

Multivitamins in pregnancy can 'advance child's brain by a year'

By Sarah Knapton SCIENCE EDITOR

TAKING multivitamins during pregnancy could help to advance a child's development by up to a year by the time they reach secondary school, a study suggests.

The issue of taking supplements is controversial for pregnant women, with research last year suggesting that it was a waste of money to take anything except folic acid and Vitamin D.

But a new study by an international team including Harvard University, the University of California and the University of Lancaster found that multivitamins can add the equivalent of up to a full year of schooling to a child's cognitive abilities between the ages of nine and 12.

The study also found that early-life nurturing, happier mothers and educated parents all led to cleverer children. A nurturing environment was found to be even more important than biological factors, such as good nutrition and birth weight, for intellectual ability, academic achievement and fine motor dexterity.

"Previous studies had hinted at the importance of social determinants, but it was the extent of our detailed cognitive assessments and the number of children tested, together with data from the pregnancy onward, that enabled us to clearly quantify the effects, and the results were surprising," said Dr Elizabeth Prado, of the University of California, Davis. The study was carried out on

almost 3,000 children in Indonesia aged between nine and 12, whose mothers had participated in an earlier study into the effects of supplements in pregnancy. The multivitamins contained iron, folic acid, retinol, Vitamin D, Vitamin E, ascorbic acid, Vitamin B, niacin, zinc, copper selenium and iodine.

The children of mothers who took the supplements had better procedural memory equivalent to an additional half-year of schooling. For mothers who had been anaemic, a common problem in pregnancy, the effect was

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equivalent to one extra year of schooling.

Procedural memory is important for a child's academic performance and daily life and is tied to activities such as driving, typing, reading, arithmetic, reading, speaking and understanding language, and learning sequences.

Biological factors such as low infant birth weight, premature birth, poor infant physical growth and poor nutrition were found to have less of an impact on mental ability compared to home environment, maternal depression, parental education and socio-economic status. The research was published in *The Lancet Global Health*.