

Hello from Dr. Nelson



Hello from the Labs of Cognitive Neuroscience! It's an exciting summer for us here at the LCN, with birthdays for all three of our labs. The Nelson lab will celebrate our six year anniversary here at Children's, the Gaab Lab is turning four, and our newest lab, run by Margaret Sheridan, PhD, has officially been up and running for a year. When I relocated to Boston after 20 years of studying infant development in Minnesota, I had high hopes that moving to an area so rich with academic and medical centers would provide new opportunities for growth and collaboration. The results have far exceeded my expectations, and we are busy studying development from infancy through adolescence, with projects looking at everything from memory development, to [autism](#), to ADHD. This includes collaborations with MIT, Boston University, and Boston Children's Museum, among others. All of this means that we are moving steadily forward in our mission to improve our understanding of brain and behavior development in babies and children, including moving toward earlier identification and better treatment of developmental disorders. Of course, our greatest collaborators are you, the families who support and take part in our work. Your help and generosity are essential to our progress. Thank you for helping us to grow and for making our first years in Boston such a wonderful success!

As always, we have many studies underway. Please feel free to explore our [website](#) or contact our research team for more information about studies that you or your child might participate in.

Whether you have already taken part in our studies or have recently joined our growing [Participant Registry](#), I greatly appreciate your interest in our research. Your support of our work and participation in our studies are invaluable to us in answering many important questions related to infant and child cognitive development.

Warm Wishes,

Charles A. Nelson, Ph.D.

Director of Research, Division of Developmental Medicine
Richard David Scott Chair in Pediatric Developmental Medicine Research
Professor of Pediatrics and Neuroscience, Harvard Medical School

In the News

"Tipping the Scales Toward Environment vs. Genetics in New Autism Research" ***Radio Boston, July 12, 2011***

LCN Research Director, Dr. Charles Nelson, took part in a discussion about a recent study out of Stanford University, which showed that environmental factors may play a greater role in causing autism than previously thought. Click [here](#) to listen.

"Lesson from Romania: Neglect and deprivation are bad for children's DNA" ***Vector, May 24, 2011***

Click [here](#) to read about the most recent study out of the Nelson Lab's [Bucharest Early Intervention Project](#), a collaboration with researchers at the University of Maryland and Tulane University. The study found that early adversity actually shortens the tips of children's chromosomes--known as telomeres--which may correlate with a shorter lifespan.

"Babies Enlisted in Brain Research" ***The Boston Globe, May 16, 2011***

Click [here](#) to see the article on Dr. Nadine Gaab's study, which seeks to identify early risk markers for dyslexia in babies. The study, which is developing new techniques to help babies sleep through an MRI, may also help reduce sedation rates for infants who need to have an MRI for medical reasons.

Join us on Facebook--help us reach 400 fans!

Last year the LCN launched a Facebook page as a place where families can stay in the loop about our lab happenings, new studies, and study results. Parents can also post photos of lab visits with their "Neuroscientists in Training," like these two adorable twins who have paid us many visits. (They also happen to belong to our Lab Coordinator, Alissa, whom many of you know!)



We hope this will also be a way to reach out to new families via those who already know us, so if you are an LCN fan please take a moment to "like" our page! You can find us at www.facebook.com/wherelidshelpkids. Hope to see you there!

LCN in the Community

West End Children's Festival

Saturday, August 20th, 12:00-4:00

The LCN will join the WECF again this year with our big brain puzzle and some fun brainy games. This year's festival theme is "International Flavor" and will celebrate the rich diversity of Boston's West End neighborhood with food, games, and other activities. Click [here](#) for details. We hope to see you there!

Featured Study: Early Neural Markers of ADHD, Improving Diagnosis in Young Children

Currently, 50% of children who are diagnosed with ADHD before the age of 7 will no longer have ADHD by the time they are 8. Most of these diagnoses are made using symptom checklists. Because brain development progresses rapidly between the ages of 3-7, which means behaviors can change dramatically as well, it may be the case that these checklists produce different results across this age range. In other words, they may not be the best tool for making a stable diagnosis in young children. In this study, we hope to use neuroimaging to better identify which children will continue on with a diagnosis of ADHD and which will not.



Improving the accuracy of ADHD diagnosis in young children would allow doctors to better determine which children need treatment and which do not. A better understanding of what's happening at the level of the brain may also help to determine which of the many treatment options available would work best for a child with ADHD. Furthermore, for the 50% of children who will not go on to have ADHD, we may be able to identify whether their behaviors are simply developmental or whether they come from other, unidentified issues that can then be treated appropriately.

We are looking for children ages 3-7 to participate in this study. It will involve a two hour session using [EEG](#) and a second, optional session in which children older than five can participate in an fMRI study. Children may also be asked to participate in a short session in a few years so that we can look at diagnostic stability and change in children with ADHD. Each session is fun and children will receive rewards, snacks, and play time if they need a break. Compensation will also be provided to you for your time and transportation costs.

If you are interested in participating or would like to learn more, please contact Kelly Kehm at adhdstudy.at.chb@gmail.com or call us at 857-218-5228!