

How is the Ability to Write Affected by Aphasia

Aphasia significantly affects a person's ability to write, often mimicking the patterns seen in their spoken language. This acquired writing difficulty is known as agraphia. The specific challenges depend on the type and severity of the aphasia, as well as the brain region affected.

How aphasia causes writing difficulties

- **Impaired language processing:** Since writing is a form of language, the same brain damage that impairs speech and language comprehension also disrupts the ability to form words and sentences in writing.
- **Agnosia and sensory deficits:** Some people may have difficulty recognizing the visual form of letters, even if they can feel the pen in their hand.
- **Memory problems:** Difficulties with memory, particularly working memory, can interfere with holding the spelling of a word in mind long enough to write it down.
- **Motor difficulties (Apraxia):** In some cases, aphasia co-occurs with motor control problems that affect the physical act of forming letters, making handwriting illegible or inaccurate.
- **Alexia (reading impairment):** Writing and reading skills are closely linked. The inability to read (alexia) that often accompanies aphasia can make it impossible for an individual to check and correct their own written work.

Writing difficulties by aphasia type

The specific writing challenges can vary greatly depending on the aphasia type:

- **Broca's aphasia (non-fluent):** Written output is sparse, effortful, and telegraphic, often missing small grammatical words. The person may write in large, messy, or poorly formed letters.
- **Wernicke's aphasia (fluent):** Writing appears fluent but contains semantic errors (using the wrong word), neologisms (made-up words), and poor spelling. The person may not realize their writing doesn't make sense.
- **Global aphasia:** This severe form of aphasia can cause a near-total loss of the ability to read and write. The person may only be able to produce a few words or symbols.
- **Conduction or anomic aphasia:** In milder cases, writing may be similar to their speech, with primarily word-finding difficulties. The person's writing may be largely intact, but with frequent spelling errors.
- **Primary Progressive Aphasia (PPA):** Writing ability declines gradually over time as the neurodegenerative disease progresses.

Common errors and effects on writing

Aphasia can lead to a wide range of writing problems, including:

- **Spelling errors:** Misspelling words or omitting letters is common.
- **Grammatical errors:** Sentence structure and word order may be incorrect or missing.
- **Semantic errors:** Substituting an intended word with a semantically related one, such as writing "dog" instead of "cat."
- **Jargon:** Writing contains nonsensical letter or word combinations.
- **Perseveration:** Repeating letters, words, or phrases.
- **Poor legibility:** Handwriting may be shaky, slow, or otherwise difficult to read due to motor impairments.
- **Spatial errors:** The person may have difficulty organizing their writing on the page, resulting in slanting lines or incorrect word spacing.

Factors influencing the impact

The extent to which writing is affected is influenced by several factors:

- **Extent and location of brain damage:** More severe or widespread damage leads to more profound writing impairment.
- **Co-occurring conditions:** The presence of other issues like physical weakness in the dominant hand (hemiparesis) can worsen the writing difficulty.
- **Pre-existing writing skills:** A person's writing abilities before the brain injury can influence their ability to relearn or recover these skills.
- **Emotional impact:** For someone who was previously literate, the loss of writing ability can be particularly frustrating, leading to feelings of embarrassment, isolation, and depression.