

CDC's Birth Defects Activities

- Every 4½ minutes, a baby is born with a birth defect.
- Birth defects are a leading cause of infant mortality in the U.S., accounting for 1 in 5 infant deaths.
- In the U.S. each year, the total hospital costs of children with birth defects exceed \$2.6 billion.

Understanding Birth Defects

One in every 33 babies in the U.S. is born with a birth defect. Birth defects are structural changes in one or more parts of the body that are present at birth.

CDC identifies causes of birth defects, finds opportunities to prevent them, and improves the health of those living with birth defects. By applying a public health approach incorporating three essential elements—surveillance or disease tracking, research to identify causes, and prevention research and programs—we can rapidly translate scientific findings into appropriate public health interventions.



Tracking the Number of Babies Identified with Birth Defects

Tracking where and when birth defects occur and who they affect is the first step in preventing birth defects. CDC tracks birth defects through a number of **state tracking systems** and regional programs. Tracking efforts can tell us if the numbers are increasing or decreasing over time, can help to identify community or environmental factors that might need more study, allows us to evaluate our efforts and plan for services, and support affected families.

Identifying Risk Factors and Causes

For some birth defects, we know the cause. But for most, we don't. And we don't completely understand how risk factors work together to cause birth defects. Research can help us answer many of these questions. CDC funds a large study to identify the causes of birth defects called the **National Birth Defects Prevention Study (NBDPS)**. Through this study, we have been building our capacity for birth defects research in the U.S. for more than a decade.

Results from the NBDPS teach us more about what might raise or lower the risk of having a baby with a birth defect. The NBDPS has made key contributions in understanding the risks of certain birth defects when specific medications are used just before and during pregnancy (e.g., the potential association between antidepressants and some birth defects). Data from the study have also clearly demonstrated that maternal obesity is a strong risk factor for a number of major birth defects and have confirmed the association between maternal smoking and having a baby with a cleft lip or cleft palate.

Preventing Birth Defects

CDC and its partners can use what they learn through research to develop ways to prevent birth defects. For example, we have learned that taking folic acid before and during the early weeks of pregnancy greatly reduces the risk of serious defects of the brain and spine called neural tube defects (e.g., spina bifida and anencephaly). This research finding led to fortification of enriched cereal grains in the U.S. with folic acid; about 1,000 babies each year in the U.S. are born without a neural tube defect because of this successful public health intervention. And, the estimated savings resulting from folic acid fortification in the U.S. is about \$300 million per year.

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National Center on Birth Defects and Developmental Disabilities
Division of Birth Defects and Developmental Disabilities



Improving our ability to prevent birth defects is an important public health priority that requires continued commitment. CDC hopes to learn more about the potential role of environmental exposures, medications, maternal infections, maternal diabetes, obesity, and genetic risk factors in causing birth defects. Expansion of tracking and research efforts holds great promise in identifying new causes of birth defects and strengthening birth defects prevention strategies.

Improving the Lives of Individuals with Birth Defects

Babies who have birth defects often need special care and interventions to survive and thrive developmentally. Birth defects tracking systems provide one way to identify and refer children for services they need as early as possible. Early intervention is vital to improving outcomes for these babies.

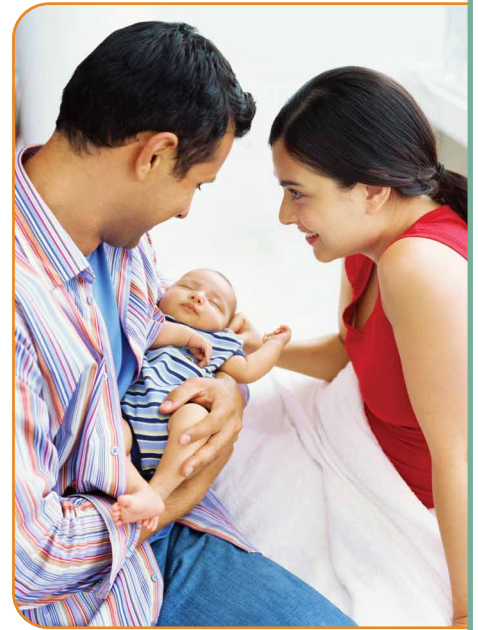
As an example, babies born with heart defects are living longer, healthier lives because of improved medical care and treatment. CDC is working to expand birth defects tracking systems to include children and adults living with heart defects to better understand the longer term outcomes and ways to improve health across their lifespan. This would allow for better estimates of prevalence of congenital heart defects among adolescents and adults, increase understanding of the types of health services needed, and assess the costs for needed services for this group of individuals.

Looking Back, Moving Forward

Through CDC's work on birth defects, we know more about trends in the occurrence of birth defects over time, potential causes and risk factors, characteristics of affected children, and health outcomes associated with birth defects. This information is essential to help public health officials estimate the number of babies born with birth defects and plan for services in their community. Because of this work, CDC has more information available in scientific publications and on our website to educate women about how they can increase their chances of having a healthy pregnancy. For example, CDC posted and disseminated findings on topiramate (a medication) and orofacial clefts following the publication of key data in July 2012. These findings will allow women and their doctors to make informed decisions about treatment with this medication during pregnancy.

Moving forward, CDC is dedicated to learning more about birth defects prevention and factors that can increase the risk of having a baby with a birth defect, including better understanding the safety or risk of specific medications during pregnancy. The Treating for Two initiative is CDC's commitment to work with partners, other federal agencies, and the public to improve information about medications commonly taken during early pregnancy. The initiative is also committed to translating this information into safe and effective healthcare for pregnant women and making this information easily accessible to women and their healthcare providers.

CDC will continue to learn more about birth defects by tracking and conducting research to guide prevention efforts and improve the lives of children and families affected by birth defects.



**For more information on CDC's Birth Defects activities,
visit www.cdc.gov/birthdefects**

National Center on Birth Defects and Developmental Disabilities

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