

The Road to Rehabilitation

Part 5 ■ Crossing the Communication Bridge: Speech, Language & Brain Injury

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Brain Injury Association of America

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Creating a better future through brain injury prevention, research, education and advocacy.

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Introduction

Communication Problems Following Brain Injury

One of the consequences of brain injury can be the inability to communicate adequately. Individuals can experience difficulty with speech, language and cognitive-communicative abilities that will interfere with appropriate learning and social interactions.

This guide is created to assist individuals and their families understand the communication problems that can be related to brain injury and plan appropriate interventions to compensate for these communication problems. Effective planning provides individuals and their families with the most efficient means of coping with communication disorders and allows for the best interaction with service providers.

This guide presents general information about communication problems that may be experienced after brain injury. The information is presented in a question and answer format. Suggestions for how you or your family members can be involved in the rehabilitation and treatment process are presented in a series of general suggestions and guidelines.

Key Definitions

Communication: Communication is the use of listening, speaking, reading, writing and gesturing either to understand an idea or to express a thought.

Speech: Speech skills are different from language skills. Speech is the production of sounds that make up words and sentences.

Language: Language refers to the use of words and sentences to convey ideas.

Cognitive-Communication: Cognitive-communication skills require the ability to use language and underlying processes such as attention, memory, self-awareness, organization, problem solving and reasoning to communicate effectively.

How are Communication, Speech and Language Affected by Brain Injury?

When a brain injury affects the areas of the brain responsible for: (1) producing speech, (2) understanding what is said or (3) using words to formulate sentences and convey ideas, then communication can be affected. Depending on the areas of the brain that are injured, the use of cognitive-communication skills to understand or convey information can be problematic. Any of these skills can be impaired or spared, depending on the location and severity of the injury.

Cognitive-communication skills are used to learn and function successfully in home, school, work and community life. It often is the inability to use appropriate language skills in learning and social environments that interferes with successful interactions. Decreased communication skills sometimes lead to loss of friends, misunderstandings or poor performance in school or job tasks.

What Types of Speech Weaknesses Can Exist?

Most individuals regain the ability to produce speech sounds and words after brain injury. These skills usually improve with the physical recovery of the person. When there are problems with paralysis, swallowing or other types of motor incoordination, there is a possibility that the individual will not recover the ability to speak or will have poor motor planning (apraxia) or muscle control (dysarthria) which results in unintelligible speech production. Characteristics of this type of speech may include:

- Slurred production of words
- Drooling
- Difficulty swallowing
- Hoarse or nasal voice quality

- Slowed rate of speech because of motor control difficulty, or increased rate of speech as the result of reduced self-inhibition and poor self-monitoring skill
- Total loss of the ability to use verbal speech from paralysis of the vocal mechanism

Because most people return to their pre-injury level of speech production ability, additional language and cognitive-communicative weaknesses can be overlooked. *TIP: Speech production is only one part of a communication disorder.*

What Types of Language Problems Can Exist?

There are two types of language abilities that should be considered.

Receptive skills are the ability to understand what is said or written. Behaviors that may indicate problems with receptive language include:

- Poor recognition of vocabulary
- Difficulty with the rate, complexity or amount of spoken or written information presented at one time
- Requests for multiple repetition of information
- Lack of attention in social conversations or teaching situations
- Problems understanding or recalling what was read
- Difficulty remembering instructions or following directions

Additionally, persons who sustain brain injury also may have hearing loss. A decrease in hearing skills also can cause the above behaviors. A complete hearing test should be completed by a qualified audiologist to rule out hearing loss before questioning receptive language competency.

Expressive skills are the ability to use verbal or written skills to express an idea. As an individual recovers from the initial injury, most receptive and expressive language skills necessary for routine communication may appear

close to normal. Rarely will there be a problem with formulating a sentence or understanding everyday language. The more subtle problems with language and cognitive-communication often are overlooked.

Behaviors that may indicate problems with expressive language include:

- Difficulty remembering the desired word when speaking or writing
- Rude or immature use of language
- Problems in developing and using new vocabulary
- Talking about unrelated topics
- Failure to maintain proper “social graces” in social situations
- Making up stories or explanations for situations
- Hypervocal or rapid, non-stop talking
- Lengthy, unorganized explanations
- Retelling the same story over and over
- Difficulty writing sentences
- Decreased ability to spell words correctly

TIP: Communication skills should be considered as possible contributors to problems if the person displays problems with learning, working or interacting with friends, family or co-workers.

Standard tests for language problems often do not disclose major problems with language after a brain injury because communication problems often are more evident in functional situations than in formal test situations. Sometimes, previously learned information is recalled, test scores are inflated and individuals look better on the test than they do in actual daily functioning. Therefore, it is important for family members to report communication behaviors they observe that seem to be causing problems for the individual.

It particularly is difficult to determine the impact of brain injury in children because they still are in the process of acquiring and refining their language skills. For example, a child may test well on a vocabulary test right after the injury because of previously learned information. However, the same child will fail to acquire new vocabulary as he/she progresses through school and will do poorly on vocabulary testing several years after the injury.

TIP: Adequate language skills are necessary for success. Inappropriate behaviors and problems should be observed over time and considered when planning for reinvolvement in home, school, work and community life.

What Types of Cognitive-Communication Problems can Exist?

On the surface, many individuals appear to have little difficulty with language skills, particularly in non-stressful situations. However, with added stress from communication demands in school, work, home or community, language performance deteriorates more than what might be expected. Problems that may result include:

Poor Organization of Expressive Language:

- Rambling conversation or written expression

- Interruptions with irrelevant ideas

- Minimal responses to questions with an inability to fill in details or offer other supporting information

- Decreased ability to organize thoughts to say what is on your mind

Inability to Maintain Attention:

- Poor listening when receiving lessons, instructions or directions

- Difficulty staying with a task long enough to complete it

- Inability to watch a complete movie or television program

- Decreased ability to respond in conversation because topic is lost

Difficulty with Abstract Language Skills:

- May not understand puns, sarcasm or humor, and may take what is said literally

- Problems learning new information if generalizing or reasoning skills are needed

Decreased Rate of Processing:

- Additional time may be needed to understand what others are saying

- Slow reading rate

- Decreased ability to understand what is read

- Inability to keep up with complex sentences or vocabulary

Cognitive-communication problems combine with language difficulties to make learning and applying what is learned more problematic in functional situations for persons with brain injury.

TIP: Cognitive-communication difficulties may impact on many learning, work and social situations.

What Do These Changes in Communication Skills Mean?

These changes mean that enough brain cells were damaged to affect communication skills and that some of these disabilities may be difficult to change because of the brain injury. Remediation and treatment can aid the individual with communication disabilities to be more competent in many functional situations. Oftentimes, the individual can learn to compensate for a disability by learning a new and different skill or by using assistive technology such as a computer, calculator, hearing aid or augmentative communication device.

Who Will Assess and Provide Intervention for These Types of Problems?

Individuals and their families should seek help from service providers who specialize in the assessment and treatment of communication disabilities. Audiologists can assess hearing. Speech-language pathologists can assess specific communication problems, offer rehabilitation and teach compensatory strategies for these problems.

If you suspect a speech, language or cognitive-communication problem, a speech-language pathologist should be consulted. A speech-language pathologist is an individual who has specialized training in the assessment and treatment of communication disorders and aids in decision making about communication intervention. These individuals may be licensed by their state and may possess a Certificate of Clinical Competence from the American Speech-Language-Hearing Association. They are employed in hospitals, clinics, universities, public schools and private practice.

Speech-language pathologists often are members of rehabilitation and education teams. In these situations, they will work closely with physical therapists, occupational therapists, neuropsychologists, physicians, nurses, social workers, educators and family members to provide collaborative and enhanced communication skills and services.

If you suspect hearing loss, an audiologist should be consulted. An audiologist is an individual who has specialized training in the assessment of hearing problems. Audiologists can help decide if amplification (i.e., a hearing aid or an assistive listening device) will improve the person's ability to hear. These individuals may be licensed by their state and may possess a Certificate of Clinical Competence from the American Speech-Language-Hearing Association. They are employed in hospitals, clinics, universities, public schools and private practice.

TIP: If you suspect a communication problem, be sure an audiologist or speech-language pathologist is consulted and is a member of your rehabilitation or education team.

What Can Families and Friends Do To Help?

Families, co-workers, teachers and friends can play an important role in helping a person improve communication skills or learn new compensatory strategies to reduce limitations. Communication is a combination of speaking, listening, reading, writing and gesturing. All communication does not have to be spoken. Accept all forms of communication (written, gestured or spoken) that is natural and appropriate. Follow these suggestions for improving communication.

General Guidelines for Helping:

- Communication occurs throughout the day. Be sure communication happens on a regular basis
- Seek evaluation, treatment and collaboration from a speech-language pathologist if communication problems are observed
- Use alternative means of communication such as pictures, reading, writing, gestures and facial expressions if speaking does not seem to work
- Respond to any and all attempts to communicate rather than focusing on verbal responses
- Talk about familiar subjects and do not try to introduce new ideas without assistance
- Consult with the speech-language pathologist before beginning practice of specific techniques such as rate, breath control or oral exercises
- Understand that consistency in communication is essential. Be sure every team member understands the goals and procedures to be followed
- Establish what methods for communication will be used and be sure everyone uses the same techniques. For example, if communication is to be completed by pointing to pictures, no one should be requesting written or verbal expression

- Keep conversation simple and direct, but at the correct age level of each family member
- Ask questions and expect to be involved in the rehabilitation and compensation process. Learn the compensatory strategies that are being taught
- Enjoy your communication exchanges and successes, be they large or small

TIP: Families and friends can make important contributions in rehabilitation and treatment. Let others know that you want to play a meaningful role. Participate in planning and implementing treatment.

What Are the Most Common Challenges in Communication after Brain Injury?

Often, the most common challenges in communication are with resuming daily functioning in home, school, work or community life. Because individuals often appear to have adequate speech and language skills, expectations for adequate communication performance are higher than they should be. Family, friends and co-workers often expect people with brain injury to follow directions, express themselves appropriately or organize communication efforts quickly and efficiently. When they are unable to do so, teachers, family members, employers or peers are confused about the individual's behavior and assume disinterest or lack of competence. There are three aspects that should be considered when a communication breakdown occurs:

- The person's inability to employ adequate communication skills as a result of the brain injury
- The environment itself (i.e., is it too noisy, confusing or stimulating)
- Complications as a result of the communication partner's manner and style of communication

In some instances, the person with brain injury will be unable to adapt or compensate for his/her communication weaknesses. Therefore, people in the environment may want to consider what they can do to make the communication easier. Questions people in the environment might ask in order to help a person adapt their behaviors include:

- Did this person understand what I said?
- Was my rate of presentation slow enough?
- Did I give clear, step-by-step directions?
- Did I use puns or humor that were not understood?
- Can I help the person understand better by using pictures or writing the steps?
- Am I distracting this person with too many gestures, too loud a voice and/or too many pauses in my speaking?
- Is the environment too loud, congested, bright and/or confusing?
- Can I simplify this communication by speaking in shorter, clearer sentences?
- Can I provide a more organized explanation of what I expect to be done?
- Are there others in this situation who can help?

What is Different About Children and Their Communication Problems?

A child is not a little adult. A child grows and develops over time. A child may test well at the time of the injury but may begin to demonstrate problems as he/she reaches a different developmental stage. Teachers may report:

- Difficulty in learning new vocabulary
- Decreased participation in class from pre-injury levels
- Lack of concentration
- Disruptive talking
- Use of socially unacceptable language
- Decreased reading and writing skills, especially organizational skills
- Poor interactions with peers

No one can anticipate when language or learning problems may emerge. For this reason, it is recommended that a child's language development and learning skills be monitored throughout the teenage years.

What Should I Do if I Suspect There are Communication Problems?

- Write down examples of the types of communication behaviors that concern you
- Consider what problems the environment itself might be causing
- Analyze the communication manner and style of those in the environment and consider whether they could make reasonable adaptations

- Contact the medical professional you trust the most (regardless of the professional discipline). Explain your observations and concerns and ask for a referral for a cognitive-communication evaluation by a speech-language pathologist
- Expect the person with brain injury and/or a family member to be included as a full team member in analyzing the communication problem and proposing solutions
- Recognize that some expectations for improvement may be unrealistic and be prepared for compensation rather than remediation
- Recall that children still are developing and be prepared for reassessment even when there does not appear to be a problem
- Ask to participate in setting goals and determining outcomes of treatment
- Be sure treatment is directed toward improving the individual's ability to communicate well in home, school, work or community activities
- Learn to advocate for communication skills to be considered when difficulty in school, work or home begins

References

For further information regarding speech-language-hearing services for individuals with brain injury, contact the American Speech-Language and Hearing Association, 10801 Rockville Pike, Rockville, MD, 20852, phone: 301-897-5700 web site: www.ASHA.org They can provide listings of speech-language pathologists or audiologists in your area.

You also may contact the Brain Injury Association's Family Helpline at (800) 444-6443, email: familyhelpline@biausa.org or web site: www.biausa.org, if you have questions or need additional assistance.

About the Author...

Jean L. Blosser, EdD, is President of Creative Strategies for Education. Her primary areas of interest are: management/administration; professional preparation issues; intervention strategies for traumatic brain injury; and parent-teacher training. Dr. Blosser has written many articles and presented numerous papers to professionals and family members. She is co-author of *Pediatric Brain Injury: Proactive Interventions*.

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For additional information about dealing with post-traumatic headaches and brain injury, contact BIA's Family Helpline at (800) 444-6443 or familyhelpline@biausa.org. Or visit BIA's award-winning web site at: www.biausa.org.

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For the individual with brain injury and his/her circle of support (i.e., family members, significant others, friends and co-workers) brain injury is a complex and often tumultuous journey. Although there are broad issues affecting ALL individuals with brain injury, both the road to rehabilitation and the outcome experienced by each individual are unique. In this series of brochures, BIA seeks to educate individuals and organizations about rehabilitation after brain injury. Some individuals with brain injury may face challenges in all of these areas, while others may experience problems with just a few of them. Regardless, the information in these brochures is crucial to provide those affected by brain injury, as well as the individuals and organizations treating them, with a basic understanding of the complex challenges following brain injury. For additional information about any of the topics covered in The Road to Rehabilitation Series, contact BIA's toll-free Family Helpline at (800) 444-6443 or visit their web site at www.biausa.org.