

## Study: Diet during pregnancy and early life affects children's behavior and intelligence



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The old adage, “you are what you eat” seems to hold significance when it comes to the mental performance of children, according to new evidence that has surfaced about pre-birth and early life nutrition. It seems these are critical times in the programming of long term health, well being, brain development and mental performance and certain nutrients play an important role in the process.

Researchers from the NUTRIMENTHE project addresses this in a 5-year study that involved hundred of European families with young children. They looked at the effects B vitamins, folic acid, breast milk, formula, iron, iodine and omega-3 fatty acids had on cognitive, emotional and behavioral development in children from birth through nine years of age.

The study found that folic acid, recommended in many European countries, taken during the first three months of pregnancy can reduce the possibility of behavioral problems during early childhood. Eating oily fish was also discovered to be beneficial for not just the omega-3 fatty acids that are the building blocks of brain cells, but also because of the iodine content that appears to have a positive effect on reading ability in children when measured at around nine years of age.

According to Professor Cristina Campoy, lead on the project, a long term study was needed. She explained, “Short term studies seem unable to detect the real influence of nutrition in early life. 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 also affect a child's mental performance, including educational level, socioeconomic status and age of the parents. NUTRIMENTHE also discovered that the genetic background of the mother and child also has an effect as it can influence how some nutrients are processed and transferred during pregnancy and breastfeeding.

Cristina Campoy, giving advice to parents, 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!”

This new information discovered by NUTRIMENTHE will contribute to the science base for dietary recommendations for pregnant women and children for improving mental performance.