Neuro-motor reprogramming in physiotherapy after a central neurological injury

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Résumé

The incidence of strokes in France is of 140000 annual new cases, 5000 diagnoses of Multiple Sclerosis (MS) and 1200 cases of spinal cord injuries (INSERM). In this field, motor improvement usually means several months or even years of rehabilitation and the aftereffects rate of disabilities remains high.

A new approach of neuro-motor reprogramming could have a positive public health impact. It's based on the latest neuroscience background in motor imagery and proprioception, combined with the use of low frequency sounds.

Firstly, we will discuss the scientific background, the clinical impact and the limitations of this innovation.

Then, we will explain motor command neurophysiology, recovery after injury and the diagnosis of motor inhibition.

Lastly, we will analyze a well documented case study in order to illustrate the future potential of neuro-motor reprogramming and research topics to address.

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