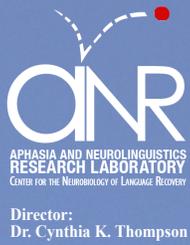


AUTUMN 2013 NEWSLETTER



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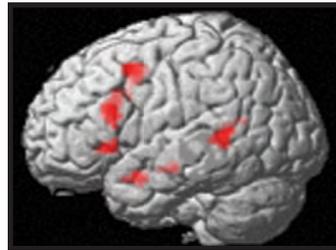


Functional Magnetic Resonance Imaging and Aphasia

Functional magnetic resonance imaging (fMRI) is a neuroimaging technique that detects changes in blood flow in the brain. When people perform activities like naming pictures, the parts of the brain involved “light up”. This is because active parts of the brain require greater energy, which is supplied by the blood flowing through the brain.

In essence, fMRI allows researchers to understand the inner workings of the brain by identifying parts of the brain involved in a wide range of behaviors. For example, researchers ask people to listen to sentences and look at pictures of people doing things during fMRI. Participants are asked to

push a button if the sentence matches the picture. These kinds of experiments help researchers understand which parts of the brain are involved in understanding sentences. You’ve probably seen scans from fMRI studies (like the one shown here):



the red spots show the areas of the brain most active when people listen to complex sentences (from Thompson et al., 2010).

In addition to identifying which parts of the brain are involved in specific behaviors, fMRI

can also be used to study neuroplasticity, which is the brain’s ability to reorganize itself by forming new neural connections. By scanning a person performing the same task at several points in time, researchers can see how the patterns of activation (i.e., colored spots) change over time. Several fMRI studies from the Aphasia and Neurolinguistics Research Laboratory have found that language treatment, specifically that aimed to improve sentence production and comprehension in people with aphasia, leads to changes in the brain.

In April 2013, the Aphasia and Neurolinguistics Research Laboratory was awarded a \$12 million dollar grant to start

the Center for the Neurobiology of Language Recovery (CNLR). The CNLR’s goal is to better understand brain recovery after stroke by studying the relationship between changes in language (with and without language treatment) and changes in brain in over 200 people with aphasia over the next five years. CNLR studies also will look for biomarkers of recovery using fMRI and other neuroimaging methods. This is a collaborative project with researchers at Northwestern, Boston, Harvard, and Johns Hopkins Universities. For more information about fMRI and/or the CNLR, please contact us or visit our website: CNLR.northwestern.edu.



Center for the Neurobiology of Language Recovery (CNLR) on the Web

The new CNLR website features information about the center and its current research projects, as well as information about the labs and researchers involved in the projects. Additional in-

formation about aphasia and resources for patients and caregivers is also provided. Please visit us at CNLR.northwestern.edu to see more.

In addition to the CNLR website, we also

created a Facebook page for the center. The page features an overview of CNLR’s mission, news and updates, and a way for followers to post comments and share with others. The CNLR Facebook

page can be found at www.facebook.com/CNLR.aphasia.

Please feel free to share these new websites with anyone who you think could benefit from our research. Thank you!

COMMUNITY AND CURRENT EVENTS

COMMUNITY EVENTS:

Flower bulb Festival:

(Oct. 4-6 at the Chicago Botanic Garden, free except for parking)

Find more than 200 varieties of bulbs, gourmet foods, gardening demonstrations, live music, and kids' activities at the Fall Bulb Festival at the Chicago Botanic Garden in Glencoe.

Chicago International Film Festival:

(Oct. 10-24 at the AMC River East 21 theater)

The Chicago International Film Festival features more than 100 short & full-length films from 50 countries, free panel discussions, and opening night gala.

Chocolate Festival:

(Oct. 18-20 at Navy Pier)

Vendors offer samples to taste plus creations to purchase at the Chicago Fine Chocolate and Dessert Show. It includes seminars, pastry demonstrations, and a beer and wine pavilion at Navy Pier.

Humanities Festival:

(Oct. 13&20 and Nov. 1-10)

A series of lectures, concerts, and films that help people explore the human condition. This year's theme is Animal: What Makes Us Human. (<http://chicago-humanities.org/blog/mattibunzl/fall-2013-animal>)

Magnificent Mile Lights Festival:

(Nov. 23, free)

The Magnificent Mile Lights Festival begins midday with

family events at Lights Festival Lane in Pioneer Court. The 5:30 p.m. tree-lighting parade starts at Oak Street and runs down Michigan Avenue to the Chicago River, ending in fireworks.

Handel's Messiah:

(Dec. 7 & 21)

It's a holiday tradition to hear the joyful Handel's Messiah sung by the Apollo Chorus of Chicago. (<http://apollochorus.org/index.cfm?pid=2>)

Nutcracker Ballet:

(Dec. 6-28)

Joffrey Ballet's production of The Nutcracker is a holiday tradition that features brilliant costumes, fanciful scenery, entrancing storytelling and Tchaikovsky's famous score played by the Chicago Philharmonic at the Auditorium Theatre.

North Shore Choral Society,

a 150 voice chorus will present three concerts this year. (<http://www.northshorechoral.org/nscs/>).

Fall Concert: "Rejoice! Festive Music for Chorus and Organ" (Nov. 17th)

The North Shore Coral Society, under the direction of Dr. Julia Davids, will be joined in concert by Chicago keyboard virtuoso David Schrader (Glenview Community Church, 1000 Elm Street).



IN THE NEWS:

Chinese individuals may have a higher risk of stroke than Caucasians according to a recent study from the University of Edinburgh in Scotland. The study also found a younger age of stroke onset in Chinese populations (<http://www.sciencedaily.com/releases/2013/07/130715164716.htm>).

Determine the health of your brain by looking at your eyes. Scientists have found that the small blood vessels behind the eyes may reflect the condition of your brain's blood vessels. (<http://www.foxnews.com/health/2013/07/14/what-your-eyes-say-about-your-brain/>).

UC Davis researchers discover a new weapon against stroke. Using mice models, scientists have observed the brain-protecting abilities of certain astrocytes (neural cells that transport key nutrients across the blood-brain barrier (http://www.eurekalert.org/pub_releases/2013-07/uoc--anw072213.php).

Researches study what our "inner speech" says about our brains. Scientists at the University of British Columbia find that our inner voice uses the same system that is primarily used for processing external speech. (For the full story, visit: <http://www.sciencedaily.com/releases/2013/07/130716080028.htm>).

The family of a Florida man who was arrested while having a stroke was recently awarded a \$1 million settlement. Allen Hicks, 51, was arrested in May 2012 for obstructing a police officer when he did not respond to commands to exit his car. After spending the night in a prison cell, Hicks was taken to a hospital where he was diagnosed with having suffered an ischemic stroke (http://www.huffingtonpost.com/2013/07/15/if-you-have-nothing-to-hi_n_3600564.html).

A Brooklyn hospital is using a groundbreaking procedure on stroke patients. The procedure involves threading a small catheter into the patient's leg and up to the brain to suction clots within a couple of minutes (http://www.ny1.com/content/ny1_living/health/185461/brooklyn-hospital-using-groundbreaking-procedure-on-stroke-patients).

Women who suffer migraines with aura may be at risk for all major stroke subtypes. The cohort study found that the link between stroke risk and migraines with aura was significantly greater than links with other common factors, such as smoking, high blood pressure, diabetes, and a family history of heart attack (<http://www.pharmacytimes.com/news/Migraine-With-Aura-Identified-as-Strong-Risk-Factor-for-Stroke>).

APHASIA SUPPORT GROUP:

NEW COORDINATORS:

Brianne Dougherty

Brianne Dougherty is one of the new research technicians in the Aphasia and Neurolinguistics Research Laboratory at Northwestern University. Before joining the Aphasia Lab, Brianne earned her Bachelor's degree in Neuroscience from the University of Illinois at Chicago (UIC) where she worked as a research assistant in the Memory Laboratory. Brianne hopes to continue to pursue her interests in language and the brain and eventually earn her Ph.D. She grew up on the northwest side of Chicago where she currently still resides. In her spare time she loves to go to concerts, watch movies, and spend time with her boyfriend. She is looking forward to co-hosting the Aphasia Support Group this year, with Jim Kloet and Stephanie Gutierrez.



Stephanie Gutierrez

Stephanie Gutierrez is one of the new research technicians in the Aphasia and Neurolinguistics Lab, who will also be co-hosting the Aphasia Support Group with Jim Kloet and Brianne Dougherty. She earned her Bachelor's degree in Psychology from the University of Chicago, where she worked as a research assistant in the Memory Research Lab. She is looking forward to continuing her studies in language processing and hopes to eventually become a certified Speech-Language Pathologist. She is from the southwest side of Chicago, and currently lives in Ravenswood. She enjoys swimming, baking, crafting, and dancing at music festivals, but above all, she loves her Chicago Bulls!



Caitlin Radnis

Caitlin Radnis is one of the new research technicians in the Aphasia and Neurolinguistics Research Laboratory. She started working in the lab as a work-study student while finishing her Bachelor's degree in Cognitive Neuroscience here at Northwestern. Caitlin is interested in brain damage and the mind and hopes to pursue a career in the medical field. In her spare time she enjoys reading, cooking and watching Netflix marathons.



PREVIOUS MEETINGS:

This summer we welcomed some new families to the group. We also welcomed two new Support Group Co-Leaders, Brianne Dougherty and Stephanie Gutierrez, who help run the meetings with Jim Kloet.

In June, Ellen Fitzmorris ran an informative workshop on different iPad apps that can be useful for people with aphasia. There is a copy of her presentation about this on the Support Group's Facebook page under the "Files" tab. (www.facebook.com/groups/Northwestern-AphasiaSupportGroup).

In July, we discussed how important it is to raise awareness about aphasia & stroke in the general public. We also talked about the "After

Words" screening that was held at Northwestern. One of the support group members shared an image of his brain scan with the group. This helped facilitate a discussion about the recovery process and some people shared tips and tricks that have helped them improve their communication skills.

In August, Jim shared pictures of his brain as well some images of other brains with lesions of different sizes and locations. We talked about travel plans and how aphasia can impact traveling.

In September, we held a showing of "Aphasia—Hope is a Four Letter Word". This was followed by a short discussion.

UPCOMING MEETINGS:

In November, some representatives from the Aphasia Recovery Connection (ARC) will give a presentation.

In December, we will be hosting our annual Holiday Potluck so please feel free to bring your favorite appetizer or dessert!

There will not be a meeting in January. Meetings will resume in February.

October 12th

November 9th

December 14th
(Holiday Potluck Party)

PUBLIC TRANSPORTATION:

The lab is located three blocks east of the Noyes Stop on the Purple Line.

CTA: 1-888-968-7282
www.transitchicago.com

RTA: 1-312-836-7000
www.rtachicago.com

Aphasia Support Group Meetings are held the second Saturday of the month from 10:30am to 12:00pm in Room 3-417 (3rd floor of the Frances Searle Building - 2240 Campus Drive). Please contact Mary Cosic for more information at 847-467-7591 or m-cosic@northwestern.edu

Do you have a story to tell?

We'd like to know!

If you would like submit a piece to be featured in an upcoming ANRL newsletter, please contact Stephanie or Brianne at 847-467-7591. Possible topics include: tips and advice, hobbies (e.g. cooking, crafts, etc.), health, research, and your personal experience with aphasia.

ACTIVITIES CORNER

HINK PINKS

Hink Pinks are fun rhyming word riddles. The answer to the riddle is a pair of words that rhyme with each other.

Example Clue: 'Large, Feline'

Start off by thinking of alternative words for 'large' (e.g. big, fat, wide). Next, think of some alternative words for 'feline' (e.g. cat, lynx, tiger). Find two that rhyme and put them together. The answer to this one is "Fat Cat".

Clues:

- 1. Scalding, Cauldron 1. _____
- 2. Skinny, Smile 2. _____
- 3. Short, Sorrow 3. _____
- 4. Snail pace, Performance 4. _____
- 5. Single, 2000 pounds 5. _____
- 6. Tiny, sphere 6. _____

CATEGORY NAMING

How many items can you name from the following categories? For an added challenge, see how many you can name in one minute.

Seasonal Categories:

- 1. Cold Weather Clothing and Accessories
- 2. Foods served on Thanksgiving
- 3. Kids' Halloween Costumes
- 4. Types of Candy

General Categories:

- 1. Musical Instruments
- 2. Ocean Animals
- 3. Team Sports
- 4. Green-Colored Foods



AUTUMN WORD SEARCH

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T | H | A | N | K | S | G | I | V | I | N | G |
| E | S | N | O | V | E | M | B | E | R | I | W |
| W | O | R | C | E | R | A | C | S | E | N | N |
| G | P | A | C | O | R | N | E | H | B | F | O |
| D | O | L | V | S | E | N | Q | A | O | F | I |
| N | E | U | X | C | T | I | U | R | T | R | T |
| R | W | O | R | C | A | K | I | V | C | O | A |
| O | E | D | C | D | E | P | N | E | O | S | R |
| C | J | H | C | P | W | M | O | S | H | T | G |
| M | D | A | S | R | S | U | X | T | G | C | I |
| Y | V | Y | R | O | S | P | C | E | I | S | M |
| K | O | N | E | E | W | O | L | L | A | H | K |

- ACORN
- CORN
- CROW
- EQUINOX
- FROST
- GOURD
- HALLOWEEN
- HARVEST
- HAY
- MIGRATION
- NOVEMBER
- OCTOBER
- PUMPKIN
- SCARECROW
- SWEATER
- THANKSGIVING



Hink Pink Answers:

- 1. Hot Pot
- 2. Thin Grim
- 3. Brief Grief
- 4. Slow Show
- 5. One Ton
- 6. Small Ball