Restoration of sensory input may improve cognitive and neural function

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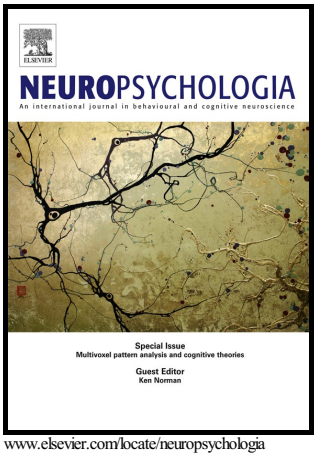

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Restoration of sensory input may improve cognitive and neural function☆

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Abstract

Age-related hearing loss is one of the most prevalent health conditions among the elderly. Hearing loss may lead to social isolation, depression, and cognitive decline in older adults. The mechanistic basis for the association between hearing loss and decreased cognitive function remains unknown as does the potential for improving cognition through hearing rehabilitation. To that end, we asked whether the restoration of sensory input through the use of hearing aids would improve cognitive and auditory neural function. We compared a group of first-time hearing aid users with a hearing-matched control group after a period of six months. The use of hearing aids enhanced working memory performance and increased cortical response amplitudes. Neurophysiologic changes correlated with working

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