Dear Friends,

After a very rainy winter and spring, summer is finally upon us! This means it is time to re-connect with friends at our annual BBQ picnic. We hope you can join us on Wednesday July 12th at our usual spot in Nancy Boyd Park in Martinez from 12-3pm (see p. 4 for details).

Our Center continues to be busy with a number of research studies. The results of one of these studies confirms the importance of brain white matter pathways in language functioning and help to explain why some patients suffer deficits in their speech and language skills, while others do not. In addition, these findings have led us to our newly funded NIH grant, Neural Mechanisms and Recovery of Language Production Deficits in Aphasia, in which we are examining the contribution of these pathways during the process of recovery and whether other, healthy pathways change during recovery. In another recent study, we identified the fiber pathways in the brain that are critical for language comprehension. Previous studies of aphasia have focused primarily on the cerebral cortex (grey matter) of the brain, but we have found that the interconnections (white matter) between these regions are very critical to our ability to comprehend spoken language. These results were presented at conferences in New Orleans and San Francisco this past spring, and we received really good feedback from our colleagues.

We hope that you are doing well, and we hope to see you for the upcoming picnic. Stay cool and see you soon!

Sincerely,
Nina Dronkers, Ph.D.
Director
Center for Aphasia & Related Disorders
New Findings from Our Center: Short-Term Memory and Aphasia

by Selvi Paulraj and Juliana Baldo

The examination of brain-behavior relationships can further our understanding of brain functions and guide treatments for rehabilitation following injury to the brain. Aphasia is a disorder of the language systems resulting in impaired expression and comprehension of language. Short-term memory has been shown to be affected in individuals with aphasia and is even thought to contribute to language difficulties. One way of assessing verbal short-term memory is digit span tasks, where participants are asked to repeat a series of numbers in both forward and backward order (e.g., “Repeat after me: 5-2-7-8-6-3”). In contrast, visual (non-verbal) short-term memory is assessed with spatial span tasks, where participants are asked to point to a series of blocks in the same order and backwards order as the examiner.

Previous research has shown that individuals with aphasia have difficulty on digit span tasks, but findings about spatial span tasks in aphasia are not as clear. For this reason, we recently analyzed spatial span data from 56 individuals who had a left-hemisphere stroke, some of whom had aphasia. All individuals had some difficulty on the spatial span tasks, but people with aphasia performed similarly to people without aphasia on the forward order spatial span task. However, people with aphasia, especially those with Broca’s aphasia, had more difficulty on the backward order spatial span task.

(Continued on next page)
Next, we looked at participants’ brain MRI images to identify which brain areas are involved in spatial span performance. (see figure) We found that spatial span (both forward and backward) was associated with a back portion of the left half of the brain, an area called the left posterior superior temporal gyrus and inferior parietal cortex. This brain area is an important part of the language center of the brain and has also been found to play a role in digit span (verbal short-term memory). These findings suggest that parts of the brain involved in language in the left half of the brain also play a role in visual short-term memory.

This type of research is important because it helps us better understand what happens to language and short-term memory after an injury to the brain. It can also be helpful in developing treatments that are more appropriate for individuals with aphasia and short-term memory difficulties.
Stroke Support Group

When
Wednesday, July 12th, 12:00-3:00 p.m.

Where
Nancy Boyd Memorial Park, 261 Church Street
corner of Church St. & Valley Ave. in Martinez

What to bring
A dish or drink to share if you can.

Directions to Nancy Boyd Park:
♦ From Hwy 4, take Alhambra Ave. exit
♦ Go South on Alhambra Ave. for 3/4 mi.
♦ Turn left on Truitt Ave.
♦ Make first left on Valley Ave. to park
Health Tips

Super Fruits

What are they? Why do we call them so? Look at the list below, and you will find out.

- **Kiwi**: Tiny but Mighty! It is a good source of potassium, magnesium, Vitamin E & fiber. Its Vitamin C content is twice that of an orange.

- **Apple**: An apple a day keeps the doctor away? Although an apple has a low Vitamin C content, it has antioxidants & flavonoids which enhance the activity of Vitamin C thereby helping to lower the risks of colon cancer, heart attack and stroke.

- **Orange**: The Sweetest Medicine. Taking 2 - 4 oranges a day may help keep colds away, lower cholesterol, prevent and dissolve kidney stones, as well as lessen the risk of colon cancer.

- **Strawberry**: A Protective Fruit, strawberry has the highest total antioxidant power among major fruits and they protect the body from cancer.

- **Watermelon**: The Coolest Thirst Quencher. 92% of it is water, but it boosts our immune system, and fights cancer. It also contains Vitamin C and Potassium.

- **Guava & Papaya**: Top Awards for Vitamin C - They are the clear winners for their high Vitamin C content. Guava is also rich in fiber which helps prevent constipation. Papaya is rich in carotene, which is good for your eyes.

Tips on How to Stay Young!!

- Laugh and have fun. Don't be gloomy.
- Let bygones be bygones.
- Early to bed, early to rise, is healthy and wise.
- Stay lean. Being just 30% overweight is bad.
- Keep working, doing something you like.
- Be the boss of your own life.
- Too much medicine ruins your body.
- Exercise and eat less fatty foods.
- Do not worry about health and death, just get on with your life and enjoy it!!
A Cool Summer Tail

Word Search

Q I M W S B W S A L V N D D B T J Z Q E
D L R S U A Q R N K A D B U F S L R Z Q
E L V A R R W E I S A K R D E I M W B
L L O M T I K H M C N R E L Q B B X J R
Y D D C D C K T A N O I T A N R E B I H
Z S P D I N F A L W T S E N G R S X S S
X L Q L U G T E J Z M M A M M A L W I J
P V U V Y H A F Y N M R S M D O E R L D
W O L L O H I T Z L E I Y J E A T P Z C
X K N B R Q L O C T F B W N T S G N I W
H Z R A D E E L L G L W A S U J M E L T
D U H Y I K P E W R U H L V G V F N H L
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D O P X M S I M I P F E D E R O T G Y L
R A L O X Y M H X L N T G J H K X O L E
I C S Y P U C L P Q E C M X C R N P F W
B F M H S A Y G W M S E M W O B F U R I
M I G R A T E D V L A S Z X H Y B D L E
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<td>Sweat</td>
<td>Swim</td>
<td>Tail</td>
<td>Warm</td>
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Stroke Recovery Resources

Stroke and Aphasia Web Sites

American Stroke Association: www.strokeassociation.org
National Stroke Association: www.stroke.org
StrokeNet: www.strokenet.org
Aphasia Software Links: http://www.aphasiasoftwarefinder.org/

Stroke Support Groups in East Bay

Stroke Support and Communication Group at VA Martinez
150 Muir Road (126R), Martinez, CA 94553
Contact: Juliana Baldo, (925) 372-4649, meets every Wednesday 1pm-3pm in Building R4
Email: juliana@ebire.org

California State University East Bay Aphasia Group
Mailing Address: Cal State East Bay, Speech, Language & Hearing Clinic, MB# 1097A
Communicative Sciences and Disorders, 25800 Carlos Bee Blvd., Hayward, CA 94542
Contact: (510) 885-3233.
Email: ssimrin@csuhayward.edu

Aphasia Center of California
200 Grand Ave., Oakland, CA 94610 Contact: Roberta Elman, Ph.D., CCC-SLP, BC-NCD, (510) 336-0112.
Email: RJElman@aol.com Website: www.aphasiacenter.org

Stroke Support Group of Contra Costa County
Mt. Diablo Medical Center, Concord, CA 94520, or John Muir Medical Center, 1601 Ygnacio Valley Rd., Walnut Creek, CA 94596
Contact: Ann Dzuna, B.S., MBA, (925) 376-6218. Email: ADZUNA@COMCAST.NET

Stroke and Head Injury Support Group
Washington Hospital, Washington West, Anderson Auditorium C, 2000 Mowry Ave., Fremont, CA 94538
Contact: Karen Benedetti, (510) 818-6253
Mailing Address: Karen Benedetti, Washington Hospital, Rehab Dept., 2000 Mowry Ave., Fremont, CA 94538-1716

Stroke Support Groups in North Bay

Interpersonal Skills - Stroke Support Group
College of Marin, Disabled Student Services Program, 835 College Ave., Kentfield, CA 94904.
Contact: Maureen Green, M.A., CCC-SLP, (415) 457-8811 ext. 7702

Stroke Support Groups in SF/Peninsula


CHMC Community Health Resource Center 2100 Webster Street, San Francisco, (415) 923-3155.

Stroke/Communication Group/Acquired Brain Injury Program City College of San Francisco, John Adams Campus, DSPS Dept., 1860 Hayes St., San Francisco. Contact: Judi Kaplan, M.S., CCC-SLP or Joyce Foreman (415) 561-1005. E-mail: jforeman@ccsf.org

Exercise Program for Individuals with Physical Disabilities

Project Recovery, Family YMCA, Mt. Diablo Region, Contact: Libby Luxemberg (925) 687-8900.

Bay Area Clinical Trials

(Universities frequently run various clinical trials with individuals who have experienced a stroke. You may find one you are interested in learning more about/participating in. We do not promote any organization’s clinical trials, but offer these for your information only.)

UCSF: http://www.ucsfhealth.org/clinical_trials/index.html
Stanford: http://med.stanford.edu/clinicaltrials/
UC Davis: http://www.ucdmc.ucdavis.edu/medicalcenter/clinicaltrials/
Aphasia News
Center for Aphasia and Related Disorders
150 Muir Road 126 (R)
Martinez, CA 94553

http://www.ebire.org/aphasia

Newsletter Information
If you would like to receive this newsletter or you have comments/suggestions, e-mail Juliana at juliana@ebire.org, call her at (925) 372-4649 or write to:

Center for Aphasia and Related Disorders
VA Northern Calif. Health Care System
150 Muir Road 126R
Martinez, CA 94553

We welcome your comments and questions!

Center Members & Affiliates
Nina Dronkers
Juliana Baldo
And Turken
Krista Schendel Parker
Brian Curran
Janet Patterson
Carl Rudy
Stephanie Ries
Tim Herron
XJ Kang
Vitoria Piai
Selvi Paulraj
Maria Ivanova
Rita Barakat
Kevin Dalziel
Matt O’Neal
Allyson Zhong
Jet Vonk
Elke DeWitte

We would also like to thank the members of the Stroke Support Group and their families, the Speech Pathology staff, and all of our wonderful research participants.

The Center for Aphasia and Related Disorders is supported by the VA Northern California Health Care System, the VA Medical Research Program, the National Institutes of Health, and the University of California at Davis, as well as through generous donations from private foundations and individuals. Please feel free to contact Dr. Dronkers at (925) 372-2925 if you would like more information.