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Testing the Possibility of Healthy Individuals to Mimic Fatigability in Multiple Sclerotic Patients

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Abstract : A proper functioning of the Central Nervous System ensures that we are able to accomplish just about everything we do as human beings such as walking, breathing, running, etc. Myelinated neurons throughout the body which transmit signals at high speeds facilitate these actions. In the case of MS, the body's immune system attacks the myelin sheath surrounding the neurons and overtime destroys the myelin sheaths. Depending upon where the destruction occurs in the brain symptoms can vary from person to person. Fatigue is, however, the biggest problem encountered by an MS sufferer. It is very often described as the bedrock upon which other symptoms of MS such challenges in balance and coordination, dizziness, slurred speech, etc. may occur. Classifying and distinguishing between perceptions based fatigue and performance based fatigability is key to identifying appropriate treatment options for patients. Objective methods for assessing motor fatigability is also key to providing clinicians and physiotherapist with critical information on the progression of the symptom. This study tested if the Fatigue Index Kliniken Schmieder assessment tool can detect fatigability as seen in MS patients when healthy subjects with no known history of neurological pathology mimic abnormal gaits. Thirty three healthy adults between ages 18-58years volunteered as subjects for the study. The subjects, strapped with RehaWatch sensors on both feet, completed 6 gait protocols of normal and mimicked fatigable gaits for 60 seconds per each gait and at 1.38889m/s treadmill speed following clear instructions given.

Keywords : attractor attributes, fatigue index Kliniken Schmieder, gait variability, movement pattern
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