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New Study Shows Decrease in Critical Birth Defects Prevention Programs

Folic Acid Awareness Outreach Efforts Drop by Nearly 50%

RESTON, VIRGINIA— Women who've already had a child with a neural tube defect (NTD), such as spina bifida or anencephaly, can lower their risk of having another baby with an NTD if they take folic acid supplements before their next pregnancy; however the number of birth defects surveillance programs providing folic acid awareness activities in 2015 decreased by nearly 50% compared to 2005, according to a new study. The study is part of a series of breakthrough research articles using population-based data published today in [Birth Defects Research Part A: Clinical and Molecular Teratology](#).

["The study](#), conducted by Dr. Timothy J. Flood and his team, is alarming since we have strong evidence for preventing neural tube defects with high doses of folic acid in women who have already had a baby born with an NTD," said Russell Kirby, PhD, co-editor of the special issue *Birth Defects Research Part A* ([see the Overview, doi: 10.1002/bdra.23576](#)), which highlights the latest, cutting-edge science related to the causes of birth defects. The authors surveyed U.S. and Canadian birth defects surveillance programs in 2015. They found a high chance of having another baby with an NTD even though the risk can be greatly reduced by simply following higher preconception folic acid supplementation guidelines. "We ought to be making sure that a woman who has had a baby with this type of severe birth defect has access to the high folic acid supplementation necessary to avoid a repeat of this birth defect in subsequent pregnancies, but there are few formal statewide programs to do that," he added.

The study goes on to point out the nearly 50% decrease in the number of programs conducting neural tube defect recurrence outreach activities compared to 2005. "This study highlights how important prevention programs really are to this particular population," said Marilyn Browne, PhD, co-editor of the special issue. "Flood and his coauthors describe the prevention recurrence activities reported by surveillance programs and provide suggestions for activities that require minimal program resources," she added.

This new study is being published as part of an issue focused on analyzing birth defects surveillance data gathered by the National Birth Defects Prevention Network (NBDPN) in collaboration with the National Center on Birth Defects and Developmental Disabilities at the U.S. Centers for Disease Control and Prevention.

[Another study \(Ailes, et al.\)](#) in this special issue examines the use of three specific antibiotics used to treat urinary tract infections (UTIs) during the period between conception and early pregnancy and pregnancy outcomes. Often in studies of medications, it is difficult to disentangle the effects of the medication from the effects of the disease that the medication is being used to treat, according to Dr.

Browne. This challenge is otherwise known as “confounding by indication.” “This was an excellent study design because confounding by indication is always a concern in studies of maternal medication use,” she said. “But to reduce confounding by indication, this analysis was restricted to one indication, women with urinary tract infections, and the trimethoprim, sulfamethoxazole, or cephalosporin antibiotic use.”

Just one of the associations the UTI study illustrated involved women affected by periconceptual UTIs who had used nitrofurantoin. They had greater odds of having babies born with oral clefts. “The very large size of the National Birth Defects Prevention Study population allows this type of focused analysis,” added Dr. Browne.

Drs. Browne and Kirby are particularly proud of the research included in the issue, calling it “the cornerstone” of epidemiologic and health services research and disease prevention. Dr. Kirby stressed the importance of the 40 programs existing in the United States that maintain state-wide birth defects data, otherwise known as “population-based data.” “Other types of data don’t give the full picture.”

About the Teratology Society

[The Teratology Society](#), an international professional group of scientists hailed as the premier source for cutting-edge research and authoritative information related to birth defects and developmentally-mediated disorders, publishes *Birth Defects Research* with John Wiley & Sons.

The Teratology Society is made up of more than 700 members worldwide specializing in a variety of disciplines related to birth defects research, including developmental biology and toxicology, reproduction and endocrinology, epidemiology, cell and molecular biology, nutritional biochemistry, and genetics as well as the clinical disciplines of prenatal medicine, pediatrics, obstetrics, neonatology, medical genetics, and teratogen risk counseling. Scientists interested in membership in the Teratology Society are encouraged to visit www.teratology.org.

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Media Contact: Nicole Chavez, 619-368-3259, nchavez@teratology.org.