



Programa de recerca en **processos inflamatoris i cardiovasculars**



Cognitive, Emotional, and Neural Benefits of Musical Leisure Activities in Stroke and Dementia

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The capacity of music to engage auditory, cognitive, motor, and emotional functions across cortical and subcortical brain regions and the relative preservation of music in ageing and Alzheimer's disease (AD) makes it a promising tool in the rehabilitation of ageing-related neurological illnesses, such as stroke and dementia. As the prevalence of these illnesses increases rapidly, it is important to develop music-based interventions that are enjoyable, effective, and easily applicable in the everyday care of the patients. Recently, we have explored the rehabilitative efficacy of regular musical leisure activities in two single-blind parallel-group RCTs involving acute stroke patients (N = 60) and persons with dementia (PWDs) and their caregivers (N = 89). In stroke patients, effects of daily music listening were compared to audio book listening and standard care during the first 6 post-stroke months. Music listening was found to improve the recovery of verbal memory, focused attention, and mood as well as to enhance auditory sensory memory (indexed by the mismatch negativity response in MEG) in the recovering brain. Using voxel-based morphometry (VBM), we also observed music-induced increase in grey matter volume in prefrontal and limbic brain regions underlying the enhanced recovery. In PWDs, regular caregiver-implemented music listening and singing of familiar songs were compared to standard care in a 9-month follow-up. Both singing and music listening improved or maintained cognitive status (MMSE), executive functions, and mood whereas singing specifically enhanced working memory and autobiographical memory, especially in mild and AD-type dementia. Importantly, singing also alleviated the psychological burden of the caregivers. In conclusion, musical leisure activities can provide an effective and easily applicable way to enhance cognitive and emotional well-being after stroke and in early dementia.

divendres

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