

Center for Aphasia



and Related Disorders

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Aphasia News

Summer is Here!

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Have you Heard?

The annual Summer Picnic is July 23rd!

See page 5

Greetings Friends,

I hope this summer finds you happy and healthy. We are as busy as ever here at the Center. We recently received funding in the form of a grant from the National Institutes of Health to study the brain basis of speech and language, and we are busy working on that project. We are grateful to everyone, staff and research participants alike, who make this research possible and enable us to broaden our understanding of aphasia.

As usual, we have some greetings and some good-byes to make. We have been very lucky to have Courtney Jacks working with us. She is just finishing her Master's in Linguistics at UC Davis, but then she is leaving at the end of the summer to pursue graduate and clinical work in speech pathology at Vanderbilt University in Tennessee. She has been a real pleasure to work with, and we will miss her. Good luck Courtney!

We also have a new intern, Sharon Bean, who has been running our weekly speech group as well as working at the Center. Sharon is a great addition to our team and is a wonderful group leader. She is finishing up her Master's in Speech Pathology, and we hope to have her with us for a long time to come!

Our annual summer picnic will take place on Wednesday, July 23rd. Your invitation is on page five. We hope you will be able to attend!

We look forward to seeing you soon, at the picnic or at the Center!

Sincerely,

Nina Dronkers,
 Director, Center for Aphasia and Related Disorders
 VA Northern California Health Care System

Aphasia Profile: Conduction Aphasia

By David Wilkins, Ph.D.

Imagine being asked to repeat the sentence “The pastry cook was elated”. What skills go into reproducing this exactly as the tester said it? Assuming that your hearing is fine, you still have to keep a memory trace of the sentence (a memory of all the words in their correct order), and then you have to use that memory to access the words to be spoken. Once you’ve selected those words, you then have to send orders to the tongue and mouth, and other speech organs, and get the sounds and words ordered and pronounced correctly. There are many places along the line where repetition could go wrong.

One of the language skills we test when assessing aphasia is the ability to repeat words and sentences.

Repetition problems are a hallmark of *conduction aphasia*. People who are diagnosed with *conduction aphasia* are basically fluent and have relatively good comprehension. However, they do have a striking problem with repetition compared to how good their fluency and comprehension are.

A person with conduction aphasia might repeat ‘The pastry cook was elated’ as “The baker was happy”. In this case it seems pretty clear that the meaning of the sentence was correctly interpreted, but the person could not hold and reproduce the exact words. Notice that words like ‘baker’ and ‘happy’ are far more common and frequent than words like ‘pastry cook’ and ‘elated’. Sentences composed of frequent and common words, like ‘The telephone is ringing’, are often repeated much more accurately than sentences like ‘The pastry cook was elated’, even though the two sentences are roughly the same length. So, the frequency of words is one factor that is known to affect how well a person will repeat something.

Actually, in such cases of good repetition of sentences with common high frequency words, it’s difficult to be sure whether the person is really ‘repeating’ something for which they have retained an exact ‘memory recording’. Instead, the person with conduction aphasia may be taking the sentence

straight to its meaning interpretation and then reproducing the sense of the sentence in frequently occurring words. In other words, they may be reproducing the high frequency words that they heard, but only because they understood the basic concepts the words convey. They then reselect those words because they are the most common way to express the concepts.

“Repetition problems are a hallmark of conduction aphasia”

The role of meaning and interpretation in conduction aphasia is partly revealed by the fact that the hardest words for people with conduction aphasia to repeat are typically made-up nonsense words like ‘meppen’. Not only are such words by definition infrequent and uncommon, they also have no meaning. For that reason, hearing the word does not activate any basic concepts, and so cannot give rise to a paraphrase or synonym, let alone reproduction of the same word.

Length of a word or sentence can be a factor for some people with conduction aphasia. Consider the sentence ‘Pack my box with five dozen jugs of liquid vener.’ A person with conduction aphasia might say “Pack my, um, uh, I’m sorry I can’t remember it.” In this case, they have a good memory for the first couple of words of the sentence, but can’t call up the memory of the whole, long complicated string of words. Even people who often translate the meaning of a sentence into their own words, might not be able to reproduce the whole meaning unit. For instance, they might say, “Fill my bags with, could you repeat it for me please?” This suggests that the longer and more complicated the sentence, the harder it is to both retain all the words in memory, and to get the complete meaning of the sentence.

Sometimes people diagnosed with conduction aphasia have repetition problems because they get stuck on the pronunciation of one of the early words and then lose the whole sentence. For ‘The pastry cook ...’, a person might say, “The pantry cook, I mean, the mastery, ohhh, the pastry, nooo, I don’t know”. Here something seems to be going wrong in getting the exact pronunciation of the word ‘pastry’ out. The person knows the word they want to say,

Aphasia Profile: Conduction Aphasia (cont'd)

but seem to either be selecting words that sound the same, or are substituting a wrong sound for a correct sound in the word.

In fact, although fluency is generally good, many researchers observe that people diagnosed with conduction aphasia not only make pronunciation errors when they are repeating something they've heard, but also when they are speaking, reading aloud, or naming. The type of pronunciation problems that are observed tend to involve the swapping, replacement or jumbling of sounds or syllables in words or phrases.

People with conduction aphasia almost invariably attempt to correct their mispronunciations. This often gives the impression of someone going through the tip-of-the tongue phenomenon, where a person has a sense of the particular word she wants, and she's struggling to get that exact word out. She knows when an attempt is not right, but keeps on making attempts until she produces the word she has been searching for. For instance, a person with conduction aphasia was asked to name a line drawing of a 'cactus' and responded by saying "gaktus, no, gaksus, gackone, no, cackus, little screwed up there, cack , cactus! cactus!". Some researchers believe that language behavior of this sort indicates that a certain people diagnosed with conduction aphasia have a general disruption to the system responsible for the organization of language sounds in words, phrases, and sentences.

Like most aphasic syndromes, people diagnosed with conduction aphasia show a very wide range of language behaviors. Although controversial, some researchers often divide people with conduction aphasia into two groups. These two groups reflect different parts of the complex repetition process we discussed above. One group of conduction aphasics is thought to primarily have a problem at the level of holding a memory trace for the exact words that have been said to them. In technical terms this is considered a problem with verbal working memory. The other group of conduction aphasics is thought to have their primary problem at the level of getting the

sounds together for reproducing the words they've heard. The former group is thought to have a receptive memory problem reflecting damage to a storage component of the language processing system. By contrast, the latter group is thought to have a production problem reflecting damage to that part of the language processing system concerned with the perception and production of language-specific speech sounds.

The labels attributed to the two types of conduction aphasia are 'repetition conduction aphasia' and 'reproduction conduction aphasia' respectively. Researchers who maintain this division, acknowledge that some people diagnosed with conduction aphasia fall into both groups. To the extent that these divisions are accurate, there is no single effective rehabilitation treatment for conduction aphasia. Instead the clinician must attempt to identify the exact source (or sources) of

the problem and then proceed to work on the relevant component or components that have been compromised.

Of course, we are not usually asked to repeat long or complicated sentences in our daily lives. However, the sources of the repetition problem for people with conduction aphasia regularly lead to some relatively minor problems with both comprehension and speech. If there is something that you really want a person with conduction aphasia to understand, then the rule of thumb is to keep your sentences short and simple. Further, when people with conduction aphasia are experiencing the frustrating problem of not getting the right word out, then they should be encouraged to write down the word they are trying to say.

If you have more questions about Conduction aphasia, please contact David Wilkins at wilkins@ebire.org or at 925-370-4010.

"If there is something that you really want a person with conduction aphasia to understand, then the rule of thumb is to keep your sentences short and simple."

Face to Face with Juliana Baldo, Ph.D.



Fred has been an active participant in our research program for several years. He has been invaluable, both as a participant and as a friend. Fred graciously agreed to talk to me about life after his stroke.

JB: Where were you born?

Fred: Missouri.

JB: Why did you move to California?

Fred: I was in the Army 4 years overseas. I started to work right away, and I worked the same job all day for 40 years.

JB: What work was that?

Fred: Berkeley

JB: At Lawrence Berkeley Laboratory?

Fred: Yeah. Met my wife.

JB: You met your wife there at work?

Fred: Yeah.

JB: Where do you live?

Fred: Always in Pleasant Hill.

JB: Do you have children?

Fred: Three sons, all married.

JB: Do you have grandkids?

Fred: Michael had three boys, 2nd had two girls and one boy.

JB: So you have six grandkids?

Fred: At least [laughing]?

JB: Are they close by?

Fred: All in California. I see them all the time.

JB: When did you have a stroke?

Fred: It was seven years ago. I remember very well.

JB: Do you feel like speech therapy helped you?

Fred: No.

JB: And do you keep active now?

Fred: I keep pretty busy.

JB: Do you garden?

Fred: Yes, water and that sort of thing. I got 12 new growing tomatoes. I had a bunch of potatoes, and I cut them all up and I eat them. I got a new place like this [draws blueprint of shed].

JB: What's in the shed?

Fred: That. [points at computer]

JB: Do you use the computer to go on the Internet?

Fred: No — for fun.

JB: What else do you like to do?

Fred: I have a big shop.

JB: A workshop?

Fred: Yes. I had about 90 [birdhouses]. I got about 10 [model] boats. I paint.

JB: Yes, we have some of your artwork hanging in our center (see artwork inset). So, you're still able to do different hobbies and activities?

Fred: Yeah. She [caregiver] can help me do some things. I can't do that [drive] — sure wish I could.

JB: Is there anything else you'd like people to know?

Fred: I got a big dog. ■

Food!

Friends!

Singing!

Fun!

Stroke Support Group Annual Summer Picnic!

When: Wednesday, July 23 12:30-3:00 p.m.

*Where: Nancy Boyd Park in Martinez
(directions below)*

What to bring: a dish or drink to share

Questions: Call Sharon (925) 372-2205

Directions to Nancy Boyd Park:

From Highway 4, take the Alhambra Ave. exit

Go South on Alhambra Ave. for 3/4 mile to Truitt Ave.

Go left on Truitt Ave.

Make first left on Valley Ave.

You will see park in front of you once you hit Church St.

Tips for Travel by Jenny Ogar

“As a traveler with a disability, I know the ability to follow through with one’s dream is not always an easy thing. The task of setting out in an unfamiliar city in order to discover it is daunting. But if one is armed with advanced local knowledge, good humour and a sense of adventure, things are made much easier and the end result is a fabulous experience.”

■ *Matt Laffan, from “Traveling Beyond the Front Gate”*

What follows are traveling tips for people with aphasia – some are specific advice for people with aphasia, or those traveling with wheelchairs, others are more general traveling tips. We hope you find them useful. Information was gleaned from a variety of sources. Please note that references to services, websites, books and other products are not meant to serve as endorsements.

1. For those who have difficulty speaking, they may want to pack the “International Travelers Point and Conversation Guide,” a small booklet that allows one to communicate through pictures. It includes six main topics: services, shopping, sports & entertainment, transportation, accommodation and food items. While it is designed to overcome foreign language barriers, it has been deemed suitable for use by people with speech problems by the Society for Accessible Travel & Hospitality. To order a copy, ArnMoor Publishing at (407) 855-5934.

2. Bring along any communication book you may use at home. Make sure that you carry a card explaining what aphasia is and what it is not. Include maps of the areas that you will be visiting so that you can easily get directions.

3. Make sure any potential medical issues are taken care of ahead of time:

- Make an appointment for a medical check-up before you go on vacation.
- A doctor’s letter to take abroad can be helpful if illness occurs. It should include details of past and present medical conditions and a list of current medications.
- Make sure you have adequate medical insurance to cover you while on vacation.
- Take ample supplies of your own medication.

4. Check hotel and medical facilities for wheelchair accessibility before booking your trip.

5. Advise the airlines of special medical, dietary and mobility requirements. They can arrange for transportation around the airport if notified in advance. They should provide special aisle-accessible wheelchairs while on-board your flight.

- If you’re planning to rent a car, make sure you bring your disability parking card with you – other countries may honor it, check with a travel agent to be sure.
- There are many sources of information for those traveling with wheelchairs. Some of the best advice comes from people who have done it. Two websites that provide information as well as places where you can read personal stories or post specific questions are: 1) Society for the Advancement of Travel for the Handicapped at: www.sath.org and, 2) Lonely Planet at: <http://thorntree.lonelyplanet.com>

6. Travel Lightly

Make your vacation that much easier by bringing the least amount of luggage possible. You may want to check with a local travel store to see if they offer tips for packing lightly.

-- Many thanks to Arlene and Barry Matthews for their helpful suggestions

Game Zone



Aphasia News

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&
The Speech Pathology staff

Newsletter Information

If you would like to receive this newsletter or you
have comments/suggestions, e-mail Jenny at
jenny.ogar@med.va.gov
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We welcome your comments and questions!