

“Today I am exhausted by a paragraph. Three years ago, a sentence exhausted me.”



Putting Words on Paper: Writing after Stroke

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When a stroke occurs in the “language hemisphere,” the resulting injury often affects the ability to communicate in writing. It may become difficult to recall the spelling of words, or how to put the words in correct order to make sentences. In some cases, it is even challenging to recall how to form the letters that make up words. These writing impairments are referred to as *agraphia* or *dysgraphia*.

Most people with aphasia also have agraphia. The disruption to the processes that support spoken language typically also interferes with the ability to write. In addition, weakness or paralysis of the dominant hand may require a shift to writing with the other hand.

There are cases where writing is better than speaking; or the reverse, where writing is more difficult than speaking. This happens because there are specialized areas of the brain that process the written symbols of language, so where the stroke is located influences whether a survivor has problems with written or spoken language.

For most people with aphasia, the ability to speak is a greater concern than the ability to write, especially in the first months after a stroke. Nonetheless, problems associated with reading and writing certainly interfere with daily living. Writing a check, making a grocery list, composing an e-mail — such everyday tasks may become impossible.

A look at three patients from our clinic at the University of Arizona illustrates how such writing impairments may be treated, and how writing can enhance communication.

Mr. Thorpe’s stroke left him with severe aphasia. Although he could talk with relative ease, the words made little sense. His speech was filled with empty phrases like “all the time,” as well as utterances that had no meaning.

Several years after his stroke, we worked with Mr. Thorpe to help him relearn how to write. Over the course of a year, he dedicated himself to writing homework daily and was able to learn, word by word, the spelling of

about 75 words that were important to him. He learned to write the names of family members, favorite restaurants, places he had lived, and words concerning his occupation and hobbies.

Mr. Thorpe was able to write these words in conversational exchange to communicate specific information that he could not say. His animated gestures and the expression conveyed in his voice complemented the written words, and he was able to get across a great deal more information. In this case, Mr. Thorpe made progress with written language when his spoken language appeared resistant to change.

Another patient, Mr. Raymond, had a less severe form of aphasia that allowed him to speak in sentences, but he often had difficulty saying the words that contained the main content. However, he was often able to write the word that he could not say, so that conversational interaction consisted of speaking and then writing down the “difficult words.”

For example, Mr. Raymond might say, “The other night we went to the, uh, [and he would write the word *movie*]. It was marvelous. You should see it. It was with... [he would write *Meryl Streep*].” So, Mr. Raymond could write some words that he could not say.

His speech pathologist took advantage of this strength and trained him to use the written word to help him produce the spoken word. This required considerable effort to relearn the links between letters and sounds, but ultimately he was able to say many of the previously “difficult” words. Mr. Raymond knew he was speaking more and writing less because he used fewer pads of paper each week.

Another patient, Ms. Vines, was a highly educated woman who had a stroke in her 40s. Her recovery of spoken language was good, and she ultimately could hold a conversation with only traces of the aphasia evident to the listener. But Ms. Vines wanted to return to work and her hobby of creative writing, so her remaining difficulty with writing was a great concern.

She wrote, “It is exhausting work, writing. Reading is hard too, but passive. Writing is active. It takes a lot of brain power just to write a simple sentence.” Ms. Vines worked with her therapist to relearn the spellings of words, to sound out difficult words, and ultimately to compose essays. She uses an electronic speller to help her detect and correct spelling errors and has made impressive progress in her ability to write.

“Today I am exhausted by a paragraph. Three years ago, a sentence exhausted me.” She continues to work toward her goal to “write an entire essay without stopping to recover.”

These three patients with aphasia and agraphia illustrate different methods of writing rehabilitation. In each case, the patients devoted considerable time to their rehabilitation and made satisfying improvements. While problems with written language present a greater loss for some people than others, working with both spoken and written modalities enhances rehabilitation. **SC**

For more information or to find an ASHA-certified speech-language pathologist in your area, call ASHA's Action Center at 1-800-638-8255 or e-mail ASHA at stroke@asha.org or visit ASHA on the Web at www.asha.org.

How can you improve your writing or help a family member?

- 1. Copying specific words repeatedly can help to relearn those spellings.*
- 2. Select a few words (no more than five) to practice repeatedly. Use personally relevant words, like family names, local stores and restaurants, words that are likely to be used in common communication.*
- 3. After copying the word several times, cover the example and attempt to write the word from memory.*
- 4. After mastering those words, add a few more for practice.*
- 5. Slowly rebuild the spelling vocabulary.*



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