Music for the Ageing Brain:
Efficacy and Neural Mechanisms of Music in Neurological Rehabilitation

Dr. Teppo Särkämö, PhD
Adjunct Professor, Academy of Finland Research Fellow
Cognitive Brain Research Unit (CBRU)
Department of Psychology and Logopedics
Faculty of Medicine
University of Helsinki
teppo.sarkamo@helsinki.fi

Abstract

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 makes it a promising tool to support cognitive and emotional functioning in normal ageing and 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. In this talk, I will discuss about the recent advances in neuroimaging and clinical studies on (i) the neural basis of music processing in the healthy and damaged brain, (ii) impact of musical activities in healthy ageing, and (iii) the rehabilitative efficacy of music-based interventions in stroke and dementia patients based on randomized controlled trials, especially regarding the use of self- and caregiver-implemented musical leisure activities.

References:

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Short bio:

Dr. Teppo Särkämö is a psychologist and cognitive neuroscientist whose research focuses on the neural mechanisms of music and speech processing and their deficits (amusia and aphasia), neuroplasticity, ageing, and music-based interventions for neurological illnesses. He is best known for his pioneering studies on the efficacy of musical leisure activities (music listening, singing) in early stroke rehabilitation and dementia care. Dr. Särkämö received his PhD in Psychology from University of Helsinki in 2011, followed by Title of Docent in Psychology in 2014. In 2017, he has awarded with the Cortex Prize of the Federation of the European Societies of Neuropsychology. Dr. Särkämö currently works at the Cognitive Brain Research Unit (CBRU), University of Helsinki, as an Academy of Finland Research Fellow and Adjunct Professor, leading the Music and Neurorehabilitation Team (MART).