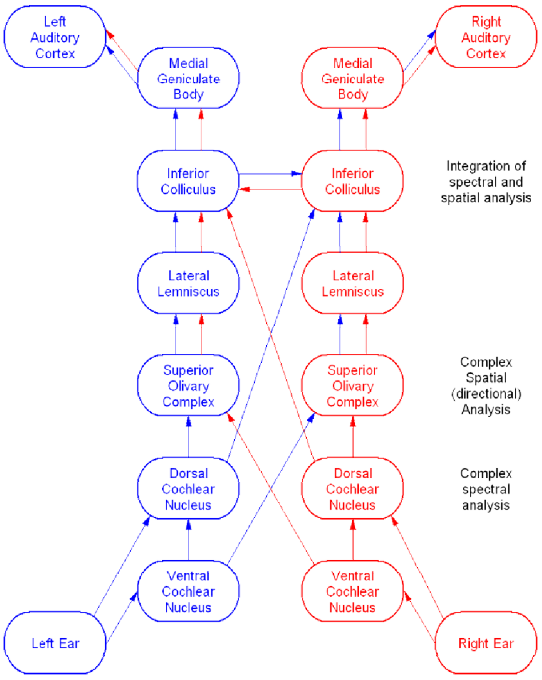
Central Auditory Processing Disorders

Unless you have been diagnosed with a Central Auditory Processing disorder (CAPD) or you know someone who has, most know little about CAPDs.

During normal auditory functioning, the process of sound recognition is complex. Put simplistically, sound is processed by both ears and transformed into bioelectrical nerve impulses that travel via the eighth auditory nerve up ascending auditory pathways in route to the final destination-the auditory cortex. The auditory cortex, housed within the brain, is where meaning to auditory stimuli is applied.



Lesions occurring at any junction along the ascending auditory pathway can produce a Central Auditory Processing disorder, which refers to an impaired capacity disallowing normal relay of auditory information at some point along ascending auditory pathways. Generally, the 8th cranial nerve, brainstem, and/or the auditory cortex are sites of lesion responsible for CAPD dysfunction.

Associated CAPD lesions on the 8th nerve may involve benign tumors (e.g. Acoustic Schwannoma, Lipoma), malignant tumors, Neuritis, and Diabetic Neuropathy. Brainstem lesions may erupt after infarct; sufferers of Multiple Sclerosis may also develop brainstem lesions. Lesions of the cortex may result from traumatic injury, stroke, or tumor. CAPD can also develop as part of the degenerative biological aging process.

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Frequently, persons with CAPD have normal or near normal threshold sensitivity. A common symptom of CAPD is one's difficulty discriminating speech in noisy environments despite their apparent normal or near normal threshold sensitivity. CAPD may also superimpose varying degrees of hearing loss; persons are resultantly confronted with compounding communication difficulties related to hearing loss and abnormal signal processing. While more complex symptoms may be present, other common CAPD symptomatic manifestations include difficulties comprehending speech at high intensity levels and difficulties localizing sound.

Numerous clinical test batteries are at the disposal of Audiologists to assist in the diagnosis of CAPD. Once diagnosed, Audiologists, Aural Rehabilitationists, and/or Speech-Language Pathologists may offer management therapies.

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