Last Word on Point:Counterpoint: The major limitation to exercise performance in COPD is 1) inadequate energy supply to the respiratory and locomotor muscles, 2) lower limb muscle dysfunction, 3) dynamic hyperinflation.

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TO THE EDITOR: The number of comments (5) received about the Point:Counterpoint debate on exercise limitation in COPD speaks by itself; understanding exercise intolerance in COPD is still attracting a lot of research interests. This debate is healthy as it will likely advance the therapeutic options to improve exercise tolerance in this disease. Issues rose about the heterogeneity of the COPD population and the multifactorial nature of exercise limitation in this disease is valid and important to consider when discussing the mechanisms of exercise intolerance in COPD. We have difficulties in accepting the theory that a limitation in blood flow to the limb muscles is a major factor, considering the published data demonstrating that lower limb blood flow is in fact adequate during exercise in patients with COPD when compared with healthy subjects (2, 4). It should nevertheless be recognized that this data come from a small number of highly selected patients and that there might an opportunity to readdress this issue by measuring leg blood flow in a larger patient population with a range of disease severity. Here again, the heterogeneity of the study population will be important to take into account considering that unrecognized heart failure may be present in a significant portion of patient (3). Last, we would like to emphasize that trying to understand exercise intolerance in COPD based on the determinants of the Fick equation is unlikely to be very productive. This physiological approach neglects the role of symptom generation, an issue of considerable importance in patients with COPD who primarily stop exercising because of dyspnea and/or leg fatigue (1), proximal to achieving a true limitation in VO₂.

REFERENCES