Book Reviews

Exercise and Stress Response: The Role of Stress Proteins

Marius Locke and Earl G. Noble, eds.
Boca Raton, FL: CRC Press, 2002
US \$99.95, 226 pages, hardcover

The role of stress proteins in exercise is a relatively recent area of investigation, and the development of a book on this subject is most welcome. *Exercise and Stress Response: The Role of Stress Proteins*, part of the CRC Press Series in Exercise Physiology, provides a current and very worthwhile review of the role of stress response to exercise and health. There is strong support for the idea that expression of stress proteins (SPs) provides protection to cells and tissues. Scientists interested in the pursuit of SPs, especially as SPs relate to exercise, will find in this book a current review of the topics necessary for an up-to-date familiarity with the field. Topics covered (to name just a few) include transcriptional regulation of the mammalian heat-shock genes, SPs and myocardial protection, heat-shock proteins and reactive oxygen species, SPs and exercise-induced muscle damage, and modulation of immune response. The editors of this book are experts in the field of SPs and have chosen leading internationally known researchers as contributors. Even though there is a very strong emphasis here on exercise physiology research as it concerns SPs, the editors have included topics of applied interest suitable for practitioners and teachers.

Although long recognized as a stress, exercise has only recently been examined as a natural physiological method for inducing the protective cellular stress response. Not surprisingly, relatively few studies have examined the relationship between exercise and the stress response. The editors note that although investigation into cellular stress response, SPs, and heat-shock proteins is a well-established area of research (a PubMed search using the keywords *cells* and *stress* lists over 42 000 journal articles), the field of investigation examining how exercise alters the cellular stress response has only recently emerged (a PubMed search using the words *stress proteins* and *exercise* lists 85 papers). Because the expression of SPs has been shown to provide protection to cells and tissues, understanding the role of SPs during exercise is of considerable importance.

It appears that exercise is capable of altering cellular homeostasis to such an extent that the cellular stress response is activated and SPs accumulate in certain tissues. Nonetheless, the exact significance of increased SPs, not

to mention the mechanism(s) by which exercise induces SPs and confers protection at the cellular level, has not been determined. Although the physiological meaning of the SP response for exercise is far from completely understood, *Exercise and Stress Response: The Role of Stress Proteins* is an important contribution to the literature. Perhaps most importantly, it provides well-documented support for the use of SPs as molecular markers of cellular stress as a clear understanding of the functional importance of SPs in the muscular repair process.

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Conflict and Catastrophe Medicine: A Practical Guide

James Ryan, Peter Mahoney, Ian Greaves, and Gavin Bowyer
London, UK: Springer Publishing, 2002
US \$49.95, 408 pages, softcover

Do you want to read some words of wisdom regarding the practice of disaster medicine in a foreign country? Well, the authors of *Conflict and Catastrophe Medicine: A Practical Guide* have pooled their considerable experiences to construct an excellent handbook tailored to anyone with such an interest.

The authors have collected the lessons they have learned from participating in disaster relief programs around the world—in places like Azerbaijan, Kosovo, Bosnia, Namibia, and the Falkland Islands—and have organized them in this compact and very readable volume. The authors, all from the United Kingdom, have constructed a book that is rich in specific resources for readers in the United Kingdom, yet it has broader applicability as well. According to the preface, the book is designed “as an *entry-level* text aimed at medical, nursing, and paramedical staff undertaking work in a hostile environment.” It lives up to this task and is easily readable by a wide audience. However, there can be no mistaking that the authors have focused their attention on a specific type of reader—the medical student and resident (“junior health professional”) who is contemplating a rotation or experience in the field.

In fact, this handbook should constitute a must read for readers who fall into that category. Although the chapter titled “A Guide to the Medical Student Elective Abroad” does not appear until late in section 2, it is