

Types of Aphasia

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Language is much more than words. It involves our ability to recognize and use words and sentences. Much of this capability resides in the left hemisphere of the brain. When a person has a stroke or other injury that affects the left side of the brain, it typically disrupts their ability to use language.

Through language, we:

- Communicate our inner thoughts, desires, intentions and motivations.
- Understand what others say to us.
- Ask questions.
- Give commands.
- Comment and interchange.
- Listen.
- Speak.
- Read.
- Write.



A stroke that affects the left side of the brain may lead to aphasia, a language impairment that makes it difficult to use language in those ways. Aphasia can have tragic consequences.

People with aphasia:

- May be disrupted in their ability to use language in ordinary circumstances.
- May have difficulty communicating in daily activities.
- May have difficulty communicating at home, in social situations, or at work.
- May feel isolated.

Scientists and clinicians who study how language is stored in the brain have learned that different aspects of language are located in different parts of the left hemisphere. For example, areas in the back portions allow us to understand words. When a stroke affects this posterior or back part of the left hemisphere, people can have great difficulty understanding what they hear or read.

Imagine going to a foreign country and hearing people speaking all around you. You would know they were using words and sentences. You might even have an elemental knowledge of that language, allowing you to recognize words here and there, but you would not have command of the language and couldn't follow most conversation. This is what life is like for people with comprehension problems.

People with comprehension problems:

- Know that people are speaking to them.
- Can follow some of the melody of sentences — realizing if someone is asking a question or expressing anger.
- May have great difficulty understanding specific words.
- May have great difficulty understanding how words go together to convey a complete thought.

Wernicke's Aphasia (receptive)

People with serious comprehension difficulties have what is called Wernicke's aphasia and:

- Often say many words that don't make sense.
- May fail to realize they are saying the wrong words; for instance, they might call a fork a "gleeble."
- May string together a series of meaningless words that sound like a sentence but don't make sense.
- Have challenges because our dictionary of words is shelved in a similar region of the left hemisphere, near the area used for understanding words.

Broca's Aphasia (expressive)

When a stroke injures the frontal regions of the left hemisphere, different kinds of language problems can occur. This part of the brain is important for putting words together to form complete sentences. Injury to the left frontal area can lead to what is called Broca's aphasia. Survivors with Broca's aphasia:

- Can have great difficulty forming complete sentences.
- May get out some basic words to get their message across, but leave out words like "is" or "the."
- Often say something that doesn't resemble a sentence.
- Can have trouble understanding sentences.
- Can make mistakes in following directions like "left, right, under, and after."

"Car...bump...boom!" This is not a complete sentence, but it certainly expresses an important idea. Sometimes these individuals will say a word that is close to what they intend, but not the exact word; for example they may say "car" when they mean "truck."

A speech pathologist friend mentioned to a patient that she was having a bad day. She said, "I was bitten by a dog." The stroke survivor asked, "Why did you do that?" In this conversation, the patient understood the basic words spoken, but failed to realize that the words of the sentence and the order of the words were critical to interpreting the correct meaning of the sentence, that the dog bit the woman and not vice versa.

Global Aphasia

When a stroke affects an extensive portion of the front and back regions of the left hemisphere, the result may be global aphasia. Survivors with global aphasia:

- May have great difficulty in understanding words and sentences.
- May have great difficulty in forming words and sentences.
- May understand some words.
- Get out a few words at a time.
- Have severe difficulties that prevent them from effectively communicating.

Remember, when someone has aphasia:

- It is important to make the distinction between language and intelligence.
- Many people mistakenly think they are not as smart as they used to be.
- Their problem is that they cannot use language to communicate what they know.
- They can think, they just can't say what they think.
- They can remember familiar faces.
- They can get from place to place.
- They still have political opinions, for example.
- They may still be able to play chess, for instance.

The challenge for all caregivers and health professionals is to provide people with aphasia a means to express what they know. Through intensive work in rehabilitation, gains can be made to avoid the frustration and isolation that aphasia can create.

Excerpted from the article "Talking Tough?", Stroke Connection May/June 2004 (Last science update March 2013)

For most, a stroke has a startling and life-altering effect on both the survivor and family members. All involved find themselves trying to come to terms with changes ranging from physical and sensory loss to loss of speech and language.

For many survivors, this loss or change in speech (dysarthria, apraxia) and language (aphasia) profoundly alters their social life. Ironically, research has shown that socializing is one of the best ways to maximize stroke recovery. Many experts contend that socializing should begin right away in the recovery process.

For many people living with aphasia, dysarthria or apraxia, the question then becomes: How can they socialize if they can't communicate the way they used to?

Here are some tips you can use to begin your recovery:

- Educate yourself about aphasia so you can learn a new way to communicate.
- Close family members need to be involved so they can understand their loved one's communication needs and begin to learn ways to facilitate speech and language.
- Experiment with strategies that facilitate social interaction during your rehabilitation.
- Many stroke survivors with communication challenges compensate by writing or drawing to supplement verbal expression, or use gestures or a picture communication book, or even a computer communication system.

Family members can facilitate communication with some simple techniques:

- Ask yes/no questions.
- Paraphrase periodically during conversation.
- Modify the length and complexity of conversations.
- Use gestures to emphasize important points.
- Establish a topic before beginning conversation.

Your environment also can help support successful socialization. Survivors have told us that it is easiest to begin practicing conversation in a one-on-one situation with someone they are comfortable with and who understands communication disorders.

In addition:

- Practice conversation in a quiet, distraction-free environment.
- As you become more confident, slowly add more conversational partners but continue to limit distractions such as background noise (music, other talking, TV).
- As you become more comfortable in one-to-one or small group interactions, explore less-controlled social situations with your speech-language pathologist, close friends and family, or other stroke survivors.
- Before you attend these gatherings, practice common things discussed in a variety of situations. For example, "How are you?" "It's been a long time since I've seen you."
- Practice a few statements about current events: "Did you see the basketball game?" or "Boy, we are having beautiful weather!"
- The more you practice this script, the greater your chances for success.
- Family members can prepare written cues, or organize pictures to promote interactions.

Once you achieve a level of comfort with close family and friends, you can start getting involved in the community by:

- Going to familiar large group activities such as church events or weekly social gatherings.
- Volunteering, returning to work or joining a new interest group.
- Remembering there's no rush. You should step into this stage at a comfortable pace.
- Attending a stroke support group.

Speakeasy is a conversational practice group in Cleveland, Ohio that meets weekly for two hours. Its members have a chance to practice their communication skills and gain confidence in their ability to communicate.

Speakeasy's tips for communicating with speech and language limitations in social settings:

- Try, try, try to get your point across no matter what anybody says or thinks.
- If waiters speak too fast when you go out to dinner, ask them to slow down.
- Try one-on-one conversations.
- When talking on the phone with a new person, repeat, "I'm a stroke survivor...can you understand me?"
- Make a point to go out and interact with people — socializing is an important part of recovery.
- No matter who tells you that you can't, it's always possible to keep recovering!

Remember that the speech and language changes stroke survivors experience can last a lifetime in some form or another. As life circumstances change, and your speech and language needs evolve, reevaluate what works and what has not worked in social situations. And continue to expand your horizons.

For more information on aphasia or to find an ASHA-certified speech-language pathologist in your area, call ASHA's Action Center at 800-638-8255 or visit ASHA on the Web at www.asha.org.

The following is excerpted from the article "Constraint-Induced Language Therapy for Aphasia," Stroke Connection Magazine, March/April 2006 (Last science update March 2013)

Constraint-induced therapies (CIT) have received a good deal of attention in the popular press recently.

An early researcher, Dr. Edward Taub, examined the notion that much of the long-term disability of stroke survivors resulted from a *learned* tendency to avoid using the impaired arm and hand, instead of focusing on compensating by using the remaining good limb. Taub proposed the term "learned non-use" to describe this process by which the survivor increasingly avoids using the impaired limb and is thus unable to capitalize on the value this limb might offer.

Principles of CIT

Based on this theory, Taub developed a set of treatment principles designed to counteract learned non-use and enhance the underlying residual abilities of the impaired limb. There were three treatment principles:

1. *Constraint* – avoid the compensation, in this case, by tying down the good limb (paw) of the animals he studied;
2. *Forced use* – require use of the impaired limb by placing the animals in circumstances where they needed to use it to achieve a meaningful goal (for example, acquiring food pellets); and
3. *Massed practice* – require the constraint and forced use every day and all day long.

In the last decade, Dr. Taub and many others have applied these three principles to humans. Results of these experiments suggest CIT is helpful in some cases. Emerging results of a randomized controlled trial by Dr. Steve Wolf of Emory University and others endorse the value of this approach at least with regard to arm rehabilitation.

CIT and aphasia

Recently these same CIT principles have been applied to aphasia rehabilitation. In speech therapy, *constraint* means avoiding the use of compensatory strategies such as gesturing, drawing, writing, etc. *Forced use* means communicating only by talking; and *massed practice* refers to therapy occurring 2–4 hours per day.

The activities used in applying CIT principles to aphasia rehabilitation don't differ substantially from what might be found in more traditional treatment approaches. However, what does differ are the demands placed on the speaker in the context of relevant, communicative exchange.

Preliminary investigations suggest that CIT principles may be effective in aphasia rehabilitation. However, this investigation is only beginning, and we are not able to say any more about its efficacy than that in some cases it appears to be helpful. Not only will further study be needed to confirm that CIT is effective with aphasia, these same studies are needed to confirm its *safety*. For example, some of the animal work by Dr. Tim Shallart and colleagues suggested that intensive CIT may be harmful when performed too early after a stroke. Thus the application of CIT to aphasia rehabilitation must be pursued with both enthusiasm and caution.

Evaluating new treatment approaches

Whenever a new intervention or approach to rehabilitation is considered, it is best to gather as much information as possible. Before beginning any rehabilitation program, you should determine that the provider is qualified, informed and experienced. However, when considering a product or program that is new or experimental, such as CIT applied to aphasia rehabilitation, it is equally important to evaluate how the program is portrayed and the evidence that supports it. Testimonials on promotional materials and uncontrolled case reports are considered the lowest level of evidence and should be supported by research published in professional journals.

The American Speech-Language-Hearing Association (ASHA) provides a [list of questions to guide you](#) in evaluating new products or technologies. You'll find it under the heading "What to ask your Audiologist or SLP."

Reimbursement for CIT

Another frequent concern is whether the new approach or technology is covered by insurance. There is as yet no specific evidence to endorse CI for aphasia as being special, so the reimbursement issues for CI therapy would be the same as for any intervention occurring at the chronic stage of recovery.