Response to Letter to the Editor from Dr. Safer et al. regarding the article “Age-related changes in body composition in a sample of Czech women aged 18–89 years: a cross-sectional study,” published in *European Journal of Nutrition*

Aleš Gába · Miroslava Přidalová

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Dear Editor,

We appreciate that Dr. Umut Safer and his colleagues considered our study [1] interesting and recommended it to readers of the *European Journal of Nutrition*. With regards to the letter from Safer et al. about our recent publication, our responses to the letter are as follows.

In the Letter to the Editor, Safer et al. argued that pre-testing preparation is necessary to maximize the accuracy of the direct segmental multi-frequency bioelectrical impedance analysis (BIA). We agree with this statement and guarantee that all participants were asked to fast for 2 h, to avoid any vigorous physical activity for at least 48 h before the procedure, and to urinate or defecate before the measurements were taken. To comply with the standard conditions of measurement, we excluded those who use diuretics or are undergoing diuretic therapy.

Safer et al. have noted in their letter that we calculated fat-free mass (FFM) by an equation based on total body water (TBW) measurement, but this was not referenced. We would like to respond to this comment. In “Methods,” we described the principles for estimate body composition via BIA. According to Thibault et al. [2], the measurement of total body impedance allows estimation of TBW, and, by assuming that TBW is constant, FFM which contains body water. InBody 720 (Biospace Co., Ltd.; Seoul, Korea) estimates FFM by dividing TBW by constant. TBW was

estimated from area, volume, length, impedance, and a constant proportion. In contrast to single-frequency devices, InBody 720 uses multiple-frequency technology which improves the estimation of FFM, and, hence, body fat, by determining intracellular and extracellular water.

Finally, Safer et al. highlighted that validity of segmental multi-frequency BIA was referenced by the study of Ling et al. [3] that describes Korean middle-aged adult population. We dare to disagree with this statement because the study sample of the study mentioned above includes participants from Leiden Longevity Study (Netherlands). Although Mally et al. [4] reported that actual BIA equations should be revised, we have to point out that the authors of the study used single-frequency device (Tanita BC-418 MA) and the study participants were over 60 years old. And hence, this conclusion should not be generalized for all BIA devices and all age groups.

Conflict of interest None declared.

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A. Gába (✉) · M. Přidalová
Department of Natural Sciences in Kinanthropology,
Faculty of Physical Culture, Palacký University Olomouc,
Tř. Míru 115, 771 11 Olomouc, Czech Republic
e-mail: ales.gaba@upol.cz