



Folic Acid and Neural Tube Defects

Neural Tube Defects are a group of relatively common birth defects for which much is known about prevention. The occurrence of Neural Tube Defects (NTD) could be reduced by 50% if ALL women of childbearing age took 0.4 mg of folic acid every day. Folic Acid consumption MUST OCCUR BEFORE pregnancy if the preventative effects are to be achieved.

Medicine & Other Drugs

Prescription and over-the-counter medicines can have side effects on a developing fetus or pregnancy. For example, Accutane, a drug commonly prescribed for acne, can cause congenital malformations of the head, brain and face if taken early in pregnancy. Some antiseizure drugs can have adverse effects on the baby. All women should talk to their doctor before taking medicine during pregnancy.

Infectious Agents

Germs that cause only mild or no symptoms at all in adults can be deadly to an unborn fetus. Women of childbearing age can avoid some of these by making sure that all of their

immunizations are up-to-date before becoming pregnant. Other harmful germs and parasites can be avoided by using good hygiene. The parasite that causes toxoplasmosis, for example, is found in cat feces and raw meat, and can cause severe brain damage in the fetus. Pregnant women should avoid contact with sandboxes and litter boxes, wear gloves when gardening, and practice good hygiene when handling raw meat.

Other Hazardous Substances

Many substances can pass through the placenta into the fetus's blood supply. In general, mothers-to-be should avoid exposure to toxic substances including fumes from strong household chemicals such as gasoline, paints, paint thinner, and pesticides; lead in some paints; and water from contaminated sources. Smoke from her own or from another person's cigarette (secondary smoke) can also be harmful to an unborn child. While studies are not definitive in clarifying causal relationships between toxic substances and birth defects, the results are suggestive of this link.

Further information about congenital malformations may be obtained from the Centers for Disease Control and Prevention at www.cdc.gov/ncbddd/bd/default/htm. This web site contains descriptions of the five major work areas of the Division of Birth Defects and Developmental Disabilities: public health surveillance, epidemiological studies, prevention of fetal alcohol syndrome, prevention of folic-acid preventable spina bifida and anencephaly, and prevention of developmental disabilities.

The CMR welcomes questions, comments, and data requests. CMR staff can be contacted at **(518) 402-7950** or **1- 800-458-1158**. The CMR e-mail address is cmr@health.ny.gov.

Further information can also be found at the NYS Department of Health's web site at www.health.ny.gov/birthdefects



Striving for Healthy Births



The New York State Congenital Malformations Registry

The New York State Congenital Malformations Registry (NYS CMR) is the best statewide source of information about congenital malformations in children born or residing in NYS, and it is one of the largest statewide population-based birth defects registries in the nation. By monitoring reports, public health staff identify and investigate unusual patterns of congenital malformations throughout NYS and study suspected causes. Department of Health (DOH) staff also use the Registry to link children with services in their home communities. Registry information identifies the number of children with special needs in each area and is provided to communities in NYS to help them plan for and deliver services.

Why is the Registry Important for Public Health?

Analysis of CMR information helps public health scientists understand the frequency, variety and pattern of congenital malformations in NYS.

This information is used to:

- Identify changes in malformation rates overtime so increases that may reflect a change in women's health, environmental conditions, and other factors can be determined.
- Identify geographical areas with consistently high rates.

- Provide summaries and tables to the public, health providers, local health departments, and others upon request.
- Investigate reports of unusual numbers of malformations so that the actual extent and nature of them can be determined accurately and efficiently.
- Ensure that families of children identified in the Registry locate available resources so that each child can maximize his or her development.
- Identify families of children with specific malformations who may be invited to participate in research studies.

The CMR participates in various community outreach and educational activities to reduce the occurrence of birth defects, such as the Folic Acid Awareness campaign. For women who could become pregnant, increased consumption of folic acid through food or vitamins can reduce the occurrence of certain birth defects of the brain and spinal cord. The goal of the Folic Acid Awareness campaign is to educate as many women as possible about the benefits of folic acid.

The CMR publishes an annual Birth Cohort Report that summarizes malformations by type, by organ system and by county. The demographics of children with reported malformations are summarized.

Comparisons are also made with birth defects in other states. This annual Report serves as a resource for health care programs and professionals providing preventive health care and delivery of services to affected children and their families. A number of health

research studies using registry data have been published. A bibliography and copies of articles that use CMR data are available.

How Does the Registry Obtain Information?

Hospitals and physicians throughout NYS are required to report children born or living in NYS who have been diagnosed before two years of age with particular congenital malformations. The majority of reports in the Registry are sent by hospitals. The CMR Handbook, available to hospital medical records departments, lists the conditions that are reportable, as well as to whom and how to report.

Is Information Kept Confidential?

DOH staff rigorously secure and protect all Registry information in order to maintain and uphold a high level of privacy and confidentiality. Access to Registry information is restricted and carefully monitored so that the identity of children and families is not disclosed. The NYS Department of Health's Institutional Review Board for the Protection of Human Subjects must approve any research projects for which families are contacted. If a child is adopted, neither the birth parents nor the adoptive parents are contacted. When information is provided to communities to help them plan for services, no names are attached to the information.

What Do We Know About Congenital Malformations?

Although most of the factors that can cause congenital malformations are not known, research has allowed scientists to identify many ways in which malformations can be prevented. If a pregnant woman is better informed about the types of substances or exposures that may be harmful to her baby, she may be able to help reduce the risk that her baby will be born with a congenital malformation.

Alcohol & Street Drugs

No amount of alcohol is known to be safe for a developing fetus. When a pregnant woman drinks, the alcohol in her blood passes through the placenta and reaches the baby—sometimes with devastating consequences. Fetal Alcohol Syndrome (FAS) is the leading known preventable cause of mental retardation in the United States. Children with FAS have permanent mental and behavioral problems. They often have distinctly malformed facial features. Drugs such as cocaine and marijuana, when taken by a pregnant woman, are delivered to her unborn baby by way of the blood supply through the umbilical cord. These and most other illegal drugs pass easily to the fetus and therefore must be avoided.