

DDSIG New and Noteworthy

APTA Neurology Section

7/1/2016

Edition 2 Volume 1

New

Acute recovery from exercise in people with multiple sclerosis: an exploratory study on the effect of exercise intensities.

[Article Link](#)

Collett et al. Disability and Rehabilitation, 2016 Mar 13:1-8

Objective: To determine how people with Multiple Sclerosis (MS) recover from exercise may help inform interventions.

Design: Crossover Exposure-Response Design.

Setting: Laboratory.

Participants: Patients with MS (n=14; average disease duration 14.1±9.7 years and Healthy Adult Controls (n=9).

Methods & Main Outcome

Measures: To examine the physiological and perceptual responses following different exercise intensities, study participants completed a cycling exercise test to determine maximum capacity. Participants then performed 20-min exercise

sessions relative to their maximum capacity in random order separated by 7 days: (1) 45% and (2) 60% continuous cycling and (3) 90% intermittent cycling (30 s cycling, 30 s rest). During a 45-minute recovery period after each cycling session, tympanic temperature, exertion in breathing and legs, and cortical excitability were measured. **Results:** Individuals with MS required longer to recover than controls, as measured by leg exertion, and this increased with increasing intensities of cycling and correlated with tympanic temperature. Cortical excitability, measured with transcranial magnetic stimulation MEPs was significantly depressed in both MS and control groups at 45% and 60% and in the MS group, this correlated with leg exertion.

CONCLUSIONS and CLINICAL IMPLICATIONS:

- *A better understanding of how individuals with MS recover following exercise may help inform exercise prescription and fatigue management.*
- *In individuals with MS, the time to recover from feelings of leg fatigue increased with the intensity of the exercise session rather than total work performed and was related to increase in body temperature.*
- *These results support the need to consider a recovery period after exercise for persons with MS.*

Noteworthy

•••

Join us at IV STEP

Look for live Twitter feed from IV STEP

@APTADDSIG

Here are some highlights:

Friday July 15:

Movement System

Diagnosis and Prediction,
Ann F. VanSant, PT, PhD,
FAPTA

Saturday July 16:

Regenerative

Rehabilitation; Plasticity,

Chet T. Moritz, PhD

Fabrisia Ambrosio, PT,

PhD

Monday July 17:

Technology Use for

Plasticity and Participation,

Judy Deutsch, PT, PhD

Sarah (Sally) Westcott

McCoy, PT, PhD, FAPTA

Arun Jayaraman, PT, PhD

Link to article:

<http://www.ncbi.nlm.nih.gov/pubmed/26972274>