Disrupted feedforward but spared feedback control during speech in patients with cerebellar degeneration

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F1 perturbation was introduced gradually or abruptly. Some studies have shown cerebellar patients may retain the ability to adapt to gradual perturbations [2,3], though others have not [4,5]. Gradual was always tested first.

“Catch” trials were included in which auditory feedback was eliminated and masking noise was increased in volume:
- 20 catch trials randomly distributed during trials 60-120 of each block.
- Note that loud masking noise causes general increase in F1 [2]

CD patients show reduced adaptation to consistent F1 perturbations introduced abruptly.

Adaptation is also impaired in patients when the perturbation is introduced gradually.

CD patients show greater within-trial compensation to unexpected perturbations.

References


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