

## Healthy Babies 2008

Advance planning in 2007. It is the key to healthy babies in 2008. That's the message from the South Carolina Birth Defects Prevention Program at the Greenwood Genetic Center.

Birth defects are the leading cause of infant death in South Carolina and a major contributor to long-term disabilities. One of every 40 babies born here will have a major birth defect. The health care cost of birth defects is immense, exceeding \$6 billion each year in the United States, according to the National Centers for Disease Control and Prevention.

The effectiveness of folic acid before pregnancy has been demonstrated dramatically in South Carolina. "Fifteen years ago in South Carolina, birth defects of the brain and spine occurred in two of every 1,000 pregnancies – a rate much higher than in other areas of the country," said Dr. Roger Stevenson, director of the Neural Tube Defects Prevention Program at the Greenwood Genetic Center. "The rate of these defects has now decreased by more than 60% because of the increased use of multivitamins with folic acid by women of childbearing age before they become pregnant."

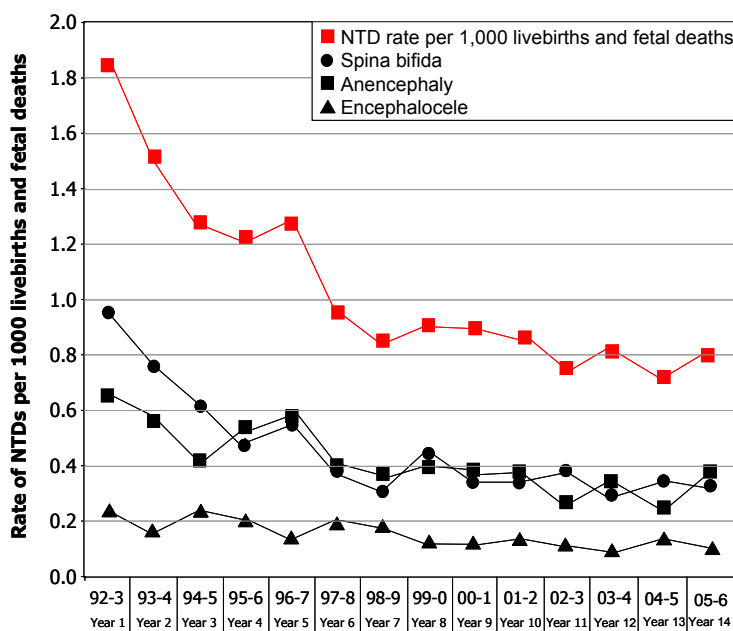
Jane Dean, RN, statewide coordinator for the Birth Defects Prevention Program, notes that, "In addition to taking a multivitamin containing folic acid every day, certain other habits help to assure healthy outcomes for pregnancies. These include avoiding exposures that might harm the developing infant, but also early and regular pregnancy care as well as control of any chronic medical conditions before pregnancy."

## Public Awareness Campaign Focuses on School Nurses

This year the Folic Acid Group in South Carolina plans to recruit school campuses in its effort to promote knowledge and use of folic acid in South Carolina. Last year, Inez Tennenbaum, former State Superintendent of Education, sent letters to the publishers of school science textbooks used by middle school and high school students to encourage them to include information about folic acid. She impressed the importance for this information to be presented to females within the health education curriculum. The new health and science textbooks became available to the schools in the fall of 2006.

School nurses in all the middle and high schools have received a packet of information on folic acid that can be used in the health curriculum. They also have been offered prepared lectures or guest speakers who may be invited to the science or health classes.

**NTDs In South Carolina 1992-2006**



### 5 HABITS FOR HEALTHY PREGNANCIES

- Daily multivitamin with folic acid before pregnancy
  - Early and regular prenatal care
- Assure immunizations are current before pregnancy
- Control of medical conditions (such as diabetes or seizures)
- Well-balanced diet, moderate exercise, and adequate rest

### 5 EXPOSURES TO AVOID FOR HEALTHY PREGNANCIES

- Alcohol and tobacco
- Street drugs or chemicals
- Any medications not prescribed by a physician
  - Excessive heat (hot tubs/saunas)
  - Cat litter

## Folic Acid Effective in Recurrence of NTDs

Since 1992, the SC Birth Defects Surveillance and Prevention Program has enrolled mothers of babies affected with neural tube defects (NTDs) in a recurrence prevention project. Mothers that are not trying to get pregnant are provided with a free daily multivitamin with 0.4 mg folic acid. Mothers actively trying to get pregnant are reimbursed for the purchase of a daily prenatal vitamin and 4.0 mg of folic acid. These mothers are followed-up by phone every 1-3 months depending on their pregnancy plans.

This project has followed 426 subsequent pregnancies in 286 women. Mothers who consumed multivitamins with folic acid at least four days a week had no recurrences (0%) of NTDs in 364 subsequent pregnancies. There were three recurrences (5%) of NTDs in 62 subsequent pregnancies where the mother did not consume folic acid or consumed folic acid three days or less a week.

These results stress the importance of folic acid protection for those high risk pregnancies in mothers who have had a previous baby with an NTD.

The Greenwood Genetic Center is a non-profit institute organized to provide clinical genetic services and laboratory testing, to develop educational programs and materials, and to conduct research in the field of medical genetics.

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**Public health surveillance** is critical for determining rates and trends of birth defects; assessing the efficiency and quality of referral of affected infants and families for services and care; developing public health strategies for the prevention of birth defects; and conducting research on the causes, distribution and prevention of birth defects. South Carolina has now joined a number of other states in implementing a statewide system of birth defects surveillance, the SC Birth Defects Program. This system, operated by the SC Department of Health and Environmental Control, began in July 2006. Initially, birth defects of the brain, spine, heart, limbs and orofacial clefts will be identified. In future years, the monitoring system will expand to include all major birth defects identified from the prenatal period through age two years.

## Types of NTDs in SC During 2006

This year, anencephaly appears to be slightly higher in prevalence than spina bifida, accounting for 46% of the cases.

Spina Bifida	20 (42%)
Anencephaly	22 (46%)
Encephalocele	6 (13%)

Distribution of cases by region during year fourteen is shown below:

Region I (Piedmont)	12
Region II (Midlands)	12
Region III (Coastal)	24

This newsletter is provided as an educational service to the health care community. For more information about the clinical and laboratory services available through the Greenwood Genetic Center, visit us on the web at [www.ggc.org](http://www.ggc.org), or contact:

**Clinical Staff (Greenwood)**  
(864) 941-8100 or 1-800-473-9411  
1-888-GGC-GENE FAX: (864) 941-8114

**Fetal Examination**  
R. Robert Lebel, M.D.  
(864) 388-1700 FAX: (864) 388-1707

**Epidemiology**  
Julianne Collins, Ph.D. (864) 388-1737

**Laboratory Staff**  
(864) 941-8111 or 1-800-473-9411  
FAX: (864) 941-8133

**SC Neural Tube Defects Prevention Program**  
Greenwood Genetic Center (Greenwood)  
Jane Dean, R.N. (Coordinator) (864) 941-8138  
1-800-939-1920  
FAX: (864) 388-1707

Spina Bifida Association (Upstate)  
John Cooper (864) 848-1490  
Shriners Hospitals for Children (Greenville)  
Myelodysplasia Services  
Jean Brown, R.N. (864) 271-3444  
Spina Bifida Clinic (MUSC)  
Kathy Sloan, R.N. (843) 876-1522  
SC Department of Disabilities and Special Needs  
(803) 935-5325  
SC DHEC  
Lyn Phillips, LMSW (803) 898-1787

### ADDITIONAL INFORMATION AND MATERIALS

We will be happy to provide you with materials to distribute in your office to assure your patients have information regarding prevention of these serious defects. Please contact Jane Dean, RN, Statewide Program Coordinator at 1-800-939-1920, ext. 8138 or (864) 941-8138.

You may also contact our office outreach representative, Rob Cathey, at (864) 993-9171 for folic acid materials to distribute to patients.

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