Reply to “Letter to the Editor: Comments on Uchida (2018): ‘Unit of oxygen uptake efficiency slope’”

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Dear Editors:

I have read the comments of Dr. Reizo Baba et al. regarding my short review¹⁾, entitled, “Unit of oxygen uptake efficiency slope” published in *JPFSM* (2018) 7: 171-175. It is my great honor to have comments from the author who originated the oxygen uptake efficiency slope (OUES). I would like to thank Dr. Baba et al. for having an interest in my article and giving constructive comments.

The points of my review are to show that the unit of OUES is the same as oxygen uptake ($\dot{V}O_2$), and that the y -intercept b can be written as $b = -a \log_{10} \dot{V}_{E_{rest}} + \dot{V}O_{2_{rest}}$, where a , $\dot{V}_{E_{rest}}$ and $\dot{V}O_{2_{rest}}$ are OUES, minute ventilation and oxygen uptake at rest, respectively.

I think Dr. Baba et al. are in agreement with the above two points. Dr. Baba et al. wrote in their comments that the steeper the slope a (OUES), the deeper the y -intercept b . Because $\log_{10} \dot{V}_{E_{rest}}$ and $\dot{V}O_{2_{rest}}$ are constants independent of exercise, the above relationship $b = -a \log_{10} \dot{V}_{E_{rest}} + \dot{V}O_{2_{rest}}$ shows the same relationship as Dr. Baba’s comment that the steeper the slope a , the deeper the y -intercept b .

I completely agree with their comments that OUES is an excellent parameter to estimate $\dot{V}O_{2_{max}}$ without maximum exercise²⁾ and that the relationship between $\dot{V}O_2$ and $\dot{V}_E$ can help us better understand exercise physiology and its clinical applications.

Conflict of Interests

The author declares that there is no conflict of interests regarding the publication of this article.

References

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