

Combining Medicine with Art

- Effect of music therapy on neurological disorders

Author: Tong Zhang

A neurological disorder is one that affects the body's nervous system, i.e. the brain, the spinal cord, and the nerves that lead to and from them. Neurological disorders are quite widespread - according to a recent survey of the World Health Organization over 1 billion people suffer from neurological problems and can afflict people of any age. Symptoms of neurological conditions are paralysis, aphasia, rigid muscles, tremors, slow motion, difficulty swallowing, numbness, and intermittent twitching. Other symptoms include inability to speak clearly, lack of balance and coordination, and lost ability for automatic movements, e.g. blinking. In some cases, neurological disorders result in dementia. Most neurological diseases are difficult to treat, Neurorehabilitation is a complex medical process which aims to aid recovery from a neurological disorder, and to minimize and/or compensate for any functional alterations resulting from it. Types of Neurorehabilitation include physiotherapy, occupational therapy, psychological therapy, speech and language therapy, Music therapy is the use of interventions to accomplish individual goals within a therapeutic relationship by a professional who has completed an approved music therapy program. In other words, music therapy may be considered as one of the types of neurorehabilitation. One therapy model based on neuroscience, called "neurological music therapy" (NMT), is "based on a neuroscience model of music perception and production, and the influence of music on functional changes in non-musical brain and behavior functions". Current research (including our research) also suggests that when NMT is used in conjunction with traditional neurorehabilitation therapy, it improves success rates significantly in impairment due to neurological disorders and this relies on neural plasticity within the residual neural circuits.
