



Children's Hospital Boston

*Children's Hospital Boston
Laboratories of Cognitive Neuroscience*

Winter 2008 Newsletter



Hello from Dr. Nelson

*Director of Research, Division of Developmental Medicine, Children's Hospital Boston
Professor of Pediatrics, Harvard Medical School*

Happy New Year from the Laboratories of Cognitive Neuroscience! Whether you have already taken part in our studies or have recently joined our growing participant database, I greatly appreciate your interest in our research at Children's Hospital Boston. Your support of and participation in our studies is invaluable to us in answering many important questions related to infant and child cognitive development.

This winter, as always, is an exciting time for our labs. We are beginning a number of new studies in face processing, autism, and developmental dyslexia. And, because cognitive development is a lifelong process, our research continues to expand upward in age range--our studies now include everyone from three-month-old infants to sixteen-year-old adolescents to adults!

Please feel free to explore our website or contact our research team directly to learn more about the nature of our studies and how you and your child might participate. Thank you again for your interest in the Laboratories of Cognitive Neuroscience. I look forward to meeting you at a study session in the near future!

Warm wishes,

Charles A. Nelson

Charles A. Nelson, Ph.D.



Inside the Lab:

Current Opportunities for Study Participation

As a registered member of our participant database, you are eligible to receive notifications by mail or e-mail when opportunities for research participation are available that fit your (or your child's) age range. Wondering what study opportunities might be available to you, your family members, or your friends in the near future? Browse the [Ongoing Research](#) section of our website, and take a look at the research studies in our laboratories enrolling infants, children, and adults for participation. And if you spot a study opportunity which might be of interest to someone you know, feel free to forward this newsletter or tell them about our [participant database](#)!

Featured Study: Neural Pre-markers of Developmental Dyslexia in Children Prior to Reading Onset

In this study, Dr. Nadine Gaab is using cutting-edge, non-invasive brain imaging technologies (functional and structural magnetic resonance imaging) to investigate neural pre-markers of developmental dyslexia in children who have not yet learned to read. Dr. Gaab's previous research in typically developing children has identified certain brain networks essential for reading and has shown that these brain networks can be rewired through remediation in children with a diagnosis of developmental dyslexia. This study aims to further our knowledge of these brain networks, and thereby lay the groundwork for early identification of developmental dyslexia. This, in turn, will promote earlier intervention and remediation strategies to help children at risk for dyslexia before they are faced with the frustration that can come with learning to read.

To help achieve this goal, the Gaab lab is seeking children who have not yet learned to read (ages 4-6) and who have a sibling or parent with a diagnosis developmental dyslexia. In the study, children will complete simple auditory and language tasks. As they perform these tasks, we can track how they utilize the brain networks that are critical for learning to read.

For more information, please visit the Gaab lab website:

www.childrenshospital.org/research/gaablab or contact the Gaab lab directly at (857) 218-3022.

[In the News:](#)

Foster Care and Cognitive Development in Science

As part of the Bucharest Early Intervention Project, Dr. Nelson and a team of researchers continue to study the development of children who were institutionalized in Romania as a result of policies implemented under former dictator Nicolae Ceausescu. In the Science article, the team addresses how high quality foster care (created by the BEIP) has positively impacted the cognitive development of some of these children, as well as potential implications for child welfare around the world. To read the full article, please visit the "[In the News](#)" section of our website and click on the full text link for the Science article.

Sound Training and Dyslexia on Brainconnection.com

In this article from December 2007, Dr. Gaab writes about how she and a team of researchers used functional magnetic resonance imaging (fMRI) and the remediation program Fast ForWord Language, to show that sound-based interventions can actually re-wire the brains of dyslexic children to function more like that of a typical reader. To read the full article, [click here](#).

Please visit the "[In the News](#)" section of our website for more press coverage about the laboratories' research!

[In the Community:](#)

Watertown Boys & Girls Club Annual Road Race

In November, the LCN sponsored the annual 5K road race held by the Boys & Girls Club of Watertown. In addition to being an important fundraiser for the Club and its programs, the road race is a great day of family and community fun! For more information on the Watertown Club and how you can get involved in this years road race, [click here](#).

The United Way's "Inspire 4 Life: A Summit on Youth," Tuesday, January 29th, 8:30 am-7:00 pm

"Inspire 4 life is a multi-component campaign that calls upon our whole community to listen to what youth are saying, learn about what research tells us are the best ways to engage with youth, and lead the efforts to advocate on behalf of youth....The Summit on Youth will bring together a broad cross section of community and corporate leaders, policy makers, youth providers and key stakeholders who care about the future of our youth. " (From the [Inspire 4 Life website](#)). To speak to how research fits into this equation, Dr. Margert Sheridan, an LCN researcher and Robert Wood Johnson Health and Society Schoar at the Harvard School of Public Health, will present a workshop at the summit entitled "Applying Brain Science to Youth Development." For a full description of the workshop, as well as more information on how you can participate in this event, which is free and open to the public, [click here](#).

"What's Best for Children? How Judges Use Neuroscience to Break the Cycle of Child Maltreatment" Tuesday, February 12th, 3:30-5:30 pm

As part of the colloquium series sponsored by Harvard's Center on the Developing Child, Dr. Nelson will be speaking at this talk, along with a judge from the Miami-Dade County Juvenile Court and a panel of experts from Harvard Law School. The talk is free and open to the public, and a wonderful opportunity to find out more about how the Center on the Developing Child is working to bridge the gap between research-based knowledge and public policy. The talk will take place in room 107 in Pound Hall, at 1563 Massachusetts Ave. in Cambridge. For more information on the Center and the series, you can visit their website at www.developingchild.harvard.edu

"The Reading Brain" Sunday, April 27th, 1:00-4:00 pm

Does learning to read change the brain? Is the brain of a struggling reader different from that of a skilled reader? Are music, language, and reading skills linked neurologically? As part of the Museum of Science's exciting new lecture series about "The Science of Kids," Dr. Gaab will speak to how brain researchers are currently exploring these questions, as well as the possible link between musical training, language, and reading development. For more information on the series and how to register for Dr. Gaab's workshop, visit the [Museum of Science website](#).

To remove your information from our participant database, please e-mail babybrain@childrens.harvard.edu or call (857) 218-3011.

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