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Auditory Processing in Fluency Disorders

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UNIVERSITY OF MONTANA

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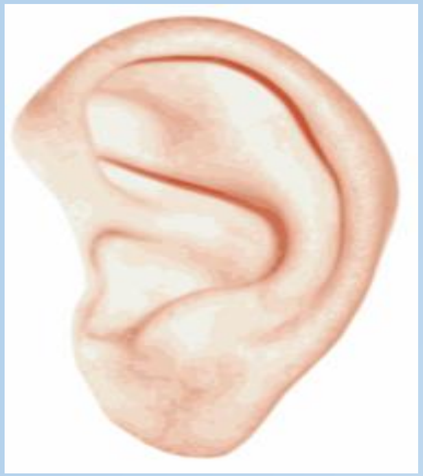
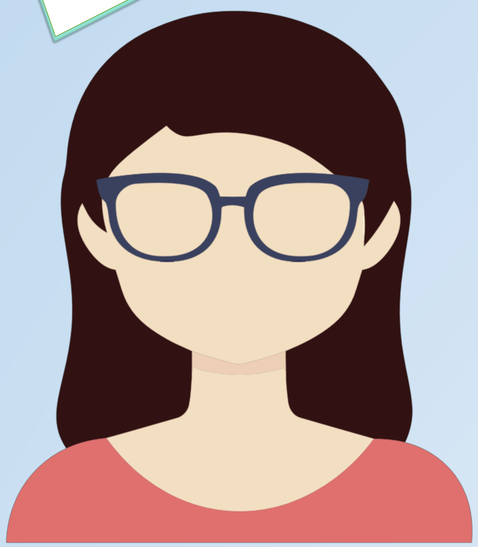
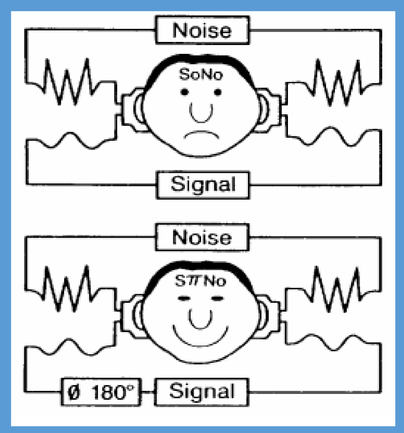
Mentor: Al Yonovitz, PhD



Is stuttering related to defective feedback in hearing your own voice?



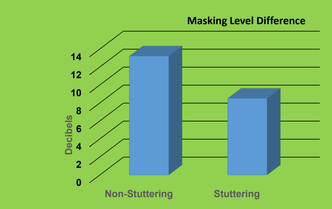
Masking Level Difference

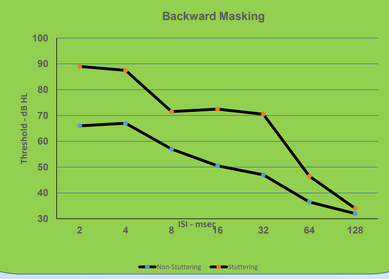


Adapted from Olsen and Noffsinger, 1976

The Masking Level Difference (MLD) is a binaural phenomenon that is considered necessary for auditory processing. The MLD is not a test of hearing threshold. It relates to our ability to separate signals from background noise. It has been shown to have origins neuro-physiologically in the brainstem.

Results





Backward Masking

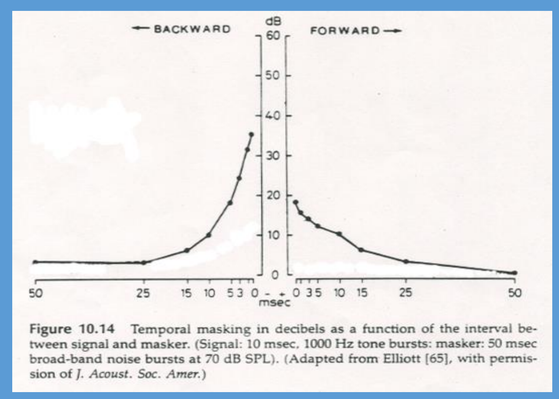


Figure 10.14 Temporal masking in decibels as a function of the interval between signal and masker. (Signal: 10 msec, 1000 Hz tone bursts: masker: 50 msec broad-band noise bursts at 70 dB SPL). (Adapted from Elliott [65], with permission of *J. Acoust. Soc. Amer.*)

Backward Masking (BM) is a monaural phenomenon that is considered necessary for auditory processing. BM disorders have been associated aging and lead-based perceptual problems in animal models and children. BM has its origins neuro-physiologically in the midbrain.