

Professor Bengt Saltin Symposium – Environmental challenges to human performance¹

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ABSTRACT

This short review is from a presentation made at the Bengt Saltin Symposium, October 15–17, at the 2015 Canadian Society for Exercise Physiology conference, Hamilton, Canada. The review provides context of the important work of the late Dr. Saltin's contributions to environmental physiology. In addition to well-controlled laboratory experiments to better understand the influence of hypoxia or temperature, or both, Dr. Saltin also led several field expeditions to the North Greenland, Kenya, Himalayas, and the Andes, where he studied several aspects of human adaptation to environment. The 1998 Danish High-Altitude Expedition to the Andes, in particular, resulted in many major contributions to the field of altitude physiology including, but not limited to, mechanisms of reductions in maximal oxygen uptake, the lactate paradox, acclimatization, muscle metabolism, gas exchange, cerebrovascular physiology, etc. Of note, many of these related studies were conducted in both Danish sojourners to altitude and Bolivian altitude natives of Aymara ancestry, thus providing some of the most mechanistic comparisons with high altitude natives to date. A framework of these physiological contributions in terrestrial extremes is provided in this review.

Keywords: Bengt Saltin, exercise, high altitude physiology, temperature



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