

Withdrawal/Redaction Sheet

Clinton Library

DOCUMENT NO. AND TYPE	SUBJECT/TITLE	DATE	RESTRICTION
001. list	White House Attendees (partial) (1 page)	01/25/99	P6/b(6)

COLLECTION:

Clinton Presidential Records
First Lady's Office
Mary Ellen McGuire (Subject Files)
OA/Box Number: 17350

FOLDER TITLE:

Children's Health - Folic Acid

2013-0238-S

ry1292

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

- P1 National Security Classified Information [(a)(1) of the PRA]
- P2 Relating to the appointment to Federal office [(a)(2) of the PRA]
- P3 Release would violate a Federal statute [(a)(3) of the PRA]
- P4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
- P5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]
- P6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

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PRM. Personal record misfile defined in accordance with 44 U.S.C. 2201(3).

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Freedom of Information Act - [5 U.S.C. 552(b)]

- b(1) National security classified information [(b)(1) of the FOIA]
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Folic Acid Drop By

230
Thurs.

History: Invited to do a speech, NOT doing drop
by to show support

Natl Folic Acid Education Council

CDC / March of Dimes. ^{now the leader}

- ① Getting names of participants
15-20 reps of major folic acid orgs
from Charlotte Dickenson at CDC
770 488-7155

get ss, dob's, etc.

- ② Briefing

Charlotte → P@ campaign → basic info on folic acid

Katy what did in China
supported there, this is showing we support there
to

- ③ Molly / PATTI - ROOM

- Gate to use? - how early to get here?

pls get them info. Mon/Tues ^{so can plan} for bus

Other

Jill Merrell, March of Dimes
659-1800

photo
P of each

1/25 30 min msg

Kristen Goewelin

needs Natl Council on Folio Aid

- Talk - asking her to be chair

Backgrounder

The March of Dimes 1999 National Ambassador

KELSEY ADAMS

A Folic Acid Success Story

Kelsey Adams is a charming 8-year-old girl who loves soccer, math and reading. What makes Kelsey stand out from the other third graders in her hometown of Clinton, Mississippi, is that she wants to tell all of America how they can have healthy babies. Kelsey will have the chance to spread her message as she travels the country with her mother as the March of Dimes 1999 National Ambassador.

Kelsey is alive and healthy today in part because her mother took the B vitamin folic acid before she was born. Her mom, Jody, a nurse practitioner, was working full-time in a labor and delivery unit when she and her husband, Jerry, learned they were pregnant with their first child in 1989. Her pregnancy was quite smooth; she took prenatal vitamins, got appropriate prenatal care and she didn't drink or smoke.

During her 24th week of pregnancy though, Jody noticed that their baby wasn't kicking. She used a few techniques to try to locate movement, but was unsuccessful. Thinking she was just being a "know-too-much" nurse, she put her concerns aside. As Jody left work that evening, she decided to calm her nerves and put herself on a fetal monitor. Jody could not find the baby's heartbeat. Neither could her colleague, nor one of the obstetricians. They called Jody's physician, who ordered an ultrasound. The ultrasound confirmed Jody's fears; their baby had died. They were devastated.

The following morning, her doctor induced labor. Upon delivery, doctors learned that Jody and Jerry's son had a cervical meningocele, a type of neural tube defect. A cervical meningocele is a cystic sac that contains membranes that surround the spinal cord and fluid from the brain and spine. Located in the back of the neck, it pokes through an open defect in the spinal column.

Soon after, Jody's aunt, a doctor of pharmacology, told her about new research on folic acid. Jody learned that consuming 400 micrograms of the B vitamin folic acid daily, three months before conception and during pregnancy, can help prevent neural tube defects. Jody's neonatologist confirmed this and Jody left the hospital taking folic acid supplements daily.

Several months later, Jody was pregnant again. She continued taking her folic acid, and at 15 weeks, Jody's amniocentesis results came back normal.

On April 22, 1990, Kelsey was born healthy.

National Council on Folic Acid

Mission: To reduce birth defects by promoting the use of folic acid.

Goal: To increase the proportion of women who consume 400 mcg of folic acid daily.

Strategies:

1. Increase the proportion of women who understand that consuming folic acid daily can help prevent birth defects.
2. Make folic acid awareness a routine and standard part of the delivery of preventive health care services to women.
3. Increase the level and availability of folic acid in food.
4. Evaluate the effectiveness of folic acid projects and programs and share lessons learned.

What is the Council?

The Council is a coalition of organizations committed to promoting the consumption of the vitamin folic acid for the prevention of birth defects.

How was the Council formed?

The staff of the Division of Birth Defects and Developmental Disabilities at CDC recognized the need to involve as many organizations as possible in the effort to educate the American public about the Public Health Service recommendation that all women consume 400 mcg of folic acid daily to prevent the serious birth defects of spina bifida and anencephaly. Discussions began with CDC, the March of Dimes, the Spina Bifida Association of America, the American Academy of Pediatrics, the American College of Obstetricians and Gynecologists, and a state health department representative. The idea was received with enthusiasm and the fledgling organization expanded quickly.

Where is the Council now?

The March of Dimes agreed to assume leadership of the National Council on Folic Acid in June of 1998. The Council meets quarterly to coordinate educational activities related to the national campaign. The Council is launching its education campaign in January, 1999. The campaign is based on messages and materials developed and tested by market research experts contracted by CDC. In order to maximize the reach of the campaign, the Council will share materials and implementation plans with many other groups from the fields of health care, public health, and business. Toward this end, the Council is expanding to include representatives from other organizations and companies with activities and a commitment to increasing folic acid consumption for the prevention of NTDs. The current members of the Council, as of December 31, 1998, will serve as the Steering Committee of the alliance. If you are interested in joining the Council, contact Judith Gooding, Director, Folic Acid Campaign, March of Dimes, 1275 Mamaroneck Avenue, White Plains, New York 10605, (914) 997-4620, jgooding@modimes.org.

National Council on Folic Acid

Mission: To reduce birth defects by promoting the use of folic acid.

Goal: To substantially increase the proportion of women who consume 400 micrograms of folic acid daily.

Strategies

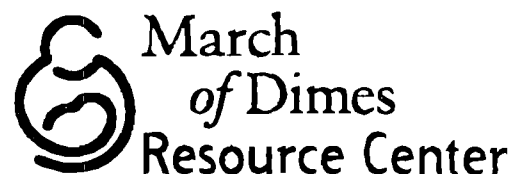
- 1. Increase the proportion of women of childbearing age who understand that consuming folic acid daily can help prevent birth defects.**
 - 1a. Conduct broad-based public health education campaigns through all available media.
 - 1b. Partner with corporations to increase exposure for the folic acid message.
 - 1c. Develop, demonstrate and evaluate model programs to reach reproductive age women of various social and economic groups.
 - 1d. Conduct behavioral research to identify barriers to use of supplements.
- 2. Make folic acid awareness a routine and standard part of the delivery of preventive health care services to women.**
 - 2a. Work with national and state professional organizations to encourage physicians, nurses, nutritionists and other health professionals to counsel women to consume a supplement containing folic acid daily.
 - 2b. Work with managed care organizations, government programs, and nonprofit organizations to incorporate folic acid educational interventions into their existing programs and services.
 - 2c. Develop, demonstrate and evaluate model programs to teach health care providers how to educate their patients about the need for folic acid supplements.
- 3. Increase the level and availability of folic acid in food.**
 - 3a. Conduct research and convene experts to determine most effective, safe level of folic acid fortification.
 - 3b. Conduct research and monitor medical literature to identify other health benefits of folic acid fortification (cleft lip, cleft palate, heart defects, heart disease, stroke).
 - 3c. Conduct and monitor research to assess any adverse affects of folic acid consumption on adult health.

- 3d. Build relationships with administration and congressional officials to share new knowledge relative to folic acid fortification benefits and appropriate levels.

Evaluation Methods

1. Conduct public opinion surveys to assess awareness of folic acid and use of supplements among women of childbearing potential.
2. Evaluate methods and build capacity for blood folate survey research.
3. Conduct birth defects surveillance to measure incidence of spina bifida and anencephaly.

Folic Acid



Folic acid is a B vitamin that can help prevent birth defects of the brain and spinal cord called neural tube defects (NTDs) when taken before pregnancy and in the early weeks of pregnancy.

Since NTDs originate in the first month of pregnancy, before many women know they are pregnant, it is important for a woman to have enough folic acid in her system before pregnancy. Folic acid is recommended for all women of childbearing age because 50 percent of pregnancies in this country are unplanned.

Here's what women should know about this crucial nutrient.

Why should women of childbearing age take folic acid?

Studies show that women who consume the recommended amount of this vitamin, beginning before conception and continuing into the first month of pregnancy, reduce their risk of having a baby with certain birth defects of the brain and spine called neural tube defects (NTDs).

The neural tube is the embryonic structure that develops into the brain and spinal cord. This structure, which starts out as a flat pancake of cells, normally folds into a tube by the 29th day after conception. When the neural tube does not close completely, the baby has a neural tube defect. About 2,500 babies are born with NTDs each year, and many other affected pregnancies end in miscarriage or stillbirth.

The most common NTDs are spina bifida and anencephaly. Spina bifida is a leading cause of childhood paralysis. Affected children have varying degrees of lower-body paralysis and bladder and bowel control problems. Anencephaly is a fatal condition in which a baby is born with a severely underdeveloped brain and skull.

Studies also suggest that folic acid may help prevent some other birth defects as well, including cleft lip and palate.

How much folic acid should women take?

The March of Dimes recommends that all women who can become pregnant consume a multivitamin containing 400 micrograms of folic acid daily, in addition to eating a healthy diet

including foods rich in folic acid. This is the only sure way a woman can get all the folic acid and other vitamins she needs. Most women get only about 200 micrograms of folic acid a day from their diets.

Foods that are naturally rich in folates (the natural forms of folic acid found in foods) include: orange juice, other citrus fruits and juices, leafy green vegetables, beans, peanuts, broccoli, asparagus, peas, lentils, liver and whole-grain products. Multivitamins, fortified breakfast cereals, and enriched grain products contain a synthetic form of folic acid that is more easily absorbed by the body than the natural form (which must be broken down by the body into a usable form). It is not yet known whether consuming 400 micrograms of folate from foods every day provides the same level of protection against birth defects as 400 micrograms of the synthetic form. This is because cooking and storage can destroy some of the folate in foods, and the amount of usable folic acid the body can obtain from different foods varies widely.

The body can absorb almost 100 percent of the synthetic form of folic acid. This is why the March of Dimes, the Centers for Disease Control and Prevention (CDC), and the Institute of Medicine recommend that women who could become pregnant consume 400 micrograms a day of the synthetic form. Because some fortified breakfast cereals contain 400 micrograms of folic acid in one bowl, a woman also could get the recommended amount of synthetic folic acid this way, or she can take a multivitamin. However, a 1997 March of Dimes survey showed that only 30 percent of women take a multivitamin containing folic acid before pregnancy.

The Institute of Medicine also recommends that women should increase their intake of synthetic folic acid to 600 micrograms a day once their pregnancy is confirmed. Most doctors recommend a prenatal vitamin that contains at least this amount of folic acid. However, women should not take more than 1,000 micrograms (or 1 milligram) without their doctor's advice.

If a woman has already had a baby with an NTD, she should consult her doctor before her next pregnancy about the amount of folic acid she should take.

Studies have shown that taking a larger dose of folic acid daily (4 milligrams), beginning at least one month before pregnancy and in the first trimester of pregnancy, reduces the risk of having another affected pregnancy by about 70 percent.

How much folic acid is in fortified foods?

As of January 1, 1998, the U.S. Food and Drug Administration has required the addition of 140 micrograms of folic acid per 100 grams of grain to cereals, breads, pastas, and other foods labeled "enriched." (Only a few cereals contain 400 micrograms per serving.) This makes it a little easier for women to obtain folic acid from their diets. However, the amount added to enriched foods is small, and most women will not be able to obtain enough folic acid from their diet alone. It is estimated that the addition of this amount of folic acid to enriched foods will prevent only about 5 to 20 percent of folic acid-preventable NTDs.

The FDA did not require that more folic acid be added to enriched foods because of the concern that folic acid might mask one sign of a potentially dangerous condition called pernicious anemia, that is seen mainly in elderly people. Since high doses of folic acid could possibly correct the anemia, diagnosis of serious neurological symptoms that accompany it could be delayed. The level of fortification the FDA currently requires is believed to be safe for everyone.

How does folic acid prevent birth defects?

How folic acid prevents NTDs is not well understood. Some studies suggest that it may correct a nutritional deficiency, while others suggest that supplemental folic acid helps compensate for inborn errors in how the body processes folates.

For example, a recent study found that as many as one in seven people may carry a genetic mutation (change) that causes them to have a deficiency in folic acid, even if they are consuming a diet that contains the recommended amount of folates. These people have problems breaking down folates found in food to forms of folic acid the body can use, resulting in lower folic acid levels in the

blood. Studies suggest that women with this gene mutation may be at increased risk of having a baby with an NTD. However, taking folic acid appears to raise levels of the vitamin in the blood, and thereby reduce the risk of having an affected baby.

Besides helping to prevent certain birth defects, folic acid plays other important roles during pregnancy. A pregnant woman needs extra folic acid to help her to produce the additional blood cells she needs. Folic acid also is crucial to support the rapid growth of the placenta and fetus. This vitamin is needed to produce new DNA (genetic material) as cells multiply. Without adequate amounts of folic acid, cell division could be impaired, possibly leading to poor growth in the fetus or placenta. One study found that women who were deficient in folic acid were more likely to have a baby who was premature and of low birthweight (less than 5-1/2 pounds).

Does folic acid have other health benefits?

In recent years, doctors have come to realize that folic acid is very important for everyone in maintaining health. It has long been known that folic acid plays an important role in production of normal red blood cells, and that individuals who were deficient in folic acid sometimes developed a form of anemia called megaloblastic anemia (characterized by a reduced number of red blood cells).

More recent studies suggest that folic acid also may help prevent heart disease and stroke. It appears that individuals who have a high level of a substance called homocysteine in their blood have an increased risk of heart disease and stroke. When these people take folic acid, the level of homocysteine in their blood drops, possibly decreasing their risk of cardiovascular diseases. (Researchers also are looking at the role of high homocysteine levels in causing birth defects.) Other studies suggest that folic acid also may help prevent certain cancers, especially colon cancer. While these studies are preliminary, they suggest that many people, besides women of childbearing age, may benefit from taking folic acid.

Is the March of Dimes conducting research on folic acid?

The March of Dimes has several research grantees who are seeking to improve understanding of how folic acid prevents NTDs. Because most NTDs are believed to be caused by a combination of genetic and environmental factors (including nutritional factors like folic acid), other grantees are trying to identify genes that increase a woman's risk of having a baby with an NTD. One of these researchers is focusing on 5 genes that play a key role in how the body breaks down food folates, to see if mutations in any of these genes increase the risk of spina bifida. Another researcher is looking at how folic acid is transferred from the placenta to the fetus, and trying to identify any factors that could interfere with this process. These studies could lead to ways to identify women who are at increased risk of having a baby with an NTD, and to improved ways to treat them, with the goal of preventing even more NTDs than is currently possible.

References

- Centers for Disease Control and Prevention. Knowledge and use of folic acid by women of childbearing age - United States, 1997. *Morbidity and Mortality Weekly Report*, volume 46, number 31, August 8, 1997, pages 721-723.
- Centers for Disease Control and Prevention. Recommendations for the use of folic acid to reduce the number of cases of spina bifida and other neural tube defects. *Morbidity and Mortality Weekly Report*, volume 41, number RR-14, September 11, 1992.
- Locksmith, G.J., and Duff, P. Preventing neural tube defects: the importance of periconceptional folic acid supplements. *Obstetrics and Gynecology*, volume 91, number 6, June 1998, pages 1027-1034.
- Molloy, A., et al. Thermolabile variant of 5,10-methylenetetrahydrofolate reductase associated with low red-cell folate: implications for folate intake recommendations. *The Lancet*, volume 349, May 31, 1997, pages 1591-1593.
- Schwarz, R.H., and Johnston, R.B., Jr. Folic acid supplementation - when and how. *Obstetrics and Gynecology*, volume 88, number 5, November 1996, pages 886-887.
- Standing Committee on the Scientific Evaluation of Dietary Reference Intakes, Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes: Folate, Other B Vitamins, and Choline*. Washington, D.C., National Academy Press, April 7, 1998.
- All materials provided by the March of Dimes are for information purposes only and do not constitute medical advice.

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**March
of Dimes**
Saving babies, together

*March of Dimes
Birth Defects Foundation*

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1275 Mamaroneck Avenue
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Telephone (914) 997-4620
Fax (914) 997-4501
Email: jgooding@modimes.org*

*Judith S. Gooding
Director
National Folic Acid Campaign*

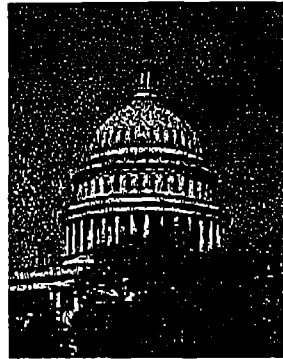
Background about Folic Acid and The National Council

- Since 1992, the U.S. Public Health Service has recommended that all women of childbearing potential consume 400 micrograms (0.4 milligrams) of folic acid to help prevent serious birth defects of the brain and spine (neural tube defects).
- Folic acid is a B vitamin that has been proven to help prevent spina bifida and anencephaly. In order to be effective, however, all women of childbearing age must consume the recommended amount daily.
- 2,500 babies are born with neural tube defects each year. Neural tube defects are serious birth defects of the brain and spine; they include spina bifida (open spine) and anencephaly (when babies are born with a partial or absent brain). Research shows that if all women of childbearing age consumed the recommended amount of folic acid, the incidence of neural tube defects would be reduced by up to 70 percent.
- Of the 4 million babies born each year in the United States, about half are unplanned. Since folic acid consumption needs to begin one month before pregnancy to be effective, every woman of childbearing age needs to get the message, and change their nutritional habits in order for prevention to be complete. If a woman waits until she knows she is pregnant, it may be too late to prevent these birth defect.
- Folic acid is found in some foods – such as orange juice and green leafy vegetables – but it is difficult to get enough of the vitamin every day through diet alone. The easiest and best way for a woman to get enough folic acid is to take a daily multivitamin as part of a healthy diet that is rich in natural sources of folate and foods fortified with folic acid.
- The National Council on Folic Acid is a coalition of organizations, led by the March of Dimes, which aims to reduce the incidence of neural tube defects through the use of folic acid. The Council includes government agencies, non-profit organizations, health professional associations and community health groups who share this goal.



March
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1901 L Street, NW Suite 200
Washington, DC 20036
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Fax (202) 296-2964



March of Dimes Office of Government Affairs

OUR FAX NUMBER: 202-296-2964

OUR PHONE NUMBER: 202-659-1800

DATE: Jan. 26, 1999

PAGES: 2

TO: Maryellen M^cGuire

FAX NUMBER: 456-6244

FROM: Judith Gooding 1-800-222-Tree

I have received information (names, SSN, DOB) for 3 additional people. If we can fit them in, it will be wonderful. If not, could we talk about substitutions? Or, we can leave the list as it is and I can tell the "late comers" that the final is already final. Thank you for your help.

Judith

MARCH OF DIMES BIRTH DEFECTS FOUNDATION

National Office

1275 Mamaroneck Avenue

White Plains, New York 10605

Telephone: 914-428-7100

**FAX TRANSMISSION**Date: Jan. 25, 1999Total pages to be transmitted (including this page) 8Single Fax ☒Broadcast ☐**Note: If Broadcast Transmission, use comment area to post additional individuals/organizations and fax numbers.**TO: Maryellen McGuireORGANIZATION: Office of the First LadyFAX #: 202-456-6244FROM: Judith S. GoodingTEL. #: 914-997-4620

Volunteer and Chapter Support Department Fax #: 914-428-9366

Comments: Here is background on folic acid, The Council and the Campaign. Please call me with any questions.Judith Gooding.914-997-4620Doubletree at Pentagon City

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[001]

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Roberta	Carlin, JD	Associate Executive Director; Spina Bifida Association of America		
Magdalena	Castro-Lewis	Director, System and Organizations; National Coalition of Hispanic Health And Human Services		
Charlotte M.	Dickinson, Ph.D.	Associate Director, Planning and Communication; Centers for Disease Control and Prevention		
J. David	Erickson, Ph.D.	Chief, Birth Defects & Genetics Diseases Branch Centers for Disease Control & Prevention		
Linda	Foster	Nutrition Program Coordinator; Virginia Department of Health		
Wilma	Freire, Ph.D.	Food & Nutrition Program Coordinator; Pan American Health Organization		
Judith	Gooding	Director, National Folic Acid Campaign; March of Dimes		
Jennifer L.	Howse, Ph.D.	President; March of Dimes		
Christopher Paul	Howson, Ph.D.	Director of International Programs, March of Dimes		
Richard J.	Jackson, MD	Director, National Center for Environmental Health; Centers for Disease Control and Prevention		
Alice	Lenihan	Chair, Public Health Nutrition Practice Group; American Dietetic Association		
Katherine	Lyon Daniel, Ph.D.	Epidemiologist/Behavioral Scientist; Centers for Disease Control and Prevention		
Donald Roger	Mattison, MD	Medical Director; March of Dimes		
Claudia	Morris	Deputy Executive Director; National Healthy Mothers, Healthy Babies Coalition		
Joe	Mullnare, MD	Chief, Prevention Section; Centers for Disease Control and Prevention		
Leith	Mullaly	President; Association of Women's Health, Obstetric and Neonatal Nurses		
Godfrey P.	Oakley, MD	Professor of Epidemiology; Emory University		
Kay	Pearson	Coordinator; Oklahoma Birth Defects Registry		
Susan C.	Winckler	Director of Policy and Legislation; American Pharmaceutical Association		
Kelsey	Adams	March of Dimes National Ambassador; Child Saved by Folic Acid		
Jody	Adams	Mother of National Ambassador; Family Affected by Neural Tube Defects		
Paula	Howell	Executive Director, March of Dimes		
Ann	L. Honebrink	Member, Committee on Primary Care, American College OBGYNs		
Jaime	Frias, MD	Member, Committee on Genetics, American Academy of Pediatricians		
*Robert J.	Berry, MD	Centers for Disease Control and Prevention		
*Gwen	Carmon	Director of Volunteer Initiatives; March of Dimes		
*Jennifer L.	Coate	Photographer; March of Dimes		
*Jo	Merrill	Office of Government Affairs; March of Dimes		

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F. W. W.

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(26)

First Name	Last Name	Title/Affiliation	SS#	D.O.B.
Sandra	Adamson Fryhofer, MD	President Elect; American College of Physicians—American Society of Internal Medicine	Pg(16)(6)	
Roberta	Carlin, JD	Associate Executive Director, Spina Bifida Association of America		
Magdalena	Castro-Lewis	Director, System and Organizations; National Coalition of Hispanic Health And Human Services		
Charlotte M.	Dickinson, Ph.D.	Associate Director, Planning and Communication; Centers for Disease Control and Prevention		
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Kelsey	Adams	March of Dimes National Ambassador; Child Saved by Folic Acid		
Jody	Adams	Mother of National Ambassador; Family Affected by Neural Tube Defects		
Paula	Howell	Executive Director, March of Dimes		
Ann	L. Honebrink	Member, Committee on Primary Care, American College OB/GYNs		
Jaime	Frias, MD	Member, Committee on Genetics, American Academy of Pediatricians		
*Robert J.	Berry, MD	Centers for Disease Control and Prevention		

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MARCH OF DIMES

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**Visit of the President and First Lady
to Beijing, China
June 26-29, 1998**

Event: CDC-BMU Memorandum of Cooperation Signing Ceremony

Location: The Beijing Medical University

Date: Saturday, June 27, 1998

Time: 12:45pm - 1:45pm

Press: OPEN PRESS

Participants: The First Lady

Zhang Wen Kang, Chinese Minister of Health

Dr. R.J. Berry, Centers For Disease Control

Dr. Wang De Bing, President of Beijing Medical University

600 guests

Translation: Simultaneous

Scenario: The First Lady will be greeted by:

Dr. Peng Rui-Cong, Former Chancellor, Beijing Medical University

Dr. Qin Xin-hua, Deputy Director, Department of Science, Technology, and
Education

Liu Pei-long, Director, Department of International Cooperation

Liu Shi-jie, Honor Dean, School of Public Health, Beijing Medical University

Li Tian-lin, Professor of Health Statistics

Li Zhu, Director, National Center for Maternal and Infant Health

The First Lady will proceed to the backstage area and meet the program participants. The First Lady, accompanied by the program participants will proceed on stage and The First Lady will take her seat.

Dr. Wang delivers welcoming remarks, and introduces Dr. Berry.

Dr. Berry delivers remarks and introduces Minister Zhang.

Dr. Zhang delivers remarks and introduces the First Lady.

The First Lady delivers remarks.

The First Lady proceeds to the signing table at Stage Left, accompanied by Minister Zhang, and witnesses Dr. Berry and Dr. Wang sign the MOU.

The First Lady departs.

The brief introduction of BMU

Beijing Medical University(BMU), founded in 1912, is a comprehensive and leading medical university in China. The main campus of BMU is located at the cultural district in the northwest suburb of Beijing and occupies a land of 370,000 square meters. The total construction area of the university is 700,000 square meters in 1996.

The university offers a full range of courses in modern medicine, pharmacy, public health, stomatology and nursing. The specialties include basic medical sciences, clinical medicine, preventive medicine, stomatological medicine, pharmaceuticals, pharmaceutical chemistry, pharmacology, nursing, health administration, psychiatry and mental health, medical laboratory diagnosis, and maternal and child care. The university now has 33 accredited Doctor programs and 53 Master programs. The undergraduate programs in BMU are five-year. The university also offers seven-year programs in clinical medicine and stomatological medicine for students who study for a combined Master degree.

BMU is composed of the Graduate School, the School of Basic Medical Sciences, the School of Medicine, the School of Public Health, the School of Pharmacy, the School of Stomatology, the Faculty of Advanced Nursing, and two teaching divisions(humanity and foreign languages). The university also has 6 affiliated hospitals, 8 teaching hospitals, 19 research insitutes, 11 research collaborating centers, one national laboratory, 5 key laboratories recognized by the Ministry of Health as well as a spacious modern labrary to support the quality academic programs.

There are 1,503 professors and associate professors among a total of 11,046 staff members. Of this faculty, 6 are members of the Chinese Academy of Sciences, 10 are members of the State Council Academic Degree Committee, and 191 are doctoral student supervisors. The 1996 enrolment is 6,274, including candidates for Bachelor, Master and Doctor degrees.

BMU has been continually building up its international recognitions and collaborations. International exchange programs have been established between BMU and leading insitutions in more than 20 countries. It maintains a good collaborative relationship with the World Health Organization(WHO), United Nations Child Foud(UNICEF), the U.S. Center for Disease Control(CDC), the China MEdical Board (CMB)in New York,etc,. Fifty-eight internationally reputable scholars have served as guest professors of honorary professors at BMU, including 3 Nobel Prize winners.

**List of Chinese Greeters and Signers for the Beijing
Medical University Event
(Saturday, June 27, 1998)**

Speakers

Zhang, Wen-kang, M.D. Minister, Ministry of Health

Wang, De-bing, M.D. President, Beijing Medical University;
(Signer) Member of Oversight Group of the US-China
Collaborative Project on NTD's Prevention.

Greeters

Peng, Rui-cong, M.D. Former Chancellor, Beijing Medical University;
Professor of Public Health;
Co-Chairperson of Oversight Group of the US-China
Collaborative Project on NTD's Prevention.

Qin, Xin-hua, M.D. Deputy Director, Department of Science, Technology
and Education, Ministry of Health;
Member of Oversight Group of the US-China
Collaborative Project on NTD's Prevention

Liu, Pei-long, M.P.H. Director, Department of International Cooperation,
Ministry of Health.

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Liu, Shi-jie, M.D.**Honor Dean, School of Public Health, Beijing Medical
University;****Professor of Occupational Health;****Chairperson of IRB of Beijing Medical University****Li, Tian-lin, M.D.****Professor of Health Statistics;****Member of Data Monitoring Group of the US-China
Collaborative Project on NTD's Prevention.****Li, Zhu, M.D., M.P.H.****Director, National Center for Maternal and Infant
Health;****Professor of Epidemiology;****Principal Investigator of the US-China Collaborative
Project on NTD's Prevention**

CDC and China Working Together to Improve Health of the Nation's Children

CDC began efforts with China's Beijing Medical University (BMU) staff in 1993 to collaborate on the evaluation of Folic Acid community prevention project of interest to both countries. The community project is a broad-based effort to educate, demonstrate and evaluate the use of folic acid to prevent spina bifida and anencephaly—two common and severe birth defects..

Each year in China more than 50,000 pregnancies are affected by neural tube birth defects, called spina bifida and anencephaly. The highest rates in the world of neural tube birth defects are in northern China. In many regions of China, spina bifida and anencephaly are the leading cause of deaths of infants in the first weeks of life.

CDC is consulting with BMU to prevent these birth defects by studying the practical application of folic acid supplementation in a community setting - in both high NTD rate provinces in northern China and in low rate provinces in the south. Women were enrolled in the prevention program at the time they registered for marriage -- to begin taking folic acid before they got pregnant and to be followed through pregnancy and the birth of their infant.

Major accomplishments of this collaboration include:

- A Chinese Community Intervention Programs in 21 counties in Northern and Southern China, involving more than 150,000 women. The Ministry of Health established a national prevention campaign and program in October 1995 to have all women who were getting married receive folic acid.

-A birth defect surveillance system that has established the means to determine baseline and ongoing neural tube defect rates for evaluation of the effectiveness of the community intervention program. More than 388,000 births have been monitored since 1992 with more than 6,000 cases of birth defects identified including more than 650 cases of NTDs.

-Since October 1993, more than 90 % of women having a premarital exam started taking folic acid pills. Tens of thousands of women have started taking folic acid pills because of this prevention project. More than 17,000,000 pills have been consumed.

The results showed that a large scale folic acid supplementation program is feasible—among Chinese women who were offered the opportunity to use folic acid, a very high proportion participated. Promoting folic acid use means that many babies who would have been born with a serious birth defect causing death or disability, will now be born healthy.

The results of this collaboration between the United States and China benefits mothers and children -- in the U.S., in China, and all over the world.

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**U.S.-China Collaboration in Health:
Prevention of Neural Tube Defects through Folic Acid
Potential Talking Points for First Lady**

- ***Neural tube birth defects, including spina bifida and anencephaly (SBA), are serious but preventable.***
 - More than 50,000 pregnancies affected per year in China (compared to 4,000 affected pregnancies annually in U.S.)
 - Highest rates in the world are in China
 - SBA is leading cause of perinatal mortality in many regions of China
- ***We know that at least half of these neural tube defects (NTD) can be prevented if women consume sufficient quantities of folic acid before they become pregnant***
 - Approaches to providing folic acid may vary, including fortification of flour (as is being done in the U.S.) and supplementation through pills, as is being done in China
- ***Since 1993, China and the United States have collaborated on a community research project of interest to both countries***
 - Studied the practical application of folic acid supplementation in a community setting — in both high NTD rate provinces in northern China and in lower rate provinces in the south
 - Women were enrolled in the study at the time they registered for marriage — to begin taking folic acid and be followed through pregnancy and birth
 - We learned from the results that a large scale folic acid supplementation program is feasible — among Chinese women who were offered the opportunity to use folic acid, a high proportion participated
 - Data regarding NTD rates still being analyzed — but we would expect to find positive impact, given the high rate of compliance with the folic acid program
- ***Folic acid for the prevention of neural tube defects can SAVE MONEY***
 - In the U.S., folic acid fortification has been found to be a cost saving intervention (economic analysis, from a societal perspective)
 - This is both a humane intervention and an economically wise investment
- ***The results of this collaboration between the United States and China will benefit mothers and children globally — in the U.S., in China, and around the world***

SUMMARY

Declaration of Intent between Centers for Disease Control and Prevention (CDC) and Beijing Medical University (BMU) Regarding: Research Collaboration in Prevention of Birth Defects, Disabilities, and Health Hazards Due to Environmental Factors

BACKGROUND

Collaboration between CDC and BMU began through a 1991 Memorandum of Understanding (MOU) designed specifically to conduct a single project: "Randomized controlled trial of vitamins to prevent spina bifida and anencephaly", i.e., a community-based trial of folic acid pills to prevent neural tube birth defects. The MOU existed under the framework of periodically renewed umbrella "Health Protocols" between the U.S. Department of Health and Human Services and the Chinese Ministry of Health (MOH).

The large-scale folic acid research project has been carried out over the past several years and has been highly successful in many ways, including the strengthening of good will and scientific collaboration between CDC and BMU.

NEW 'DECLARATION OF INTENT'

The CDC-BMU Declaration of Intent has been developed as an implementing arrangement under the Health Protocol between DHHS and the Chinese MOH. It is not a renewal of the earlier MOU, which was limited strictly to the folic acid research project. Rather, it is intended to build upon the achievements of that project and expand the scope of future collaboration within the realm of birth defects, disabilities and environmental health.

Areas of collaboration under the new agreement include:

1. Epidemiologic, laboratory and analytic research studies related to the cause/source, risk factors and ultimately prevention of:
 - birth defects, including and beyond those already studied;
 - developmental disabilities;
 - environmental exposures, e.g., to radiation, lead, indoor and outdoor air pollution
2. Enhancing surveillance for birth defects, developmental disabilities, and exposures and diseases associated with environmental hazards.
3. Enhancing epidemiologic skills through various training modalities

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CDC and China Working Together to Improve Health of the Nation's Children

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Each year in China more than 50,000 pregnancies are affected by neural tube birth defects, called spina bifida and anencephaly. The highest rates in the world of neural tube birth defects are in northern China. In many regions of China, spina bifida and anencephaly are the leading cause of deaths of infants in the first weeks of life.

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- A Chinese Community Intervention Programs in 21 counties in Northern and Southern China, involving more than 150,000 women. The Ministry of Health established a national prevention campaign and program in October 1995 to have all women who were getting married receive folic acid.

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The results showed that a large scale folic acid supplementation program is feasible—among Chinese women who were offered the opportunity to use folic acid, a very high proportion participated. Promoting folic acid use means that many babies who would have been born with a serious birth defect causing death or disability, will now be born healthy.

The results of this collaboration between the United States and China benefits mothers and children -- in the U.S., in China, and all over the world.

DECLARATION OF INTENT

Between

**THE CENTERS FOR DISEASE CONTROL AND PREVENTION
OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
OF THE UNITED STATES OF AMERICA**

and

**THE BEIJING MEDICAL UNIVERSITY
OF THE MINISTRY OF HEALTH
OF THE PEOPLE'S REPUBLIC OF CHINA**

Regarding

RESEARCH COLLABORATION ON PREVENTION OF BIRTH DEFECTS, DISABILITIES, AND HEALTH HAZARDS DUE TO ENVIRONMENTAL FACTORS

The Centers for Disease Control and Prevention (CDC) of the Department of Health and Human Services (HHS) of the United States of America and the Beijing Medical University (BMU) of the Ministry of Health (MOH) of the People's Republic of China intend to collaborate on activities and programs to prevent birth defects, disabilities, diseases, and deaths due to environmental factors. This Declaration of Intent announces the Participants' intent to engage in projects under the Protocol between the Department of Health and Human Services of the United States of America and the Ministry of Public Health of the People's Republic of China for Cooperation in the Science and Technology of Medicine and Public Health ("Health Protocol"), signed on June 22, 1979, and as extended and amended. All collaborative activities developed pursuant to this Declaration of Intent will be concluded under the framework of the "Health Protocol."

To realize the benefits of cooperation pursuant to this Declaration of Intent, hereinafter referred to as the Declaration, CDC and BMU, hereinafter referred to as the Participants, intend to exchange information and to develop collaborative activities as specified below.

The Participants intend to engage in collaborative activities predicated on mutual benefit for both countries pursuant to the following objectives:

- o To conduct epidemiologic, laboratory, and analytic research in birth defects,

developmental disabilities, and environmental health that may include, but need not be limited to:

- Studies to identify causes of and risk factors for selected birth defects and developmental disabilities;
- Studies to evaluate the impact of various vitamins and nutrients on the incidence of selected birth defects and other adverse birth outcomes;
- Studies to assess the long-term health effects on the population of certain nutrients (such as folic acid) that have been shown to reduce the risk of selected birth defects;
- Development of intervention programs to reduce the risk of certain birth defects and other adverse birth outcomes and the monitoring of the effectiveness of these programs;
- Development of intervention programs to reduce the risk of developmental disabilities and the monitoring of the effectiveness of these programs;
- Studies to identify sources of radiation exposure and childhood lead exposure and the development of programs to control these exposures;
- Studies to evaluate the relationships between blood lead levels and selected health outcomes among children;
- Studies to assess the health impacts of asthma and other respiratory diseases and their relationship to environmental and other risk factors; and
- Application of laboratory technology and infrastructure development to the prevention of birth defects and other adverse birth outcomes and diseases resulting from exposure to environmental hazards, including lead and water pollution.

- o To enhance surveillance for birth defects, developmental disabilities, childhood lead exposure, disease, and other adverse health effects resulting from exposure to environmental hazards.
- o To enhance epidemiologic, methodologic skills through training courses, distance learning, and seminars.

All activities undertaken consistent with this Declaration should be performed according to the laws and regulations of the United States of America and of the People's Republic of China.

Activities undertaken to fulfill these objectives should be specified in writing between CDC and BMU and are expected to be projects under the Protocol between the Department of Health and Human Services of the United States of America and the Ministry of Public Health of the People's Republic of China for Cooperation in the Science and Technology of Medicine and Public Health.

When collaboration with the Chinese Academy of Preventive Medicine (CAPM) is appropriate for a proposed activity, BMU may act to facilitate contact between CDC and CAPM.

Done at Beijing, in duplicate in the English and Chinese languages, this ____ day of _____, 1998.

**FOR THE CENTERS FOR DISEASE
CONTROL AND PREVENTION OF THE
DEPARTMENT OF HEALTH AND
HUMAN SERVICES OF THE
UNITED STATES OF AMERICA:**

**FOR THE BEIJING MEDICAL
UNIVERSITY OF THE MINISTRY OF
HEALTH OF THE PEOPLE'S
REPUBLIC OF CHINA:**

Name:
Title:

Name:
Title:

★ Revised

REMARKS FOR FIRST LADY HILLARY RODHAM CLINTON

AT THE BEIJING MEDICAL UNIVERSITY

I am delighted to be here today as we highlight the expansion of U.S.-China cooperation in the areas of medical and scientific research.

Collaboration between the U.S. Centers for Disease Control and Prevention (CDC) and the Beijing Medical University began in 1991 on a project to study the use of folic acid to prevent spina bifida and other neural tube defects.

Each year in China more than 50,000 pregnancies are affected by these birth defects. And in many regions of China they are the leading causes of deaths in infants in the first weeks of life.

-2-

This successful collaboration has strengthened goodwill and scientific collaboration between our two countries, and has resulted in positive changes to public health practices in the U.S., China and around the world.

This means that many babies who would have been born with serious birth defects causing death or disability will now be born healthy.

Today, the CDC and the Beijing Medical University come together again to announce a new framework for project collaboration under a larger Health Protocol between our two governments.

The signing of this Declaration of Intent calls for collaboration on prevention of birth defects, disabilities, and health effects resulting from environmental factors, such as exposure to lead, radiation and water pollution.

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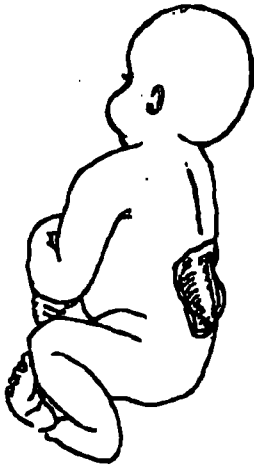
We look forward to the same far-reaching successes from the collaborations we begin today.



**CHINESE-AMERICAN COOPERATIVE PROGRAM
FOR THE PREVENTION OF NEURAL TUBE DEFECTS**

Spina Bifida and Anencephaly

Spina bifida and anencephaly are two very serious birth defects that affect the pregnancies of about 4,000 women each year in the United States. Between 2,000 and 2,500 of these birth defects could be prevented if women took a vitamin containing 400 micrograms of folic acid every day. Because these defects occur very early in pregnancy, long before most women even know that they are pregnant, women should be taking folic acid regardless of their intention to get pregnant. This is especially important because almost 50% of pregnancies are unplanned.



Babies with spina bifida have an opening along their spine and are often paralyzed from the waist down. These babies need to have many surgical treatments when they are young. Most of these children grow into adulthood with varying degrees of disability including paralysis of the feet and legs and lack of control of the bowel and bladder. The lifetime cost for medical, developmental, and other services for the children born with spina bifida in a single year is estimated to be about \$500 million.

1. Spina bifida (open spine) often results in lifelong disability.

Anencephaly is a fatal condition in which most or all of a baby's brain is missing. Babies with anencephaly are either stillborn or die within a very short time after birth.



2. Anencephaly always results in death, before or shortly after birth.

How Folic Acid Can Prevent Some Birth Defects

By educating women about the importance of folic acid and encouraging them to increase their intake, your *community* can have a direct effect on the lives of many families and the health of their babies. Birth defects of the spine and brain can cause severe disabilities or death. Each year, approximately 4000 pregnancies in the United States are affected by a defect of the spine (spina bifida) or brain (anencephaly) called NTDS (neural tube defects). For some, the effect of these defects are or have been very personal--having a baby with spina bifida or anencephaly or having family members with these conditions. A vitamin called folic acid can help to prevent 50 to 70 percent of these birth defects every year.¹ However, many women do not consume enough folic acid daily to protect against these serious birth defects.

To get the recommended amount of folic acid each day, most women will need to change their behaviors to either take vitamin supplements that contain folic acid or consume sufficient amounts of breakfast cereals and other foods fortified with folic acid. This guide provides a way for you to increase reproductive-age women's knowledge of the need to consume adequate amounts of folic acid so that they can maximize their chances of having a healthy pregnancy and minimize their chances of having a baby born with one of these serious defects.

About NTDS

NTDs (neural tube defects) are birth defects that occur very early in a pregnancy. The defects develop between the 17th and 30th day after conception (four to six weeks after the first day of a woman's last menstrual period), usually before a woman knows she is pregnant. During this critical time of pregnancy, the proper formation and closure of the neural tube, which later becomes the spinal cord, brain, and bone surrounding the spinal cord and brain, normally takes place. An NTD occurs when the neural tube fails to close properly.

Anencephaly and **spina bifida** are the two most common NTDs. *Anencephaly* is a fatal condition in which the upper end of the neural tube fails to close. In these cases, the brain either never completely develops or is entirely absent. Pregnancies affected by anencephaly often result in miscarriages, and infants who are born alive will die very soon after birth.

Spina Bifida occurs when the lower end of the neural tube fails to close. As a result, the spinal cord and back bones do not develop properly. Sometimes a sac of fluid protrudes through an opening in the back, and a portion of the spinal cord is often contained in this sac. Paralysis of the infant's legs, loss of bowel and bladder control, hydrocephalus ("water on the brain"), and learning disabilities are among the disabilities associated with spina bifida. Eighty to 90% of infants born with spina bifida survive. Despite varying degrees of disability, many lead long, successful, and productive lives.

What Is it Like to Live With an NTD?

Both prevention and treatment of NTDs--spina bifida and anencephaly--are important. NTDs can impact not only the life of a child and that of his or her family, but the community as well. As a child with spina bifida grows older, he or she faces unique economic, educational, medical, health, legal, and emotional issues. Bowel and bladder management problems, which are common for those with spina bifida, may affect a person's health, self esteem, personal interactions, and work and recreational opportunities.

Despite physical and mental challenges, many people with spina bifida live independently. Today, mental retardation caused by hydrocephalus, a complication of spina bifida, is unusual. However, learning disabilities are common. Although medical care has greatly improved the survival rates and quality of life of children with spina bifida, the children and families affected live with varying degrees of physical, emotional, and social challenges for life. Additional references on neural tube defects and a list of supportive organizations for

parents and children affected by spina bifida is included in Appendix B on pages 7-8.

Who Is at Risk for Having a Baby With an NTD?

Approximately 60 million women are of childbearing age in the United States. Any woman who is capable of becoming pregnant could have an NTD-affected pregnancy. It is not possible to predict which women will have a pregnancy affected by an NTD. Ninety-five percent of women with NTD-affected pregnancies have no personal or family history of NTDs.

However, some risk factors are known. These include:

- A previous NTD-affected pregnancy. (This increases a woman's chance of having another NTD-affected pregnancy by approximately 20 times.)
- Maternal insulin-dependent diabetes.
- Use of anti-seizure medication (Valproic Acid/Depakene® and Carbamazepine.)
- Obesity.
- Exposure to high temperatures in early pregnancy (for example, high prolonged fevers and hot-tub use).
- Race/ethnicity. (NTDs are more common among white women than black women and more common among Hispanic women than non-Hispanic women.)
- Lower socio-economic status.

Pages 1-5 of Appendix C contains a list of health care professionals and organizations who can provide advice and assistance on these issues.

About Folic Acid

Folic acid in a vitamin supplement, when taken 1 month before conception throughout the first trimester, has been proven to reduce the risk for an NTD-affected pregnancy by 50% to 70%.

Folic acid, a B-vitamin, is necessary for proper cell growth and development of the embryo.

Although it is not known exactly how folic acid works to prevent NTDs, its role in tissue formation is essential. Folic acid is required for the production of DNA, which is necessary for the rapid cell growth needed to build fetal tissues and organs early in pregnancy. **That is why it is important for a woman to have enough folic acid in her body both before and during pregnancy.**

Folate and *folic acid* are different terms for the same B-vitamin. While these two terms are often used interchangeably, we make some distinctions between them. Folate is the B-vitamin form found naturally in foods. Folic acid is not found in natural food sources. Folic acid is the synthetic B-vitamin form that is used in vitamin supplements and added to fortified foods. Synthetic folic acid is absorbed better than natural food folate.²

Most of the folate found naturally in foods have a more complex structure than synthetic folic acid which is found in fortified foods and vitamin supplements. The more complex structure affects the intestine's ability to quickly process and absorb food folate. The body can absorb and use the folic acid found in vitamin supplements and fortified foods more efficiently than it can convert the folate found in food into a usable form. Synthetic folic acid is about two times more absorbable than naturally occurring food folate.³

When Do Women Need to Take Folic Acid?

Simple Rule: If you can get pregnant, take folic acid. Women need to get enough folic acid every day throughout their reproductive years. To prevent NTDs, a women must take folic acid daily at *least* one month before she conceives and then continue taking it through the first trimester (three months) of pregnancy. *All women capable of becoming pregnant should consume enough folic acid everyday--not just those planning a pregnancy--* because half of all the pregnancies in the United States are unplanned, and NTDs occur before many women know that they are pregnant.

How Much Folic Acid Is Needed to Prevent NTDs?

- ◆ In 1992, the U. S. Public Health Service (PHS) recommended that all women of childbearing age consume 400 micrograms (0.4 milligram) of folic acid every day to reduce their risk of having an NTD-affected pregnancy.
- ◆ For women who have already had an NTD-affected pregnancy, the PHS recommends

consulting with a doctor about taking a much larger amount of folic acid (4000 micrograms [4 milligrams]), starting one month before conception and continuing throughout the first three months of pregnancy.

- ◆ In 1998, the Institute of Medicine (IOM) recommended that to reduce their risk for an NTD affected pregnancy, women capable of becoming pregnant should take 400 micrograms of synthetic folic acid daily, from fortified foods or supplements or a combination of the two, in addition to consuming food folate from a varied diet.

Are Women Getting Enough Folic Acid?

Two-thirds of women in the United States **do not** report consuming enough folic acid, even though there are several ways to get 400 micrograms of folic acid a day.

How Can Women Get Enough Folic Acid?

There are three ways women can get enough folic acid to prevent spina bifida and anencephaly. They can choose to:

- ◆ **Take a vitamin supplement containing 400 micrograms of folic acid daily.**
 - ◆ **Eat a fortified breakfast cereal containing 100% of the recommended daily amount of folic acid (400 micrograms).**
 - ◆ **Increase consumption of foods fortified with folic acid (e.g., "enriched" cereal, bread, rice, pasta, and other grain products) in addition to consuming food folate from a varied diet (e.g., orange juice and green vegetables).**
- ◆ **Take a vitamin supplement with 400 micrograms of folic acid daily.**
Taking a vitamin supplement containing folic acid is an easy way to get enough folic

acid. Almost all over-the-counter *multivitamins* contain 400 micrograms (0.4 milligram) of folic acid, the amount recommended to prevent NTDs. The label on a multivitamin container will clearly list a vitamin supplement's contents. Recently, more stores are carrying supplements containing folic acid alone. The cost of vitamins can vary considerably, but women can buy vitamins containing folic acid for as little as 50¢ to \$1.00 a month.

A woman should understand that taking too many vitamin supplements is not good for herself or her baby. Caution should be taken to prevent the excessive use of multi-vitamin supplements or fortified foods. For example, very high amounts of vitamin A may cause birth defects.

According to the 1997 March of Dimes survey, 30% of all childbearing-age women who are not pregnant take a daily multivitamin supplement containing folic acid. Among women age 25 and under, only 19% take a vitamin supplement daily. Yet this population of women accounts for 39% of all U.S. women giving birth. Increasing women's knowledge about the benefits of folic acid and motivating them, especially younger women, to get adequate amounts of folic acid daily are the challenges we face as health educators and promoters.

- ◆ **Eat a fortified breakfast cereal containing 100% of the recommended daily amount of folic acid (400 micrograms).**

Some cereals have enough added folic acid per serving to meet 100% of a woman's daily need. Fortified breakfast cereals that contain 100% of the recommended daily amount of folic acid (e.g., Total, Product 19, Multi-Grain Cheerios Plus, and Smart Start) are good options for women who do not want to or cannot take a vitamin supplement. A list of foods that are good sources of folic acid and folate are provided in Appendix B on page 5.

- ◆ **Increase consumption of foods fortified with folic acid in addition to consuming food folate from a varied diet.**

Effective January 1, 1998, the U. S. Food and Drug Administration ordered that all

enriched cereal grain products be fortified at a level of 140 micrograms (0.14 milligram) of folic acid per 100 grams of grain product. While this level of fortification offers some protection against NTDs, most women will not get enough folic acid through fortified grain products alone. Thus using a folic acid-containing supplement, eating a fortified breakfast cereal that contains 100% of the recommended daily amount of folic acid, or increasing the consumption of foods fortified with folic acid are good options for women of childbearing age to reach the recommended daily level of folic acid consumption.⁴

In addition to getting 400 micrograms of synthetic folic acid, women should consume food folate from a varied diet. Foods rich in folate include orange juice from concentrate, dark-green leafy vegetables (e.g., spinach, broccoli, asparagus, and romaine lettuce), beans, grains, citrus and other fruits (e.g., kiwis and strawberries), and liver. However, women capable of becoming pregnant who eat a healthy diet still need to take a vitamin supplement, eat a breakfast cereal containing 100% of the daily value of folic acid daily or increase their consumption of foods fortified with folic acid to achieve the recommended amount of folic acid for the prevention of NTDs.⁵

Can Women Get too Much Folic Acid?

No. If a woman of reproductive age were to eat a bowl of fortified cereal (100 to 400 micrograms), take a vitamin containing 400 micrograms (0.4 milligram) of folic acid, and eat foods rich in folate in one day, she would not have a problem with too much folic acid. Even in very high amounts, folic acid is nontoxic.⁶ Nevertheless, with the exception of women who have had a prior NTD-affected pregnancy, it is recommended that women consume no more than 1,000 micrograms of synthetic folic acid a day.⁷

Very large amounts of folic acid may hide the ability to quickly diagnose a vitamin B₁₂ deficiency, a sign of pernicious anemia. This disease can lead to serious brain and nerve damage if not treated with vitamin B₁₂. Today, doctors can use a series of definitive tests to check

individuals for a B₁₂ deficiency, even when large amounts of folic acid are present.

What Do These Options Mean For Women?

A diet rich in food folate is healthy and highly recommended. There are a few studies that suggest food folate may reduce the risk for NTDs. However, the jury is still out.⁸ In addition to a woman's usual diet, vitamin supplements containing folic acid were used in the scientific studies to show that folic acid can prevent 50% to 70% of NTDs. The PHS recommendation for NTD prevention is based on studies of folic acid from supplements. Fortifying the food supply is an excellent way to increase consumption of folic acid without requiring women to change their behaviors. However, fortification at the current level will not prevent all folic acid-preventable NTD-affected pregnancies unless women are educated to change their food-consumption behaviors.

To prevent NTDs, women will need to either take a folic acid-containing vitamin daily, eat a fortified breakfast cereal containing 100% of the daily value of folic acid, or increase their consumption of foods fortified with folic acid in addition to consuming food folate from a varied diet.

Incorporating these behavior changes into women's lives will prevent a significant proportion of NTDs and also contribute to women's good health. A guide to help answer frequently asked questions about folic acid that are not detailed in this introduction is included in Appendix B on pages 1-4. Next, you will find a step-by-step guide for planning a successful NTD prevention campaign.

Endnotes

1. CDC. Recommendations for the use of folic acid to reduce the number of cases of spina bifida and other neural tube defects. MMWR 1992; 41(no. RR-14): 2-3.

2. Institute of Medicine(IOM). Dietary Reference Intakes: Folate, Other B Vitamins, and Choline: Prepublication Copy. In: Dietary Reference Intakes for Thiamin, Riboflavin, Vitamin B₆, Folate, Vitamin B₁₂, Pantothenic Acid, Biotin, and Choline. Washington, DC: National Academy Press, 1998. Chapter 8, page 11.
3. Op cit, IOM. Chapter 8, page 1.
4. Cuskelly GJ, McNulty H, Scott JM. Effect of increasing dietary folate on red-cell folate: implications for the prevention of neural tube defects. *Lancet*. Vol. 347: 657-9. March 9, 1996.
5. Op cit, IOM. Chapter 8, page 32.
6. Shils M, Young V. Modern Nutrition in Health and Disease. Philadelphia: Lea & Febiger, 1988.
7. Op cit, IOM. Chapter 8, page 45.
8. Op cit, IOM. Chapter 8, page 32.

14TH STORY of Level 1 printed in FULL format.

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September 13, 1996, Friday, BC cycle

SECTION: International

LENGTH: 356 words

HEADLINE: Sino-U.S. project targets birth defects

DATELINE: BEIJING, Sept. 13

BODY:

Experts announced Friday the largest Sino- U.S. collaboration in the health field to save 80,000 Chinese babies from being born each year with fatal birth defects. The Ministry of Health plans to spread the research results throughout the country that vitamin B supplements taken by pregnant women helps prevent congenital neural tube problems in newborn infants. David Satcher, director of the U.S. Centers for Disease Control and Prevention, said 300,000 to 400,000 babies are born annually with neural tube defects. "China has the highest incidence with 80,000 to 100,000 cases a year -- one-third of the world's total," he said. Infants with the disorder are born with no brain or with an exposed spine. Most are born dead or die within a year, while the few survivors are severely disabled. Satcher said the joint effort is "the only one of its kind globally and the biggest Sino-U.S. collaboration in the health field" and will set an example for the rest of the world. He and several other American experts are in Beijing reviewing previous Sino-U.S. field studies and are formulating new research projects to be carried out in collaboration with their Chinese counterparts. A study of diets of pregnant women conducted by the China Medical University and published in the official China Daily found 30 percent of Chinese females of reproductive age suffer from folic acid or vitamin B deficiency. The proportion is higher in the northern and rural areas than in the southern and urban regions. The incidence was reduced by 70 percent when a woman took 0.4 milligrams of vitamin B supplements daily until the third month of pregnancy, the university found. Joint research was started in 1990 by the American center, Beijing Medical University and Chinese Ministry of Health. Chinese once blamed winter marriages for the neural tube defects. Under the theory, the defect occurred if a woman became pregnant during the cold months when there was a shortage of green vegetables and fruits rich in folic acid, now known to be essential to an embryo's healthy development.

LANGUAGE: ENGLISH

LOAD-DATE: September 14, 1996

16TH STORY of Level 1 printed in FULL format.

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AP Worldstream

September 12, 1996; Thursday 23:29 Eastern Time

SECTION: International news

LENGTH: 307 words

HEADLINE: Chinese, U.S. Health Experts Expand Joint Research on Birth Defect

DATELINE: BEIJING

BODY:

Chinese and US health experts are expanding work on a joint project to prevent a fatal birth defect that claims 80,000 infant lives per year in China.

Research has found that pregnant women who take a moderate dosage of folic acid supplements daily can reduce the chance that their children will be born with congenital neural tube defects. Babies with the disorder are born with no brain or an exposed spine.

Worldwide, 300,000 to 400,000 babies are born each year with neural tube defects. China has the highest incidence, with 80,000 to 100,000 cases a year, or one-third of the world's total, the state-run Xinhua News Agency said on Friday.

David Satcher, director of the U.S. Center for Disease Control and Prevention, and other U.S. health experts are in Beijing to review research results and draw up new projects, Xinhua said.

The government news agency quoted Satcher as saying the joint research on neural tube defects is the largest collaboration by the two countries on health issues.

A study of the diets of pregnant women by China Medical University found 30 percent of Chinese women of reproductive age suffer from folic acid deficiency, Xinhua said. Northern and rural women were more likely to have the deficiency than southern and

urban women.

LANGUAGE: ENGLISH

LOAD-DATE: September 12, 1996

22ND STORY of Level 1 printed in FULL format.

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November 14, 1995, Tuesday, BC Cycle
07:27 Central European Time

SECTION: International News

LENGTH: 507 words

HEADLINE: China launches campaign to battle birth defects

DATELINE: Beijing

BODY:

China's Ministry of Public Health has launched a campaign to fight the very high incidence of babies born with brain defects by providing newly married women and pregnant women with folic acid supplements, the official media reported Tuesday.

China has the highest incidence of infants born with what the China Daily described as "neural tube defects," with 80,000 to 100,000 babies born every year without brains or with exposed spines.

Neural tube defects account for one-third of all birth defects in China, and one-third of the total cases in the world, the report quoted Li Zhu, a researcher with China Women's and Children's Health Care Centre at Beijing Medical University.

The campaign is expected to save 50,000 babies annually, and will place special emphasis on the country's vast, rural areas.

Ancient Chinese theorists once attributed the defect to winter marriages, when women became pregnant during the cold, barren months during shortages of green vegetables rich in Vitamin B, or folic acid.

China began researching the problem in the early 1980s. Studies of the diets of pregnant women conducted by the university hospital revealed that about 30 per cent of Chinese women of reproductive age suffered folic acid deficiencies.

Researchers concluded that if a woman takes 0.4 milligrams of folic acid supplements daily after marriage and up to the third month of pregnancy, the risk of neural tube disorders is reduced 70 per cent.

The U.S. National Center for Disease Control and Prevention, Beijing Medical University and the Ministry of Public Health launched a joint project to research the disorder in 1990. dpa mi mb

LANGUAGE: ENGLISH

LOAD-DATE: November 14, 1995

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APRIL 3, 1998, FRIDAY

LENGTH: 145 words

HEADLINE: children with cleft palates to benefit from smile campaign

DATELINE: hangzhou, april 3; ITEM NO: 0403043

BODY:

the '98 international smile campaign will be held in june in hangzhou, capital of east china's zhejiang province, which will provide medical treatment for 150 children suffering from cleft palates. the philanthropic organization established by an american physician in 1982 provides free plastic surgery for children suffering from the birth defect. the organization has provided free operations for more than 40,000 children throughout the world, and cooperated with the hangzhou plastic surgery hospital to offer free operations to more than 150 children in its first china mission in 1991. related campaigns held in such chinese cities as beijing, hangzhou, meizhou, shantou and nanchang corrected the birth defect in 2,000 children. a number of international medical organizations and volunteers will participate in the june program.

LANGUAGE: ENGLISH

LOAD-DATE: April 3, 1998

2ND STORY of Level 1 printed in FULL format.

The Xinhua General Overseas News Service

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FEBRUARY 27, 1991, WEDNESDAY

LENGTH: 238 words

HEADLINE: study links higher rate of birth defects to air pollution

DATELINE: beijing, february 27; ITEM NO: 0227072

BODY:

chinese experts are warning that the incidence of birth defects among newborns may be higher if the first three months of the mother's pregnancy coincide with the winter months when air pollution is especially intense, today's 'china daily' reported. a three-year study on the relationship between environmental conditions and birth defects in newborns in the country proves that birth defects in newborns are closely related to the quality of the air the mother breathes during her pregnancy. among the over 2.2 million people surveyed in shenyang, dalian and zhengzhou, birth defects were found in five to 5.8 out of each thousand children conceived in summer and autumn, when the dust density rate is relatively lower than in spring and winter. the incidence of birth defects was shown to be as 7.9 per thousand among newborns conceived in winter. the study, organized by the scientific research institute of the state family planning commission and conducted by 16 concerned units, also indicates that the incidence of birth defects is also higher for pregnant women who work in industry and live in densely-populated residential districts. living in highrise buildings, as compared to single-story houses or compounds, is believed to help alleviate the harmful effects of air pollution on the fetus. central heating was also found to be healthier than burning coal for cooking and heating, according the study.

LANGUAGE: ENGLISH

LOAD-DATE: February 27, 1991

DRAFT

**U.S.-China Collaboration in Health:
Prevention of Neural Tube Defects through Folic Acid
Potential Talking Points for First Lady**

DRAFT

- ***Neural tube birth defects, including spina bifida and anencephaly (SBA), are serious but preventable.***
 - More than 50,000 pregnancies affected per year in China (compared to 4,000 affected pregnancies annually in U.S.)
 - Highest rates in the world are in China
 - SBA is leading cause of perinatal mortality in many regions of China
- ***We know that at least half of these neural tube defects (NTD) can be prevented if women consume sufficient quantities of folic acid before they become pregnant***
 - Approaches to providing folic acid may vary, including fortification of flour (as is being done in the U.S.) and supplementation through pills, as is being done in China
- ***Since 1993, China and the United States have collaborated on a community research project of interest to both countries***
 - Studied the practical application of folic acid supplementation in a community setting — in both high NTD rate provinces in northern China and in lower rate provinces in the south

- Women were enrolled in the study at the time they registered for marriage — to begin taking folic acid and be followed through pregnancy and birth
 - We learned from the results that a large scale folic acid supplementation program is feasible — among Chinese women who were offered the opportunity to use folic acid, a high proportion participated
 - Data regarding NTD rates still being analyzed — but we would expect to find positive impact, given the high rate of compliance with the folic acid program
- ***Folic acid for the prevention of neural tube defects can SAVE MONEY***
 - In the U.S., folic acid fortification has been found to be a cost saving intervention (economic analysis, from a societal perspective)
 - This is both a humane intervention and an economically wise investment
- ***The results of this collaboration between the United States and China will benefit mothers and children globally — in the U.S., in China, and around the world***
 - ***In recognition of this valuable collaborative research and the benefits it will have on families around the world for generations to come, [I] would like to present [?who - appropriate Chinese recipient] with certificate of appreciation***