

# Clinical Update

## **Folic acid link to post-natal depression may be genetic**

Folic acid supplements during pregnancy might help protect against worsening depression up to 21 months after giving birth, especially in women with a genotype that influences folate metabolism, suggests a new study.

*(European Journal of Clinical Nutrition, July 2011)*

Several recent studies have suggested that low folate status could also be a factor in depression. Dr Sarah Lewis of Bristol University in the UK and her team wanted to explore the relationship in pregnant women by investigating whether high folate intake during pregnancy might offer protection against depression during pregnancy and afterwards. Their research is thought to be the first ever longitudinal study of folic acid supplementation and perinatal depression.

They found no strong evidence linking self-reported folic acid intake to a reduce risk of self-reported depressive symptoms during pregnancy or in the first eight months after giving birth. However they did note a link later on, as folic acid supplementation appeared to exert a protective effect against increased depressive symptoms between eight and 21 months after giving birth – and the effect was particularly pronounced in women with the methylenetetrahydrofolate reductase (MTHFR) C677T genotype, which has been seen to influence folate metabolism and intra-cellular levels of folate metabolites and homocysteine.

*“Low folate is unlikely to be an important risk factor for depression during pregnancy and for post-partum depression, but it may be a risk factor for depression outside pregnancy, especially among women with the MTHFR C677T TT genotype,”* wrote Dr Lewis in a report published in the *European Journal of Clinical Nutrition*.

The timescale for an observed effect is significant because without adequate supplementation concentrations of maternal serum folate decrease gradually from the fifth month of pregnancy. They remain low for several months after the birth, meaning that women who become pregnant again within a short space of time may not rebuild serum folate to optimum pre-pregnancy levels.

### **Study details**

The study drew on data from 6809 women who had taken part in the Avon Longitudinal Study of Parents and Children (ALSPAC), a population-based prospective study conducted in the UK involving women who were expecting a baby between April 1991 and December 1992.

They looked at the association between change in self-reported depressive symptoms (on the Edinburgh Postnatal Depression Scale) at 18 and 32 weeks of pregnancy and at 8 weeks, 8 months and 21 months post partum; and self-reported folic acid supplementation at 18 and 32 weeks gestation.

The analysis was stratified by genotype, because the team also wanted to see whether any differences could be seen in depression outcomes for women with the MTHFR C677T TT genotype.

The change in depression score for the women with this genotype from 8 to 21 months was 0.66 among those not taking supplements, compared with -1.02 among those taking supplements at 18 weeks of pregnancy.

(Source: [www.nutraingredients.com](http://www.nutraingredients.com) )