pregnancy or lactation, on long term health. For many of the animals used, their natural lifespan is short enough to also allow the effects on the second and third generations to be examined.

### What has EARNEST found out so far?

- Higher protein intake during the first year of a baby's life resulted in greater weight for length when the child was two years old.
- Giving infant formula with a mixture of prebiotics to infants with a high risk of allergy resulted in a lower rate of eczema up to the age of 2 years.
- Mothers who took fish oil supplements during the last part of their pregnancy had children with a reduced risk of asthma later on.

#### General enquiries

Dr Hans Demmelmair / Brigitte Anton  
[programming@med.uni-muenchen.de](mailto:programming@med.uni-muenchen.de)

#### Press enquiries

Rhonda Smith / Marc Catchpole  
[earlynutrition@btinternet.com](mailto:earlynutrition@btinternet.com)  
Telephone: +44 (0) 1264 710428 Mobile: +44 (0) 7887 714957

#### Websites

[www.metabolic-programming.org](http://www.metabolic-programming.org) - [www.earlynutrition.org](http://www.earlynutrition.org)

### What your mother ate during pregnancy might affect your long term health



### Breast fed babies are less likely to become fat children than bottle fed



### Growing too fast in infancy could increase your risk of heart disease in later life

