

## **Generalized adaptation to dysarthric speech.**

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### **Abstract**

Generalization of perceptual learning has received limited attention in listener adaptation studies with dysarthric speech. This study investigated whether adaptation to a talker with dysarthria could be predicted by the nature of the listener's prior familiarization experience, specifically similarity of perceptual features and level of intelligibility. Following an intelligibility pretest involving a talker with ataxic dysarthria, 160 listeners were familiarized with 1 of 7 talkers with dysarthria—who differed from the test talker in terms of perceptual similarity (same, similar, dissimilar) and level of intelligibility (low, mid, high)—or a talker with no neurological impairment (control). Listeners then completed an intelligibility posttest on the test talker. Results revealed that all listeners benefited from familiarization with a talker with dysarthria, however adaptation to the test talker was superior when the familiarization talker had similar perceptual features; and reduced when the familiarization talker had low intelligibility. Evidence for both generalization and specificity of learning highlights the differential value of listeners' prior experiences for adaptation to, and improved understanding of, a talker with dysarthria. These findings broaden our theoretical knowledge of adaptation to degraded speech, as well as the clinical application of training paradigms that exploit these perceptual processes for therapeutic gain.