



# FRIENDS OF NICHD COALITION NEWS

The Eunice Kennedy Shriver National Institute of Child Health and Human Development  
National Institutes of Health

**Fall 2008**

The *Friends of NICHD News* is a quarterly report from the Friends of NICHD highlighting some of the research advances and programs funded by the NICHD, one of the institutes at the National Institutes of Health. The Friends of NICHD is an independent coalition of more than 100 organizations representing scientists, physicians, health care providers, patients and parents concerned with the health and welfare of women, children, families and people with disabilities. The NICHD sponsors research on human development, before and after birth; maternal, child, and family health; reproductive biology and population issues; and medical rehabilitation. For more information, visit the Institute's Web site at <http://www.nichd.nih.gov>.

## **New Program Teaches Preschoolers Reading Skills, Getting Along With Others**

Recent debates about emphasizing academic skills at the expense of social and emotional development in preschool programs like Head Start are being informed by a recent study funded by the NICHD and other federal agencies showing that it's possible to teach preschoolers the pre-reading skills they need for later school success, while at the same time fostering the social skills necessary for making friends and avoiding conflicts with their peers.

In the study, conducted by Karen Bierman, Ph.D., distinguished professor of Psychology at Penn State University, researchers compared the progress of students who received a traditional Head Start curriculum to those who received a curriculum with enhancements in the areas of social and emotional learning and pre-reading skills. The new program is known as the REDI (Research-Based, Developmentally Informed) Head Start program. The researchers developed the REDI curriculum by combining a program that fosters social and emotional development (Preschool PATHS) with curriculum components that promote language development and pre-reading skills.

When compared to children in the traditional Head Start program, children in the REDI program scored higher on several tests of emotional and social development than did children in the traditional program. This included skills in recognizing emotions in others, and responding appropriately to situations involving a conflict. Moreover, parents of children in the REDI group reported fewer instances of impulsivity, aggression and attention problems than did parents of children in the traditional program. Children in the REDI program also scored higher than children in the traditional program on several tests of pre-reading skills: vocabulary, blending letter sounds together to form words, separating words into their component letter sounds, and in naming the letters of the alphabet.

<http://www.nichd.nih.gov/news/releases/nov19-08-New-Program.cfm>

## **ADHD Medications Do Not Cause Genetic Damage in Children**

In contrast to recent findings, two of the most common medications used to treat attention deficit hyperactivity disorder (ADHD) do not appear to cause genetic damage in children who take them as prescribed, according to a new study by researchers at the National Institutes of Health (NIH) and Duke University Medical Center. ADHD is a disorder characterized by attention problems, impulsivity, and hyperactivity. About 3 to 5 percent of children in the United States have been diagnosed with the disorder, although several studies suggest 7 to 12 percent of children may be affected.

The study published online this month in the *Journal of the American Academy of Child and Adolescent Psychiatry (JAACAP)* provides new evidence that therapeutic doses of stimulant medications, such as methylphenidate and amphetamine, do not cause cytogenetic (chromosomal) damage in humans. The

researchers looked at three measures of cytogenetic damage in white blood cells of each child participating in the study and found no evidence of any changes after three months of continuous treatment.

"This is good news for parents," said Kristine L. Witt, M.Sc., a genetic toxicologist at the National Institute of Environmental Health Sciences (NIEHS) and co-author on the study, which was funded through the Best Pharmaceuticals for Children Act by NIEHS and the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), both parts of NIH. "Our results indicate that methylphenidate- and amphetamine-based products do not induce cytogenetic damage in children."

This study was supported by the NIH/NICHD Best Pharmaceuticals for Children Act pediatric drug development program and the Intramural Research Program of the National Toxicology Program at the National Institute of Environmental Health Sciences. NIH Clinical Trial NCT00341029: <http://clinicaltrials.gov/show/NCT00341029>.  
<http://www.nichd.nih.gov/news/releases/nov19-08-ADHD.cfm>

### **NICHD and National Council of Negro Women Collaborate on Healthy Weight Initiative**

The National Institutes of Health and the National Council of Negro Women (NCNW) joined forces to train NCNW members in how to present two NIH education programs that help children maintain a healthy weight. One out of every six American children ages two years to 19 years—an estimated 16.3 million—is overweight. The most recent National Health and Nutrition Examination Survey (2003-2006), or NHANES, also shows that an additional 15.6 percent are at risk of becoming overweight. One of the communities at greatest risk is the African-American community: according to NHANES, one out of five non-Hispanic Black children is considered overweight and one out of three is at risk for overweight.

More than 30 NCNW cluster leaders—women who serve as the organization's regional leaders—came from across the United States, including the Washington, D.C., metro area, to participate in the training. The programs emphasize improving food choices, increasing physical activity, and reducing screen time.  
<http://www.nichd.nih.gov/news/releases/oct31-08-NCNW.cfm>

### **Earlier Jaundice Treatment Decreases Brain Injury in Preemies**

A study from the NICHD Neonatal Research Network found that early treatment to prevent severe newborn jaundice in extremely early preterm infants reduced the infants' rate of brain injury, a serious complication of severe jaundice.

The study also found that the smallest, most frail infants in the study were more likely to die than were the larger infants, regardless of whether they received the early or the conventional treatment. Moreover, the study found a trend toward a higher proportion of deaths among smaller infants in the early treatment group, when compared to the smaller infants receiving the conventional treatment. However, this trend was within the statistical margin of error.

Jaundice, or yellowing of the skin, is common in newborns. The condition results from an accumulation of bilirubin, a yellowish substance produced when red blood cells are broken down. Ordinarily, bilirubin is removed from the body by the liver. For most infants with jaundice, the yellow skin color will fade after a few days and the infant won't suffer any ill effects. In some infants, however, the liver fails to remove bilirubin

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rapidly enough, and potentially toxic levels accumulate. The condition is known as hyperbilirubinemia. Untreated, hyperbilirubinemia may cause severe brain injury, which could result in cerebral palsy, profound intellectual and developmental disability, blindness, and severe hearing loss.

<http://www.nichd.nih.gov/news/releases/oct29-08-Jaundice.cfm>

### **Roughly One Quarter of U.S. Women Affected By Pelvic Floor Disorders**

Nearly 24 percent of U.S. women are affected with one or more pelvic floor disorders, report researchers funded by the National Institutes of Health. Their analysis is the first to document in a nationally representative sample the extent of pelvic floor disorders, a cluster of health problems that causes physical discomfort and limits activity.

The study also revealed that the frequency of pelvic floor disorders increases with age, affecting more than 40 percent of women from 60 to 79 years of age, and about 50 percent of women 80 and older. Pelvic floor disorders result when the muscles and connective tissue within the pelvic cavity weaken or are injured. These muscles and ligaments form a sling across the opening of a woman's pelvis, holding the bladder, uterus, bowel, and rectum in place. The three main pelvic floor disorders are urinary incontinence, fecal incontinence, and pelvic organ prolapse. Pelvic organ prolapse results when pelvic organs such as the uterus, bladder and bowel, collapse onto the vagina. The resulting pressure may cause a bulge or protrusion through the vaginal canal. This protrusion may be uncomfortable, may make physical activity difficult, and may interfere with sexual functioning.

“The study results underscore the need to identify the causes of pelvic floor disorders and the means to prevent and treat them.” said Duane Alexander, M.D., director of the NIH's Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD). “The NIH Pelvic Floor Disorders Network is conducting studies to provide much needed answers.”

The study's first author was Ingrid Nygaard, M.D., M.S., of the University of Utah School of Medicine, Salt Lake City. The study was conducted by researchers in NIH's Pelvic Floor Disorders Network, which seeks to improve diagnosis, treatment, and prevention of pelvic floor disorders in women. “Before our study, there were no comprehensive national prevalence estimates for pelvic floor disorders,” said Susan Meikle, M.D., M.S.P.H., Project Scientist for the NIH Pelvic Floor Disorders Network.

Additional information on pelvic floor disorders is available at:

[http://www.nichd.nih.gov/health/topics/Pelvic\\_Floor\\_Disorders.cfm](http://www.nichd.nih.gov/health/topics/Pelvic_Floor_Disorders.cfm).

### **NIH's National Children's Study Enters Next Phase**

In October, the National Institutes of Health announced that its comprehensive study to examine the effects of genes and the physical, social and chemical environments on children's health had entered the next phase of operations. Authorized by Congress in the Children's Health Act of 2000, the National Children's Study (NCS) will follow a representative national sample of 100,000 children from before birth to age 21. The study will investigate factors influencing the development of such conditions as autism, cerebral palsy, learning disabilities, birth defects, diabetes, asthma, and obesity.

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In 2004, study researchers announced 105 locations throughout the United States from which study participants ultimately will be recruited by the study centers. In 2005, the NIH awarded contracts for seven initial, or Vanguard Centers, followed by 17 additional centers in 2007. Funding for the National Children’s Study is provided each year by Congress. If funding is received as anticipated, and if the necessary technical approvals are obtained, the NCS is expected to begin initial recruitment at two of the Vanguard Centers in January 2009. This initial recruitment will focus on pilot testing for the study—early phase testing of recruitment procedures and sampling methods—before the full study begins. In April of 2009, the remaining Vanguard Centers will join in enrollment for the pilot phase of the study. After the pilot testing, the first wave of recruitment will begin in the summer of 2010.

Although the study can be expected to provide information throughout its duration, information on disorders and conditions of early life are expected within the next few years. Because the study will enroll pregnant women and, in some cases, women who are not yet pregnant, study scientists hope to identify a range of early life factors that influence later development.

“With more than 100,000 participants, we believe the National Children’s Study will be the largest study of pregnant women ever conducted in the United States,” said National Children’s Study Director Peter Scheidt, M.D., M.P.H. “We expect the study to yield information on a variety of pregnancy and birth-associated conditions.”

In particular, Dr. Scheidt added, the National Children’s Study could be expected to provide information on the potential contributors to preterm birth. More than 500,000 preterm infants are born each year in the United States. Infants born prematurely are at risk for early death and a variety of health problems, such as cerebral palsy, mental retardation, and learning disabilities. Health care costs for preterm infants total \$26 billion per year.

Additional information about the National Children’s Study is available from:  
<http://www.nationalchildrensstudy.gov>.

A chart of the 27 study centers funded for 2008 and their corresponding locations appears at the following link:  
<http://www.nichd.nih.gov/centers2008/>.

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