

Diet during pregnancy and early life affects children's behaviour and intelligence. (PR)

The statement "you are what you eat" is significant for the development of optimum mental performance in children as evidence is accumulating to show that nutrition pre-birth and in early life "programmes" long term health, well being, brain development and mental performance and that certain nutrients are important to this process.

Researchers from the NUTRIMENTHE project have addressed this in a five-year study involving hundreds of European families with young children. Researchers looked at the effect of, B-vitamins, folic acid, breast milk versus formula milk, iron, iodine and omega-3 fatty acids, on the cognitive, emotional and behavioural development of children from before birth to age nine.

The study has found that folic acid, which is recommended in some European countries, to be taken by women during the first three months of pregnancy, can reduce the likelihood of behavioural problems during early childhood. Eating oily fish is also very beneficial, not only for the omega-3 fatty acids they which are 'building blocks' for brain cells, but also for the iodine content which has a positive effect on reading ability in children when measured at age nine.

A long-term study was needed as explained by Professor Cristina Campoy, who led the project "Short term studies seem unable to detect the real influence of nutrition in early life", explained Prof Cristina Campoy, "NUTRIMENTHE was designed to be a long-term study, as the brain takes a long time to mature, and early deficiencies may have far-reaching effects. So, early nutrition is most important."

Many other factors can affect mental performance in children including; the parent's educational level, socio-economic status of the parents, age of the parents and, as discovered by NUTRIMENTHE, the genetic background of the mother and child. This can influence how certain nutrients are processed and transferred during pregnancy and breastfeeding and in turn, affect mental performance.

In giving advice to parents, Cristina Campoy explained, "it is important to try to have good nutrition during pregnancy and in the early life of the child and to include breastfeeding if possible, as such 'good nutrition' can have a positive effect on mental performance later in childhood." She went on to explain, "however, in the case of genetics, future studies should include research on genetic variation in mothers and children so that the optimum advice can be given. This area is relatively new and will be challenging!"

The knowledge obtained by NUTRIMENTHE will contribute to the science base for dietary recommendations for pregnant women and children for improving mental performance.

The work and results of NUTRIMENTHE will be presented and discussed at the NUTRIMENTHE International Conference taking place at the Granada Conference and Exhibition Centre on the 13th and 14th of September.

ENDS

Notes to Editors

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The NUTRIMENTHE project: A five year study into the effect of diet on the mental performance of children.

Coordinator: Professor Cristina Campoy, Department of Paediatrics, University of Granada, Spain.

Timescale: 1st March 2008- 31st December 2013.

Budget: €8m.

Contribution from European Commission: €5.9m

Partners: 20 partners from UK, Spain, Italy, Germany, The Netherlands, Belgium, Poland, Hungary, USA.

Website: www.nutrimenthe.eu

There is evidence that early nutrition can influence or programme later mental performance, cognitive development and behaviour. The idea that the diet of mothers, infants and children could have an influence on long-term mental performance has major implications for public health practice and policy development, economic progress and future wealth creation.

Nutrimenthe is a five-year study that draws together a wide range of scientific disciplines from organisations around Europe and beyond to study the effect of diet on the mental performance of children. More than 17,000 mothers and 18,000 children are involved in epidemiological population studies and nutritional intervention studies taking place in study centres around Europe.

Nutrimenthe has generated much new about the links between diet during pregnancy and childhood and mental performance. Nutrimenthe also aims to establish positive dietary recommendations for the European population as a whole for certain nutrients, especially Omega-3 fatty acids. Nutrimenthe also aims to improve public knowledge especially that of parents, teachers and industry, laying the foundations for appropriate health claims about how diet affects mental performance in children.

NUTRIMENTHE International Conference, Granada Conference and Exhibition Centre

13th and 14th September 2013.

Starting at 14.00 13th September 2013

Venue: Sala Machuca y Albeniz - Granada Conference and Exhibition Centre, Granada

In advance of the 20th ICN World Congress of Nutrition

About the European Commission's Seventh Framework Programme

The European Commission's Framework Programme has been running since 1984 and is the European Union's main scheme for funding research. The current, Seventh Framework Programme (FP7) is the largest programme to date, committing €19bn for research from 2007-2013 including funding for Health, Information Communications Technology, Security, Transport, Environment. Nutrimenthe is funded by the Food, Fisheries, Agriculture and Biotechnology programme of FP7.

http://cordis.europa.eu/fp7/home_en.html

The research leading to the results of the Nutrimenthe project have received funding from the European Community's 7th Framework Programme (FP7/2008-2013) under grant agreement no: 212652 (NUTRIMENTHE Project "The Effect of Diet on the Mental Performance of Children").