

## Letter to the Editor

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1 Letter to the Editor

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3 Correction to Tsuji2017

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5 Tsuji 2017 Jappl Physiol (doi 10.1152/jappphysiol.00232.2017 state on page 3

6 “*we are the first to demonstrate that hyperthermia-induced hyperventilation is not suppressed by the*

7 *resultant hypocapnia*”

8 This is incorrect.

9 Many previous studies in humans and other species have shown hyperthermia sustaining breathing  
10 and furthermore at PCO<sub>2</sub> levels lower than Tuji achieved. Thus (Cunningham & O’Riordan, 1957)  
11 showed that hyperthermia in Man by 2.9 °C stimulated breathing at PCO<sub>2</sub> levels of 25 mmHg,  
12 (Iampietro *et al.*, 1961) showed hyperthermia in Man by 3°F stimulated breathing with a PCO<sub>2</sub> fall of  
13 25 mmHg, (Rowell *et al.*, 1969) showed hyperthermia in Man by 1.5°C stimulated breathing with a  
14 PCO<sub>2</sub> fall to 27 mmHg, (Saxton, 1975) showed hyperthermia in Man by 2.5°F stimulated breathing  
15 with a PCO<sub>2</sub> fall to 22 mmHg and (Boden *et al.*, 2000) showed hyperthermia at 39.5 °C restarting  
16 breathing during hypocapnic apnea at 11 mmHg.

17

18 Yours

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#### Reference List

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29 Boden, A.G., Harris, M.C., & Parkes, M.J. (2000). The preoptic area in the hypothalamus is the source  
30 of the additional respiratory drive at raised body temperature in rats. *Exp Physiol* 85.5, 527-537.

31 Cunningham, D.J.C. & O’Riordan, J.L.H. (1957). The effect of a rise in the temperature of the body on  
32 the respiratory response to CO<sub>2</sub>. *Q J Exp Physiol* 42, 329-345.

33 Iampietro, P.F., Mager, M., & Green, E.B. (1961). Some physiological changes accompanying tetany  
34 induced by exposure to hot, wet conditions. *J Appl Physiol* 16, 409-412.

35 Rowell, L.B., Breugelmann, G.L., & Murray, J.A. (1969). Cardiovascular responses to sustained high  
36 skin temperature in resting Man. *J Appl Physiol* 27, 673-680.

37 Saxton, C. (1975). Respiration during heat stress. *Aviat Space Environ Med* 46, 41-46.

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