Response to Creatine Kinase and Pressor Response to Orthostatic Tolerance

We thank Karamat et al for their comments on our recent article about sympathetic neural and pressor responses to orthostasis in elderly blacks. It is an interesting hypothesis that racial differences in creatine kinase (CK) levels might be one of the mechanisms for the enhanced pressor response to upright tilt in elderly blacks. However, whether CK activity measured in the blood and other tissue/organs accurately reflects CK concentration at the resistance vessels that provides ATP for vascular contractility and influences all its downstream effects remains to be determined. Because only upright blood pressure was higher in elderly blacks than whites in our study, one would wonder why blacks would have higher CK activity only in the upright posture but not in the supine position. It is possible that high CK activity may enhance contractile reserve by enhancing energy supply, when sympathetic nerve activity and norepinephrine levels become high (eg, upright posture). It also is possible that the higher upright blood pressure may attenuate sympathetic activation through the baroreflex, and thereafter, reduce the effects of CK activity on vasoconstriction in elderly blacks. A previous study from Dr Brewster’s laboratory showed that low serum CK was associated with a high incidence of fainting (syncpe). However, fainting often has nothing to do with orthostatic tolerance per se, but is more closely linked to the susceptibility to a neurally mediated reflex reaction. Nevertheless, we agree that the authors proposed an interesting idea. More research is needed to elucidate the role of CK in blood pressure control in blacks and whites.

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Disclosures

None.

Yoshiyuki Okada
M. Melyn Galbreath
Institute for Exercise and Environmental Medicine

Texas Health Presbyterian Hospital Dallas
Dallas, TX

University of Texas Southwestern Medical Center
Dallas, TX

Sara S. Jarvis
Northern Arizona University
Flagstaff, AZ

Tiffany B. Bivens
Institute for Exercise and Environmental Medicine
Texas Health Presbyterian Hospital Dallas
Dallas, TX

Wanpen Vongpatanasin
University of Texas Southwestern Medical Center
Dallas, TX

Benjamin D. Levine
Qi Fu
Institute for Exercise and Environmental Medicine
Texas Health Presbyterian Hospital Dallas
Dallas, TX

University of Texas Southwestern Medical Center
Dallas, TX

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Yoshiyuki Okada, M. Melyn Galbreath, Sara S. Jarvis, Tiffany B. Bivens, Wanpen Vongpatanasin, Benjamin D. Levine and Qi Fu

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In the *Hypertension* article by Fu et al (Okada Y, Levine BD, Fu Q. Response to Creatine Kinase and Pressor Response to Orthostatic Tolerance. *Hypertension*. 2013;61:e25), a correction was needed.

Not all of the authors were listed in this Letter to the Editor response. The complete author listing is as follows:

**Yoshiyuki Okada**
M. Melyn Galbreath
*Institute for Exercise and Environmental Medicine*
*Texas Health Presbyterian Hospital Dallas*
*Dallas, TX*

*University of Texas Southwestern Medical Center*
*Dallas, TX*

**Sara S. Jarvis**
*Northern Arizona University*
*Flagstaff, AZ*

**Tiffany B. Bivens**
*Institute for Exercise and Environmental Medicine*
*Texas Health Presbyterian Hospital Dallas*
*Dallas, TX*

**Wanpen Vongpatanasin**
*University of Texas Southwestern Medical Center*
*Dallas, TX*

**Benjamin D. Levine**
Qi Fu
*Institute for Exercise and Environmental Medicine*
*Texas Health Presbyterian Hospital Dallas*
*Dallas, TX*

*University of Texas Southwestern Medical Center*
*Dallas, TX*

This correction has been made to the current online version of the article, which is available at [http://hyper.ahajournals.org/content/61/2/e25.full](http://hyper.ahajournals.org/content/61/2/e25.full).