

Speech Language Pathology

After Carol's automobile accident, her husband noticed that something wasn't right. His wife could no longer remember conversations she had just five minutes earlier. When the family sat down at the dinner table together, she seemed confused trying to follow their children's normal mealtime chatter. After Carol's physician diagnosed her with a traumatic brain injury, he recommended that she begin seeing a speech-language pathologist (SLP) to help with some of her memory and processing difficulties.

Carol's situation is just one example of the types of problems an SLP can treat. Sometimes referred to as speech therapists, SLPs will assess, diagnose, treat and help prevent disorders related to speech, language, cognitive communication, voice, swallowing and fluency. They work with people who:

- Cannot produce speech sounds or cannot make them clearly
- Stutter or exhibit speech rhythm problems
- Have a voice disorder, such as inappropriate pitch or a harsh voice
- Have difficulty understanding or producing language
- Need accent reduction
- Have swallowing difficulties
- Have cognitive-communication impairments, such as attention, memory and problem-solving disorders

What is the nature of SLP work?

SLPs teach patients how to make sounds, improve their voices or increase oral and written language skills so they can communicate more effectively. They teach individuals how to strengthen muscles or use compensatory strategies to swallow without choking or inhaling food or liquid. SLPs help patients develop or recover reliable communication and swallowing skills. They counsel individuals and families concerning communication disorders and teach them how to cope with the accompanying stress and misunderstandings. SLPs often work with family members to help them recognize or change behavior patterns that impede communication and treatment, and teach communication-enhancing techniques to use at home. For individuals with little or no speech capability, an SLP may select and teach augmentative-alternative communication methods, including automated devices and sign language.



What communication problems can occur after a TBI?

People with a brain injury often have cognitive (thinking) and communication problems that significantly impair their ability to live independently. These problems vary depending on the location and severity of the injury.

Brain injury survivors may have trouble finding the words they need to express an idea or explain themselves through speaking and/or writing. It may be an effort for them to understand both written and spoken messages, as if they were trying to comprehend a foreign language. They also may have difficulty with spelling, writing and reading.

The person may have trouble with social communication, including:

- Taking turns in conversation
- Maintaining a topic of conversation
- Using an appropriate tone of voice
- Interpreting the subtleties of conversation (e.g., the difference between sarcasm and a serious statement)
- Responding to facial expressions and body language
- Keeping up with others in a fast-paced conversation

Individuals may seem overemotional or "flat" (without emotional affect). The person may have little to no awareness of just how inappropriate he or she is acting, and in general, communication can be very frustrating and unsuccessful. In addition, muscles of the lips and tongue may be weak or less coordinated. The person may have trouble speaking clearly or may not be able to speak loudly enough to be heard in conversation.

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The muscles may be so weak that the person is unable to speak. Weak muscles may also limit the ability to effectively chew and swallow.

What cognitive problems can occur after a TBI?

Cognitive difficulties are very common in people with TBI. Cognition (thinking skills) includes an awareness of one's surroundings, attention to task, memory, reasoning, problem solving and executive functioning (e.g., goal setting, planning, initiating, self-awareness, self-monitoring and evaluation). Problems may vary depending on the location and severity of the injury to the brain and may include:

- Trouble concentrating when there are distractions (e.g., carrying on a conversation in a noisy restaurant or working on two or more tasks at once).
- Slower processing or "taking in" of new information. Longer messages may have to be "chunked" or broken down into smaller pieces. The person may have to repeat / rehearse messages to make sure he or she has processed the crucial information. Communication partners may have to slow down their rate of speech.
- Problems with recent memory. New learning can be difficult. Long-term memory for events that occurred before the injury, however, is generally unaffected (e.g., the person will remember names of friends and family).
- Executive functioning problems. The person may have trouble starting tasks and setting goals. Planning and organizing a task is an effort, and it is difficult to self-evaluate work. Individuals often seem disorganized and need the assistance of family and friends. They may have difficulty solving problems, and may react impulsively (without thinking first) to situations.

How is an individual evaluated for SLP therapy?

When treating an individual with a brain injury, an SLP will complete a formal evaluation of speech and language skills. An oral motor evaluation checks the strength and coordination of the muscles that control speech. Understanding and use of grammar (syntax) and vocabulary (semantics) as well as reading and writing are evaluated.

Social communication skills (pragmatic language) are evaluated with formal tests and the role-playing of various communication scenarios. The person may be asked to discuss stories and the points of view of various characters. Does he understand how



the characters are feeling and why they are reacting a certain way? Can he explain how different characters' actions affect what happens in the story? The person may be asked to interpret/explain jokes, sarcastic comments, or absurdities in stories / pictures (e.g., What is strange about a person using an umbrella on a sunny day?).

An SLP will assess cognitive-communication skills. Is she aware of her surroundings? Does she know her name, the date, where she is, what happened to her (orientation)? Recent memory skills are assessed, such as whether the main details in a short story are retained. Executive functioning is evaluated. The SLP assesses the patient's ability to plan, organize, and attend to details (e.g., completing all of the steps for brushing teeth). The SLP may read an incomplete story and ask for a logical beginning, middle or conclusion. The person may be asked to provide solutions to problems (e.g., What would you do if you locked your keys in your car? How can this problem be avoided in the future?).

What does an SLP do when working with people with TBI?

A treatment plan is developed after an evaluation and will vary depending on the stage of recovery. It is always focused on increasing everyday independence.

In the early stages of recovery (e.g., during coma), treatment focuses on getting general responses to sensory stimulation and teaching family members how to interact. As an individual becomes more aware, treatment focuses on maintaining attention for basic activities, reducing confusion and orienting the person to the date, where he or she is and what has happened. Later on, treatment focuses on finding ways to improve memory (e.g., using a memory log) and learning strategies to help problem-solving,

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reasoning and organizational skills. The SLP will help the patient work on social skills in small groups while helping to improve self-monitoring in the hospital, home and community. Eventually, treatment may include community outings to help the person plan, organize and carry out trips using memory logs, organizers, checklists and other helpful aids. SLPs may also help the patient work with a vocational rehabilitation specialist so he or she can return to work or school. ❖

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