

Speech and Language Disorders

Brain Locations and Function

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Brain Location	Function	Disorder
Left hemisphere-major	Language Ability	Cerebrovascular accidents can result in <i>aphasia</i> which refers to a hindrance in understanding or producing language
Left frontal lobe area	Speech development	<i>Broca's aphasia</i> , ability to say meaningful function and content words, but the inability to incorporate grammar in speech (called <i>agrammatism</i>) <i>Anomia</i> is the inability to recall words (word finding) and omitting words.
The left precentral gyrus of the insula	<i>Articulation</i> which is the ability to correctly pronounce words	Inability to articulate words (also considered to be <i>Broca's aphasia</i>)
The left precentral gyrus of the insula	Coordinates the movements of physiological parts of the mouth (lips, tongue and throat), involved in the production of speech	<i>Apraxia of speech</i> : refers to the inability to correctly coordinate the movements of physiological parts of the mouth
Left temporal gyrus area	The source of the memories of the chains of sounds that make up words	<i>Wernicke's aphasia</i> (also called <i>receptive aphasia</i>): problems understanding speech Production of speech may be grammatically correct, but content words are omitted, and words are strung together resulting in meaningless speech

Reference: Carlson, N. R., & Birkett, M. A., (2017). *Physiology of behavior* (12th ed). Boston, MA: Pearson Education Limited.