

## Know the Signs ... Know the Symptoms

FTD syndromes characterized predominantly by the gradual loss of the ability to speak, read, write or understand what others are saying fall under the category of primary progressive aphasia, or PPA. Experts further subdivide PPA into three clinical subtypes based on the specific language skills that are most affected.

People with the nonfluent/agrammatic variant of PPA (nfvPPA, also known as PPA-G), also called progressive nonfluent aphasia or PNFA, find it increasingly difficult to speak yet can still recall the meanings of individual words.

The ability to form sounds with their lips and tongue is caused by degeneration of the parts of the brain that control certain related muscles; the muscles themselves, however, are unaffected. As a result, their speech becomes slow and effortful and they may appear to be physically struggling to produce words.

Speech problems alone are not sufficient for diagnosing PPA. The defining feature is the impairment of grammar. People with nfvPPA make many mistakes while speaking, including omitting small grammatical words, using word endings and verb tenses incorrectly, and/or mixing up the order of words in sentences. Eventually, some may develop difficulty swallowing as well as more widespread motor symptoms similar to those seen in the movement-predominant forms of FTD such as corticobasal syndrome. **The following are possible symptoms of nfvPPA:**

SYMPTOMS	POSSIBLE SIGNS
<p><b>Agrammatism</b></p> <p>Omitting words in sentences, especially short connecting words (e.g., “to,” “from,” “the”)</p>	<ul style="list-style-type: none"><li>• Order of words in sentences often incorrect</li><li>• Errors in the use of word endings, verb tenses and pronouns</li><li>• Speech restricted to short, simple phrases that are difficult for listener to understand because of omissions and errors</li><li>• Uses “seed” instead of “saw” or “throwed” instead of “threw”</li><li>• “Today...go lunch...ah...sister” for “today I am going to lunch with my sister.”</li></ul>

# Nonfluent/Agrammatic PPA

SYMPTOMS	POSSIBLE SIGNS
<b>Apraxia of speech</b> Difficulty producing movements of lips and tongue needed for speech	<ul style="list-style-type: none"><li>• Slow, labored speech</li><li>• Groping movements of face and mouth in effort to produce correct sound</li><li>• Distorted or incorrect speech sounds</li><li>• Effortful speech often the first symptom</li></ul>
<b>Impaired comprehension of complex sentences</b>	<ul style="list-style-type: none"><li>• Single-word comprehension unaffected but the ability to understand long or grammatically difficult sentences is reduced</li></ul>
<b>Mutism</b>	<ul style="list-style-type: none"><li>• Affected person does not speak at all</li></ul>
<b>Difficulty swallowing</b>	<ul style="list-style-type: none"><li>• Develops later in progression of the disease</li></ul>
<b>Motor symptoms</b>	<ul style="list-style-type: none"><li>• Difficulty using an arm or leg (limb apraxia)</li><li>• Slow, stiff movement</li><li>• Loses balance or falls easily</li><li>• Restricted up-and-down eye movement</li></ul>

Doctors will consider a clinical diagnosis of nonfluent variant PPA based on this combination of symptoms: apraxia of speech, agrammatism, plus at least two of the following symptoms: Impaired comprehension of complex sentence, single-word comprehension unaffected, and object knowledge unaffected.

If you have concern that you or a loved one may have been misdiagnosed with another condition—or about any of the signs and symptoms listed above—it is important to consult a doctor.

**If you're facing this diagnosis—or if you have questions—contact AFTD for help and support.**

