

1.) Should we offer preconception folic acid to patients with a previously diagnosed neural tube defect?

Yes.

All women who have a fetus diagnosed as having a neural tube defect in pregnancy, or give birth to an infant with a neural tube defect, need to be given information about the risk of recurrence in a subsequent pregnancy, to be advised of the protective effect of preconceptional folate supplementation, and offered continuing supplementation (4mg/day).

All health contacts involving the provision of contraception to women offer the opportunity for a reminder of the protective effects of a folate-rich diet, information about how this can be achieved, and the reminder that it needs to start two months before conception.

Information on the protective effects of a folate-rich diet needs to be incorporated into nutrition and health education at secondary school level.

It is still unclear whether adequate folate to maximize the prevention of neural-tube defects can be provided by informed changes in the pattern of food consumption to a folate-rich diet.

Activity on appropriate food labeling, advertising and marketing of foods with added folate is a priority, as is attention to ethnic and cultural differences in the selection of foods to which this should apply.

While the likely benefits of fortifying basic food components such as flour with additional folate are clearly established in terms of the prevention of neural tube defects, the benefits and risks of food fortification with folate to other people in the community remain unresolved.

Given past fluctuations over time in the prevalence at birth of neural tube defects, and the increased likelihood of their early prenatal diagnosis, monitoring the effectiveness of interventions to increase folate uptake by trends in births of affected infants has the potential to be seriously misleading. Birth defects monitoring systems need to have surveillance systems in place for effective capture of all the relevant events.

Data:

Four trials of supplementation involving 6425 women were included. The trials all addressed the question of supplementation and they were of variable quality. Periconceptional folate supplementation reduced the incidence of neural tube defects (relative risk 0.28, 95% confidence interval 0.13 to 0.58). Folate supplementation did not significantly increase miscarriage, ectopic pregnancy or stillbirth, although there was a possible increase in multiple gestation. Multivitamins alone were not associated with prevention of neural tube defects and did not produce additional preventive effects when given with folate.

Reference:

Lumley J, Watson L, Watson M, Bower C. Periconceptional supplementation with folate and/or multivitamins for preventing neural tube defects (Cochrane Review). In: *The Cochrane Library*, Issue 3, 2001. Oxford: Update Software.

2.) Should we offer preconception folic acid to patients without a previously diagnosed neural tube defect?

Yes,

Research has demonstrated that periconceptional intake of 0.4 mg of the B vitamin folic acid reduces the risk for neural tube defects 50%--70% (4--8). Periconceptional multivitamin use can also reduce the risk for other defects (e.g., orofacial clefts, conotruncal heart defects, and urinary tract defects) (9--11). In response to the findings that folic acid can prevent neural tube defects, several national initiatives were implemented. In 1992, the U.S. Public Health Service (PHS) recommended that all women capable of becoming pregnant consume 0.4 mg of folic acid per day to reduce the risk for neural tube defects (12). In 1996, the U.S. Food and Drug Administration (FDA) mandated that all enriched cereal grain products be fortified with folic acid beginning in January 1998 (13). In April 1998, the Food and Nutrition Board of the National Academy of Sciences recommended that all women of reproductive age consume 400 micrograms of synthetic folic acid daily from supplements or fortified foods, in addition to folate found naturally in foods (14). *Healthy People 2010* includes national objectives to increase folic acid consumption, increase red blood cell folate levels, and measure decreases in birth defects .

Reference:

Are Women with Recent Live Births Aware of the Benefits of Folic Acid?

Indu B. Ahluwalia, M.P.H., Ph.D.

Division of Reproductive Health

*National Center for Chronic Disease Prevention and Health Promotion*

Katherine Lyon Daniel, Ph.D.

*National Center on Birth Defects and Developmental Disabilities*

MMWR May 11, 2001 / 50(RR06);1-14

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5006a1.htm>