

Functional Electrical Stimulator and Neuromuscular Electro Stimulator System Analysis for Foot Drop

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Abstract : Portable muscle stimulators for real-time applications has first introduced by Liberson in 1961. Now these systems has been advanced. In this study, FES (Functional Electrical Stimulator) and NMES (Neuromuscular Electrostimulator) systems are analyzed through their hardware and their quality of life improvements for foot drop patients. FES and NMES systems are used for people whose leg muscles and leg neural connections are healthy but not able to walk properly because of their injured central nervous system like spinal cord injuries. These systems are used to stimulate neurons or muscles by getting information from other movements and programming these stimulations to get natural walk and it is accepted as a rehabilitation method for the correction of drop foot. This systems support person to approach natural form of walking. Foot drop is characterized by steppage gait. It is a gait abnormality. This systems helps to person for plantar and dorse reflection movements which are hard to done for foot drop patients.

Keywords : FES, foot drop, NMES, stimulator

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