J Rehabil Med 2015; 47: 94

LETTER TO THE EDITOR

RE: EFFECT OF INTERVAL TRAINING ON COGNITIVE FUNCTIONING AND CEREBRAL OXYGENATION IN OBESE PATIENTS: A PILOT STUDY

It is likely that the use of stroke volume index and cardiac index in lieu of stroke volume (SV) and cardiac output (CO) could have resulted in larger changes due to training-related weight loss. Normalizing SV and CO with lean body mass might also have been an interesting avenue (as the authors have shown with VO_2max and VO_2 at the ventilatory threshold (VT)).

Accepted Oct 31, 2014; Epub ahead of print Dec 1, 2014

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RESPONSE TO THE "LETTER TO THE EDITOR: RE: EFFECT OF INTERVAL TRAINING ON COGNITIVE FUNCTIONING AND CEREBRAL OXYGENATION IN OBESE PATIENTS: A PILOT STUDY"

We thank Mr Frank Bour for his comment. Table I presents the cardiac index (CImax), stroke volume index (SVImax), cardiac output (COmax LBM) and stroke volume (SVmax LBM) normalized by lean body mass (LBM) at maximal effort. There were no significant changes (Wilcoxon's signed-rank test) in these 4 parameters, and larger effect sizes were generally observed compared with non-normalized values (1).

In conclusion, future studies on high-intensity interval training in obese subjects with larger sample size will be required to document their effects on haemodynamic variables.

Table I. *Normalized maximal haemodynamic variables before and after 4 months of high-intensity interval training in obese subjects (*n = *6)*

Parameters	Pre Mean (SD)	Post Mean (SD)	*p*-value	Effect size Hedge's, g
CImax (l/min/m^2)	8.45 (1.59)	8.87 (1.09)	0.50	0.28
SVImax (ml/m^2)	47 (7)	53 (6)	0.13	0.85
COmax LBM (l/min/kg)	0.30 (0.06)	0.31 (0.08)	0.50	0.17
SVmax LBM (ml/kg)	1.68 (0.33)	1.90 (0.49)	0.22	0.48

LBM: lean body mass; CImax: cardiac index; SVImax: stroke volume index; COmax LBM: cardiac output; SVmax LBM: stroke volume; SD: standard deviation.

REFERENCE

1. Drigny J, Gremeaux V, Dupuy O, Gayda M, Bherer L, Juneau M, Nigam A. Effects of interval training on cognitive functioning and cerebral oxygenation in obese patients: a pilot study. J Rehabil Med 2014; 46: 1050–1054.

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