LETTER TO THE EDITOR

Reply to Drs. Van Breda et al.

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TO THE EDITOR: We thank Drs. Van Breda et al. (7) for their interest in our recent CORP article (6). Although we appreciate the substantial challenges inherent with making maximal exercise measurements in the clinical setting, we assure them that there is nothing remotely “fragile” regarding our animal exercise measurements in the clinical setting, we assure.

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5. Criticism: “We believe (“that the ‘short constant-work rate verification phase’ after the steep-ramp test’) is . . . unrealistic and unethical in certain patient populations . . .” There is no disagreement that the health and safety of the patient must come first. However, repeated bouts of severe-intensity exercise (so-called HIIT) are well-tolerated by even severely compromised patient populations (1, 2, 4, 5). Indeed, one suspects that this has been known at least since the noted physician William Heberden’s observations in his heart failure patient in the late 1700s (reviewed in Ref. 8).

6) Criticism: “in patient populations you have to accept that the day-to-day (patho)physiological variation caused by non-physiological elements is ‘part of the deal’.” This specific issue was not raised in the CORP under scrutiny. Of course, without correct measurement of VO2max, Van Breda et al. (7) could not discern what was day-to-day variation vs. measurement error: a not inconsequential consideration for determination of efficacy in patient rehabilitation. This reasoning epitomizes why we are strong proponents of scientific rigor in VO2max.

The purpose of the CORP is specifically to address the problems of lack of reproducibility across and within scientific investigations. This is a central mandate from the National Institutes of Health, and others, to the scientific community. Without rigorous approaches to experimental design and measurements it is difficult, if not impossible, to discriminate data from dogma. Indeed, pursuant to the VO2max issue herein, reports that exercise training supposedly decreases VO2max in select individuals (personal communication) or increases maximal heart rate at VO2max (3) would have been more credible had rigorous criteria for VO2max been instituted as recommended in the Poole and Jones CORP.

REFERENCES


