

Move to the beat: How music can help your brain

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Credit: AI-generated image ([disclaimer](#))

Whether pounding the streets, putting in the effort at the gym or learning the latest dance moves, many people enjoy listening to music while exercising. Now scientists believe that combining movement and music could be beneficial for our brains.

Neuroscientists have discovered that moving to the rhythm can boost [motor performance](#). An EU-funded project entitled BEAT-HEALTH was launched in October 2013 in order to capitalise on the [beneficial effects](#) of rhythm on [movement](#). The project aims to focus in particular on the benefits of rhythmic stimulation in order to improve gait and mobility.

Motor skills disorder - also known as motor coordination disorder or [developmental coordination disorder](#) - is a human [developmental disorder](#) that impairs motor coordination in daily activities. This disorder is a result of weak or disorganised connections in the brain, which can lead to poor [motor coordination](#).

Parkinson's disease is a well-known degenerative disorder of the central nervous system. Early in the course of the disease, the most obvious symptoms are movement-related; these include shaking, rigidity, slowness of movement and difficulty with walking and gait.

The ultimate aim of the project, which will receive a total of EUR 2 942 000 in EU funding, is to create an innovative smartphone application capable of delivering musical rhythm. This tool would be capable of adapting to the rhythm of movement, in order to boost motor performance.

In addition, a dedicated e-Health service, in the form of an age-friendly network-based application, will be established in order to share information on movement performance. Indeed, all data gathered during the project will be made accessible online. Access to this information will enable users to recognise their motor condition, and promote healthier lifestyles that can enhance performance and compensate for motor disorder.

The BEAT-HEALTH project will begin by carrying out some

fundamental research aimed at improving our understanding of the condition, in order to maximize the beneficial effects of rhythmic stimulation on movement and physiology. The project will then look to create a new IT platform in the form of a network-based application for the collection of data and sharing online.

The consortium behind BEAT-HEALTH involves leading experts in the fields of movement sciences, music neuroscience and communication technologies. Five top laboratories across four European countries will cooperate throughout the three-year project: Montpellier-1 University (France), the University of Ghent (Belgium), the National University of Ireland, the Tecnalia foundation (Spain) and Montpellier Academic Hospital (France).

More information: www.euromov.eu/beathealth/

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