Last Word on Point: Counterpoint: Exercise training does/do not induce vascular adaptations beyond the active muscle beds

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TO THE EDITOR: We thank the commentators (3) for taking the time to prepare their excellent submissions. We believe that the premise of the Point: Counterpoint concept is that protagonists adopt adversarial positions in order that the process of debate might stimulate some new insight or ideas. To paraphrase Oscar Wilde “A debate that is not dangerous is unworthy of being called a debate at all.” We hope that, with the help of the commentators who have all raised valid and thought-provoking issues, we may have achieved this goal. As highlighted by several of the commentators, further research should now ensue and we hope that exercise physiology evolves in new directions that focus attention on direct vascular adaptations and the authentic stimuli that are associated with exercise and physical (de)conditioning. It is our view that, to date, rather too much emphasis has been placed on the effects of exercise being secondary to changes in established cardiovascular risk factors (1). Since the discovery of prostaglandins, nitric oxide, endothelins, and other paracrine agents, it is now generally agreed that exercise has direct effects on the vasculature. We hope that the outcome of our Point: Counterpoint discussion (2, 4) is that further research will be stimulated to determine whether these effects are associated with patterns of shear stress, pressure oscillations, endothelial progenitor cell modulation, or other currently unidentified factors.

REFERENCES