

# Mothers' Folate Levels Linked to Birth Weight

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**M**aternal folate status is an important predictor of infant birth weight, a prospective study has shown.

In a cohort of nearly 1,000 expectant mothers, those with lower levels of erythrocyte red blood cell (RBC) folate in early pregnancy were significantly more likely to have low-birth-weight babies, according to Caroline Relton, M.D., and her associates at the University of Newcastle upon Tyne (England).

The researchers investigated the relationship between maternal and newborn RBC folate status, vitamin B<sub>12</sub> status, maternal smoking, age, parity, and infant birth rate in 998 pregnant mothers receiving prenatal care at a hospital in northwest England and their newborns. Blood samples were collected from mothers during their first routine prenatal appointment and from the newborns' umbilical cords at birth (Br. J. Nutr. 2005;93:593-9).

In a multivariate analysis, maternal folate status was the only significant determinant of birth weight. Each standard deviation increase in maternal folic acid level was associated with a 14% weight increase in birth weight z score.

Univariate linear regression analysis associated smoking with a significant decrease in birth weight; however, multi-

variate analysis showed a dramatically reduced, nonsignificant influence, suggesting that smoking and maternal folate status are not independent of each other. Folate levels were significantly lower in women who smoked than in nonsmokers, thus the effect of smoking on birth weight may be mediated in part by its association with maternal folate, according to the authors.

Maternal vitamin B<sub>12</sub> status was significantly associated with both maternal and

neonatal folate but not with birth weight. However, the relationship between vitamin B<sub>12</sub> and maternal folate status suggests this micronutrient has an important role in maternal nutrition during pregnancy, the authors wrote.

Neonatal vitamin B<sub>12</sub> had a small but significant influence on infant birth weight when analyzed in a univariate model, but the effect was not significant when considered in a multivariate model, nor was there any association be-

tween neonatal folate and birth weight.

Folate is of fundamental importance to cell function, including the synthesis and repair of DNA and gene expression. Although the exact nature of the relationship between folate and birth weight is not known, reductions in folate are associated with increases in the amino acid homocysteine. Elevated homocysteine has been linked to many clinical conditions that affect fetal growth, the authors stated. ■

## Rodents Pose LCMV Risk to Pregnant Women

**P**regnant women and women who think they might become pregnant should avoid the care and feeding of pet rodents and avoid contact with wild rodents to reduce their risk of contracting the lymphocytic choriomeningitis virus from the animals, the Centers for Disease Control and Prevention has advised.

Pregnant women who discover wild mice or other rodents in their homes should leave the capture and removal of the animals to a family member or a professional exterminator. They should also avoid spending long periods of time in the same room as a pet rodent and should not clean the cage or feed the animal. Most LCMV infections do not cause serious illness. Symptoms include stiff neck, fever, muscle aches, and nausea.

Although the risk for LCMV infection is fairly low, transmission of infection from mother to fetus has been reported, and infection during the first or second trimester can cause developmental problems in the fetus, according to CDC.

Observing good hygiene practices and environmental modifications can reduce the risk of infection; the virus has been shown to transfer from rodents to humans, but not from person to person (MMWR 2005;54:747-8).

—Heidi Splete

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