

Communication Disorders Resulting from Stroke

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What is aphasia?

Aphasia is a condition that can affect any or all of the following areas:

- Speaking (verbal expression)
- Writing (written expression)
- Understanding of spoken language (auditory comprehension)
- Reading (reading comprehension)

Causes of aphasia

- Stroke
 - Hemorrhagic (bleeding)
 - Ischemic (blockage)
- Head Injury (open and closed)
- Neurogenic (e.g. tumors, dementia, Parkinson's disease, Multiple Sclerosis, encephalitis, etc.)

Stroke facts

- Stroke is the leading cause of adult neurological disability and the third leading cause of death in Canada
- 300,000 Canadians are stroke survivors (about 1% of the population)

Stroke facts continued

- Approximately 5,500 Albertans experience a stroke each year
- Approximately 25,000 Albertans are currently living with the effects of stroke
- One-third of all stroke victims are under the age of 65

Stroke facts continued

- Anyone of any age, sex, race, or nationality can have a stroke
- Probability is not related to level of education or type of work

Recurrence of stroke

- A stroke survivor has a 20% chance of having another stroke or a heart attack within two years of their initial stroke
- A stroke survivor has a 25-40% chance of having another stroke within five years of their initial stroke

Incidence of stroke

- The incidence of stroke has decreased since the 1950's because of the effective management of high BP and improved quality of healthcare
- Canada has the lowest mortality rate for stroke patients in the world
- However, as our population ages the number of strokes may increase again

Stroke statistics

- For every 100 Canadians who have a stroke:
 - 10 make a full recovery
 - 25 remain mildly impaired
 - 40 remain moderately to severely impaired
 - 10 are severely impaired & require LTC
 - 15 do not survive
- 20% of stroke survivors have aphasia (i.e. 1100 Albertans develop aphasia every year)

Can aphasia be prevented?

- No definitive steps can be taken to prevent the onset of aphasia once a stroke or head trauma has occurred
- New clot-busting medications (TPA) can minimize the effects of stroke and consequently the severity of aphasia
- Currently there are no drugs, medications, or surgery known to cure aphasia

What can be done?

- Speech and language therapy is provided to people with aphasia:
 - To provide education (to individuals, their families and caregivers)
 - To help individuals use their remaining communication abilities (verbal and nonverbal) more effectively
 - To teach communication strategies to compensate for communication difficulties

Types of Aphasia

- There are 2 general classes of Aphasia:
 - Non-fluent: Resulting from damage to the anterior region (e.g. Broca's region)
 - Fluent: Resulting from damage to the posterior region (e.g. Wernicke's area)

Types of aphasia and their symptoms

Non-fluent (Broca's)

- Speech is slow and halting (telegraphic)
- Speech contains mostly nouns and verbs (agrammatic)
- Word finding more preserved than sentence formulation
e.g. “Noodles...good...sauce...eat...mmm
- Auditory comprehension is minimally-moderately impaired
- Verbal apraxia (apraxia of speech) is often present
- Right-sided weakness is common

Types of aphasia and their symptoms

Non-fluent (transcortical motor)

- Less common
- Like Broca's, but repetition is intact
- Spontaneous speech is often stumbling and repetitive, but the individual can repeat long complex sentences without error

Types of aphasia and their symptoms

Non-fluent (global)

- All communication modalities are severely impaired
- Very poor auditory comprehension (and often reading comprehension) with an inability to speak or write
- Most difficult to treat...why?

Video Clip

- Supported Communication Intervention for Aphasia
- Disc 2; Title 2
- Chapter 2; 5:50- 7:46

Types of aphasia and their symptoms

Fluent (Wernicke's)

- Normal speed/intonation of conversation
- Speech is full of jargon and is empty of meaning
- Poor self-awareness of errors
e.g. “Shobby is making my dist”
- Poor language comprehension (auditory and written)
- Usually no hemiparesis

Types of aphasia and their symptoms

Fluent (Conduction)

- Conversational speech is quite fluent (smooth)
- Word retrieval is mildly impaired
- Paraphasic (e.g. phonemic, semantic) errors are present
- Repetition is very impaired relative to auditory comprehension and spontaneous speech.

Types of aphasia and their symptoms

Fluent (Anomic)

- Mildest form of aphasia
- Slightly impaired auditory comprehension
- Fluent, syntactically coherent speech
- Mild word retrieval deficits (hesitations)

Types of aphasia and their symptoms

Fluent (Transcortical sensory)

- Similar to Wernicke's aphasia
- Repetition is remarkably intact
- Ecolalia, where the person repeats the question instead of answering it, is a prominent feature

Types of aphasia and their symptoms

Fluent (Transcortical mixed)

- Like Global aphasia, but repetition remains intact
- Poor comprehension, meaningless stereotypical utterances
- Repetition may be impulsive

Deficits that may accompany aphasia

- Difficulty carrying out purposeful speech and/or body movement (apraxia)
- Weakness in the muscles of:
 - Speech (dysarthria)
 - Swallowing (dysphagia)
 - One side of the body (hemiparesis or hemiparalysis)
- Blindness in parts of the field of vision (hemianopsia), double vision or neglect

Influencing factors

- Location and size of the damaged area in the brain determines the type and severity of aphasia.
- Characteristics and severity of aphasia can vary from day to day or even hour to hour due to:
 - Fatigue
 - Stress/anxiety
 - Excitement
 - Familiarity with communication partner/situation

Video Clip

- Supported Communication Intervention for Aphasia
- Disc 2 ; title 2; Chapter 2: 9:45-10:45
 - Was this a successful “conversation”?
 - Why/why not?
 - What could be done differently?
- Chapter 2: 9:45-
 - Was this a successful communication?
 - What worked well?

Strategies for talking with someone who has aphasia

Promote Communication:

- Minimize background noise
- Be patient
- Be calm and reassuring
- Give undivided attention
- Focus on what the person is saying (the message) not how he/she is say it.
- Give choices
- Ask Yes/No questions

Strategies for talking with someone who has aphasia

Promote Understanding:

- Take your time. Speak naturally, but at a slightly slower rate (speed)
- Use nonverbal communication (e.g. gestures)
- Use paper and pen (to write key words or make simple drawings)
- Use short simple sentences
- Give instructions one at a time.
- “Check in” or confirm their understanding

Strategies for talking with someone who has aphasia

Assist in Communication:

- Give enough time for the person to process what you have said and to process his/her response
- Respond to all communication attempts and acknowledge his/her frustration
- Use word-finding strategies...

Word-finding strategies

- Pointing (point to desired object)
- Gesturing (rub stomach=hungry)
- Pantomime (drawing word in the air with finger)
- Writing (write key words)
- Drawing (draw the desired object)
- Word substitution (antonym/synonym)

Word-finding strategies cont'd

- Associations (it goes with a table = chair)
- Circular talk (black, hot, drink = coffee)
- Description (what does it look like?)
- Yes/No questions (Do you eat it?)
- Cloze phrases (e.g. You want some mashed _____.)
- Say the beginning sound (e.g. “You want a drink of mmm_____?” Or “It starts with a ‘m’ sound”.)

Cuing Hierarchy

- Work from general to specific and open to closed
- Give as few cues as necessary for the person to be successful

Cuing Hierarchy

- E.g. Clinician: What did you do this weekend (open question)?
 Client: Unable to respond
- Clinician: Did you go out or stay in? (Choices)
 Client: Out
- Clinician: You went out (checking in)? Where did you go (open question)?
 Client: Unable to respond
- Clinician: Show picture dictionary...did you go to the mall, a movie, to the game? (choice, plus pointing to pictures and/or gestures)
 Client: points to picture of mall
- Clinician: Oh, the mall, you went to the mall? (checking in) did you go shopping? Etc.

Outpatient programs for speech and language treatment

- Community Rehabilitation Interdisciplinary Services (CRIS)
735-2413
- Glenrose Rehabilitation Hospital
735-7971

Outpatient programs for speech and language treatment cont'd

Private Services (Fee required)

- Corbett Hall (University of Alberta)
Therapy provided by supervised students
492-5314
- Alberta Speech-Language Association of
Private Practitioners (ASAPP)
988-2217 www.asapp.ca