Book Review

Advanced Environmental Exercise Physiology, 2nd edition

Stephen S. Cheung, PhD, Philip N. Ainslie, PhD
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296 pages; paperback \$119 USD; e-book \$90 USD

Advanced Environmental Exercise Physiology was developed as a concise survey of the field of environmental physiology appropriate for those entering the research arena. The first edition was authored by Cheung alone in 2010. The second edition, released in 2021 in both e-book and print versions, is coauthored by Cheung and Ainslie, with the contributions from several other individuals acknowledged.

The textbook contains 16 chapters covering classic topics in environmental physiology: fundamentals of temperature regulation, heat stress, heat adaptation and heat therapy, hydration strategies for exercise, cold air exposure, cold water immersion, breath-hold diving, diving and hyperbaric physiology, physiologic adjustments to acute hypoxia, high altitude physiology, altitude training and performance, microgravity and spaceflight, exercise in polluted environments, chronobiology, cross-adaptation, and individual variability.

Each chapter begins with a list of objectives and closes with a short list of review questions. The content delivers a mix of fairly standard descriptive text, select research findings, and personal or practical perspectives. The depth of coverage varies across chapters, and this is reflected in the referencing. The use of tables and figures is appropriate to summarize or illustrate concepts. Text citations use author names, and these, along with research focus box descriptions, provide a sense of connection to the research community. There is sufficient detail to satisfy interested nonspecialists, and the switch in tone

between dispassionate and conversational provides a welcome balance for those less interested in reading straight technical content.

The appendix provides a helpful list of relevant societies, agencies, organizations, and books, with a strong North American bias. The reference list provides a sampling of the literature, with a mix of classic and less frequently cited works. The index is quite detailed, with embedded hyperlinks in the e-book version to quickly take readers to sections of interest.

The e-book is offered in most standard formats, protected from unauthorized redistribution but available for offline reading. It can be accessed by course instructors through *HKPropel*, but ancillary material for instructors was not found in preparing this review. The e-book explored on the *HKPropel* platform was readable with some lack of polish. Examples of the latter include inconsistencies in font and text sizing, some small images with often smaller text, and minor editorial errors.

Subject matter experts will certainly find areas of greater and lesser strength. This is not surprising for a book covering a broad field of inter- and multi-disciplinary research. Ultimately, though, the book is successful in positioning itself as an advanced introductory text. It will be of value to keen upper-level undergraduates, early phase graduate students, and residents or other medical readers looking for a highly digestible overview of environmental physiology. It will not be appropriate for those interested in comprehensive coverage of individual topics and the related literature.

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