

# South-East Asia Networks for Newborn & Birth Defect



WHO Collaborating Centre for Training and Research in Newborn Care  
Collaborating Centre for Training in Clinical Laboratory Genetics in Developing Countries Department of Pediatrics  
AIIMS, New Delhi, India

Supported by World Health Organization, Regional Office for South East Asia & National Center on Birth Defects & Developmental Disabilities, CDC, USA

September 2015

## This Month...

### Birth Defects

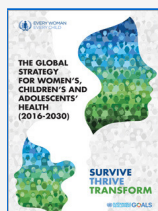
- [Findings from the National Birth Defects Prevention Study: Interpretation and translation for the clinician.](#)
- [Next steps for birth defects research and prevention: The birth defects study to evaluate pregnancy exposures \(BD-STEPS\).](#)

### Newborn

- [Ending preventable newborn deaths in a generation.](#)
- [Impact of maternal nutritional status before and during pregnancy on neonatal body composition: A cross-sectional study.](#)

## Publications

### The Global Strategy for Women's, Children's and Adolescents' Health (2016-2030)



This Global Strategy takes a life-course approach that aims for the highest attainable standards of health and well-being—physical, mental and social—at every age. A person's health at each stage of life affects health at other stages and also has cumulative effects for the next generation. Moreover, the Global Strategy adopts an integrated and multisector approach, recognizing that health-enhancing factors including nutrition, education, water, clean air, sanitation, hygiene and infrastructure are essential to achieving the SDGs.

[Read full publication](#)

## Birth Defects

### [Findings from the National Birth Defects Prevention Study: Interpretation and translation for the clinician.](#)

[Alwan S, Chambers CD.](#)

#### Abstract

#### BACKGROUND:

The National Birth Defects Prevention Study (NBDPS) is a large U.S. multi-site case-control study first established in 1996 to identify potentially preventable environmental causes and genetic risk factors for more than 30 selected categories of major birth defects.

#### METHODS:

Numerous reports with both positive and negative findings have been produced by the NBDPS, and

many have influenced clinical practice. Many NBDPS reports have included novel findings, and in some cases these findings could only be considered hypothesis-generating. Other reports have met criteria for causality such as replication of findings in other studies, biological plausibility, and coherence.

#### **RESULTS:**

However, translation of even strongly supported associations, in some cases, has required clinicians to learn to communicate information to patients about small and uncertain absolute risks in the context of the potential effects of under- or poorly treated maternal conditions.

#### **CONCLUSION:**

The NBDPS has continued to play an important role as a rich U.S. data source that can advance the understanding of maternal conditions and their treatments in relation to birth defects.

---

### **[Next steps for birth defects research and prevention: The birth defects study to evaluate pregnancy exposures \(BD-STEPS\).](#)**

[Tinker SC](#), [Carmichael SL](#), [Anderka M](#), [Browne ML](#), [Caspers Conway KM](#), [Meyer RE](#), [Nembhard WN](#), [Olney RS](#), [Reefhuis J](#)

#### **Abstract**

##### **BACKGROUND:**

The Birth Defects Study To Evaluate Pregnancy exposures (BD-STEPS) is a population-based, multi-Center case-control study of modifiable risk factors for selected birth defects in the United States. BD-STEPS is the second major research effort of the Centers for Birth Defects Research and Prevention, which extends and expands the initial research effort, the National Birth Defects Prevention Study (NBDPS).

##### **METHODS:**

BD-STEPS focuses on 17 categories of structural birth defects selected based on severity, prevalence, consistent ascertainment, and previous findings that warrant additional research. Cases are identified through existing birth defects surveillance programs; controls are from vital records or birth hospital logs from the same catchment area. BD-STEPS uses a standardized computer-assisted telephone interview to collect information from case and control mothers on topics including demographics, health conditions, and medication use. Following the maternal interview, selected Centers request permission to sample residual newborn screening blood spots from state repositories for genetic analyses. New components planned for BD-STEPS include linkages with external datasets and use of online questionnaires to collect in-depth information on selected exposures.

##### **RESULTS:**

BD-STEPS extends NBDPS by continuing to collect data on many exposures that were assessed in NBDPS, allowing data from both studies to be combined and providing an unprecedented sample size to analyze rare exposures. BD-STEPS expands upon NBDPS by collecting more detailed information on existing exposures as well as new exposures.

##### **CONCLUSION:**

The goal of BD-STEPS is to provide women and healthcare providers with information they need to make decisions to promote the healthiest pregnancy possible.

### **Newborn**

### **[Ending preventable newborn deaths in a generation.](#)**

[Akseer N](#), [Lawn JE](#), [Keenan W](#), [Konstantopoulos A](#), [Cooper P](#), [Ismail Z](#), [Thacker N](#), [Cabral S](#), [Bhutta ZA](#).

#### **Abstract**

The end of the Millennium Development Goal (MDG) era was marked in 2015, and while maternal and child mortality have been halved, MGD 4 and MDG 5 are off-track at the global level. Reductions in neonatal death rates (age <1 month) lag behind those for post-neonates (age 1-59 months), and stillbirth rates (omitted from the MDGs) have been virtually unchanged. Hence, almost half of under-five deaths are newborns, yet about 80% of these are preventable using cost-

effective interventions. The Every Newborn Action Plan has been endorsed by the World Health Assembly and ratified by many stakeholders and donors to reduce neonatal deaths and stillbirths to 10 per 1000 births by 2035. The plan provides an evidence-based framework for scaling up of essential interventions across the continuum of care with the potential to prevent the deaths of approximately three million newborns, mothers, and stillbirths every year. Two million stillbirths and newborns could be saved by care at birth and care of small and sick newborns, giving a triple return on investment at this key time. Commitment, investment, and intentional leadership from global and national stakeholders, including all healthcare professionals, can make these ambitious goals attainable.

---

**[Impact of maternal nutritional status before and during pregnancy on neonatal body composition: A cross-sectional study.](#)**

[Pacce S](#), [Saure C](#), [Mazza CS](#), [Garcia S](#), [Tomziq RG](#), [Lopez AP](#), [Ribarola L](#), [Krochick GA](#).

**Abstract**

**BACKGROUND:**

The existence of early factors which, acting during critical periods of intrauterine or immediate postnatal development, determine long-term health has become increasingly recognized. Both high and low birth weight have been associated with cardiovascular risk factors in adulthood. Therefore, body composition at birth rather than birth weight may be a marker to predict future diseases. Maternal weight previous to and gained during pregnancy is associated with intrauterine fetal growth.

**OBJECTIVE:**

To evaluate the correlation between maternal nutritional status before and during pregnancy and neonatal body composition.

**MATERIAL AND METHODS:**

This cross-sectional study included consecutive mother-child pairs at delivery at an Argentinean public hospital during 5 months period, evaluating maternal and neonatal anthropometry before 24h of life as well as the history of the mother before and during pregnancy. Neonatal body composition was calculated according to a mathematical formula based on skinfold thickness measurement validated in newborns.

**RESULTS:**

Mothers of newborns with high body fat mass were more frequently obese (72.7% versus 35.1%, p 0.005), and more frequently showed weight gain above 18kg during pregnancy (76.4% versus 31%, p 0.03).

**CONCLUSIONS:**

These findings confirm the hypothesis that maternal obesity before pregnancy is highly correlated with neonatal fat mass in the first hours of life.

**You are receiving this newsletter because you have been involved with our work.  
Please share this with colleagues who would find it of interest.**

**[Click here](#) for full list of E-Blast issues**

Contact us: [whoccnewborn@gmail.com](mailto:whoccnewborn@gmail.com)

[unsubscribe from this list](#)