

Birth defects study prompts call to boost folic acid level

By Rosie Mestel
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The rate of spina bifida and anencephaly birth defects has fallen by more than one-third since the addition in 1998 of folic acid to the nation's enriched flours, rice and pastas, according to a study.

The study, published last week in the journal *Pediatrics*, prompted a renewed call from some scientists and health advocates for the Food and Drug Administration to double the required fortification levels to further reduce the rate of the birth defects.

"We're not at maximum prevention," said Jennifer Howse, president of the March of Dimes. "We would like the FDA to reconsider this matter, hold hearings and act as soon as they can."

Other scientists, however, said not enough is known about the consequences of enriching food with folic acid and cautioned that even rare side effects could affect a significant number of people when the entire population is receiving the vitamin through food.

"No one's really looked," said Barry Shane, professor of nutrition at the University of California at Berkeley.

For instance, folic acid can mask the symptoms of vitamin B-12 deficiencies, which are common in the elderly and can lead to neurological problems.

Spina bifida and anencephaly,

known as neural tube defects, arise when the spinal column of a developing embryo does not properly close during the first weeks of pregnancy. The defect causes paralysis in spina bifida and fatal brain deformation in anencephaly.

In 1991, scientists demonstrated that the risk of the birth defects could be significantly reduced by giving expectant mothers a synthetic version of folic acid. The natural form of the vitamin is found in green leafy vegetables, whole grains and citrus fruits, although it is less easily absorbed by the body.

The government recommendation is for women of child-bearing age to take 400 micrograms of folic acid each day.

Because the vitamin is needed so early in pregnancy, by the time many women discover they are pregnant it is too late for a folic acid supplement to help prevent the defects.

After much debate among health researchers, the FDA directed that, starting in 1998, 140 micrograms of the vitamin be added to each 100 grams of grains that are labeled as "enriched." A higher level was eventually added to flour.

In 2001, the federal Centers for Disease Control and Prevention reported that U.S. rates of spina bifida and anencephaly had fallen by almost 20 percent.

The new study, also conducted by the CDC, examined birth-defect records from 20 states

and Puerto Rico from 1995 to 2002. The scientists found after the introduction of folic acid, spina bifida decreased 36 percent among Hispanic births and 34 percent among non-Hispanic whites. Rates of anencephaly also fell in both groups.

The rate of the defects did not significantly fall for black babies, who have a lower risk to begin with. Scientists do not know why the risk is lower.

Dr. Godfrey Oakley, a research professor at Emory University's Rollins School of Public Health, said the findings showed that the FDA should require a higher dose. Other research has suggested that as much as 75 percent of all neural tube defects could be prevented by a higher level of folic acid fortification, he said.

Other Americans would also benefit, Oakley said, because folic acid has been shown to reduce blood levels of homocysteine, an amino acid that appears to be a risk factor for heart attacks and strokes.

"It's time to light a fire under this," said Oakley, who co-wrote an editorial accompanying the paper.

Others are less sure higher levels will further reduce defects. And Dr. James Mills, chief of the pediatric epidemiology section in the National Institute of Child Health and Human Development, said more research is needed to understand folic acid's potential side effects.