

SOCIAL AND AFFECTIVE NEUROSCIENCE OF AUTISM LAB

Official Laboratory Newsletter





From the Director

Dr. Katarzyna Chawarska, PhD

Dr. Katarzyna Chawarska is the Director of the Social and Affective Neuroscience of Autism Program and Yale Toddler Developmental Disabilities Clinic at the Child Study Center, as well as the Emily Fraser Beede Professor of Child Psychiatry at Yale School of Medicine. She is a leading expert in research on identifying early diagnostic markers and novel treatment targets in autism spectrum disorders.

As we welcome in the spring, with its lengthening days, volatile weather, and reawakening of nature, we feel rejuvenated as we emerge from the worst of the pandemic. Here at the Yale Social and Affective Neuroscience of Autism Program, we look forward to seeing all of you in person with your babies and children. Although we have been open for in-person visits since September, loosening restrictions on interstate travel and capacity limits mean we will soon be back to our usual busy schedule in our thriving research clinic.

Despite all the reasons for optimism, we understand that times are still quite trying for many families. In this issue, we are pleased to bring you advice from our own Karyn Bailey, MSW, on the value of deep breathing, Power of the Breath (pp. 3-4). This is a step-by-step guide to learning a simple but very effective technique to help alleviate stress, for adults and children alike.

In this month's Newsletter we also highlight two of our current NIH Autism Center of Excellence (ACE) research studies (Prenatal and Neonatal Studies, p. 5) focused on mapping neurodevelopment of infants at risk for autism and infants without genetic risk factors for autism. We are now actively enrolling both pregnant moms and newborns in the first study of fetal and neonatal brain development. These studies will help us understand the brain development factors that may contribute to emergence of symptoms of autism and guide new strategies for monitoring and intervention for children on the autism spectrum.

Also, please be on the lookout for communication from us soon regarding our annual ACE Autism Summer Institute (July 13-16, 2021), a virtual series of talks presenting findings from our ACE research studies as well as the latest advances in clinical care of children and adolescents with ASD.

Stay well and we look forward to seeing you soon!

Power of the Breath

By Karyn Bailey, MSW

It seems like these days, more than ever, we are looking for ways to reduce stress and “deep breathing” is offered as a common solution. But does deep breathing really work to reduce stress, and if so, how? And, what exactly is “deep breathing”? These are the questions that I had in mind as I consulted several resources to understand more about the power of the breath to help reduce stress. I found the following to be especially helpful: Psychology Today, American Institute of Stress, Science of Us, Daniela Ramirez, Donna Farhi, Kenneth Cohen, and Roger Jahnke whose writings I invite you to explore as you see fit. In the meantime, I’ll summarize what I learned and offer this information to you as an option to consider for stress management.

Let’s begin with a brief overview of how we typically respond to stressful situations and assume that stress is anything that we encounter that represents some sort of threat that is out of the ordinary and/or out of our control. In such a moment, our vagus nerve, which runs from the base of our brain and branches out to our organs, serves as a conduit of chemicals/hormones that are activated automatically/reflexively by our sympathetic nervous system and result in the stress response that is often described as the fight or flight response. This is an involuntary and adaptive process that increases our respiration and blood flow to prepare our bodies for quick and protective action, such as fighting or fleeing. Once the perceived threat has passed or been managed successfully, the stress response also passes and our respiration, blood pressure, and heart rate return to their normal steady state.

However, highly stressful situations and/or low-level stressful situations that occur chronically may upset the balance of this process and contribute to increased blood pressure, heart rate, and muscle tension along with psychological reactions such as anxiety and irritability all of which can impair our health and well-being. The good news is that our vagus nerve can be stimulated intentionally to reset this balance and help restore, mitigate, and even prevent these physical and psychological reactions and one way to do this is through deep breathing. Through the action of our diaphragm, slow, even breaths that originate deep within the abdomen stimulate the vagus nerve in a way that signals safety and cues our bodies and minds to relax, restore, and release chronic and unhealthy patterns. Sounds like something worth trying; however, before engaging in deep breathing practice, be sure to honor any respiratory condition that contra-indicates such a practice (i.e., severe asthma).

To support deep breathing, it is wise to wear comfortable clothing and position the body in a way that leaves the respiratory system open and free to flow. Standing, sitting with the torso upright, or lying down on your back are all good positions – choose whatever is comfortable and/or accessible in a given moment. Start with an inhalation preferably through the nose, but through the mouth is fine if that is more comfortable, and draw the breath deep into your belly allowing your abdomen to expand followed by the natural inflation of your lungs and chest. Focus on keeping the breath slow and even and using the belly to gently and slowly draw air in and then gently and slowly compress air out either through the nose or mouth and repeat this cycle about 5-10 times as often as you wish.

The key is to go gently and slowly rather than forcing or pushing and always stop if you feel dizzy or faint. Some people find it helpful to count their inhale and then double the count for their exhale as an aide to smoothen and lengthen their breath. This is certainly not necessary, but worth experimenting with to discover whether or not it is helpful for you.

Kids are certainly not immune to stress and may benefit from a deep breathing practice too. For younger children, it is sometimes recommended that they learn to breathe from their belly initially by lying down on the floor and placing a favorite stuffed animal on their abdomen, which they can watch rise and fall with each breath.

Deep breathing – it's free, easy to do, can be done in almost any place or time, and has the potential to reduce stress and contribute to your overall well-being. I encourage you to give it a try and bid you peace in these stressful times.



Featured Research

Yale Autism Center of Excellence - Prenatal and Neonatal Studies

This Autism Center of Excellence (ACE) study will help our understanding of the fundamental changes that occur in the brains of fetuses and newborns with high and low familial likelihood for ASD.

We are recruiting mothers (24 weeks pregnant or fewer) with older children who have and do not have ASD. Participation includes two MRI scans during pregnancy, one MRI of your infant at 4 weeks of age, and follow-ups through 24 months that assess social, adaptive, cognitive, language, and attentional development in your child. If you are over 24 weeks pregnant or have just had your baby, you can still participate in the neonatal portion of the study!



What is an MRI and is it safe for my baby?

An MRI is a safe imaging technique that uses a magnet --no radiation or contrast dyes. MRIs have no known side effects for mom or baby.

What is the MRI like for my baby?

Before the MRI, you will feed, swaddle, and rock your baby. This way, during the scan, your baby will simply sleep!

Interested in Participating?

Call our Program Manager, Karen Franchi: (203) 764-5933
or email karen.franchi@yale.edu



HELLO TO

OUR NEW STAFF MEMBERS

Mariana Torres-Viso, PsyD, BCBA-D, BS is an Assistant Professor of Clinical Child Psychology at the Child Study Center. She is a licensed psychologist and Board-Certified Behavior Analyst. Dr. Torres-Viso earned her bachelor's degree in Human Development at Cornell University, and her doctorate degree in Clinical Psychology at the Graduate School of Applied and Professional Psychology at Rutgers University. Moreover, Dr. Torres-Viso completed her doctoral internship at the Kennedy Krieger Institute at Johns Hopkins School of Medicine.



Dr. Torres-Viso specializes in the assessment and treatment of individuals with Autism Spectrum Disorder and other neurodevelopmental disabilities, with a particular emphasis on evidence-based behavioral and developmental frameworks of intervention. Furthermore, expanding access to clinical care, and doing so in a culturally sensitive manner, has been a guiding principle behind her professional endeavors. Therefore, Dr. Torres-Viso holds a strong commitment towards data-driven and evidence-based training and capacity building of caregivers and clinicians working with children with Autism Spectrum Disorder.



Karen Franchi is the Program Administrator of the Yale Social and Affective Neuroscience of Autism Program, and the Yale Toddler Developmental Disabilities Clinic. Karen is responsible for the day-to-day management of the programs, collaborating with the Project Directors and Investigators, Clinicians and Research Fellows to ensure smooth integration of the ongoing projects. Karen works closely with the Yale Child Study Center's Business Office, the Yale Grant and Contract Administration, the Yale Human Investigation Committee, and the NIH officers as needed.

She conducts outreach to community partners and potential participants and serves as a central source of information to both families and members of the clinical teams. Karen has more than 20 years of experience in management and spent nearly a decade working with families within the State of Connecticut Judicial Branch.

GOODBYE TO

OUR SECOND YEAR FELLOWS

Join us in wishing our departing Postgraduate Fellows well as they continue their research journeys!

Hannah Feiner

In the fall, Hannah will begin a doctoral program in Communication Sciences and Disorders at Northwestern University. She plans to work under the mentorship of Dr. Megan Roberts at the Early Intervention Research Group, studying parent-mediated language intervention for children with developmental disabilities. Hannah is specifically interested in researching the design and implementation of effective language interventions for bilingual children on the autism spectrum. While completing her PhD, Hannah plans to also receive her clinical certification in speech-language pathology.

Maureen Butler

Maureen will be starting a research coordinator position at Northwestern's Neurodevelopmental Disabilities Lab under the mentorship of Dr. Molly Losh. There she will investigate prosody, neural processing of sound, and family genetic factors in children and parents with autism spectrum disorder and fragile X syndrome.

Diogo Miguel Goncalves Fortes

Diogo will be working with the Autism Biomarkers Consortium for Clinical Trials, a multicenter research study aiming to develop reliable and objective measurements of social function and communication in people with autism. He will be assisting with data quality control and analysis, while applying to graduate school for 2022 entry.



For the Little Ones:

It's Coloring Time!





Family Corner

We Want to Hear From You!

Let us know how your family is doing! You can send us updates, pictures, and cards to:

Yale Child Study Center
Developmental Disabilities Program
Social Neuroscience Laboratory
300 George St. Suite 900
New Haven, CT 06511

New contact info? Let us know with an email to sanalab@yale.edu

Read about our study on attention to mouths and language learning in baby siblings of children with autism:

[Infant siblings of autistic children miss language-learning clues](#)

"It has been a pleasure being a part of the ACE prenatal and newborn studies. The staff and clinicians are extremely knowledgeable, kind, and helpful. The visits get more and more fun for my son as he gets older, and I find it interesting to learn about his development at each visit."

Deanna Macris, Autism Center of Excellence Parent



SANA

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 medicine.yale.edu/lab/chawarska/

Interested in Participating?

Call our Program Manager, Karen Franchi: (203) 764-5933
or email karen.franchi@yale.edu

