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

quite clear from beginning to end that every aspect of the book has been designed to educate the eager young professional. Despite this focus, the book still contains many useful pearls for any who are considering the field. This is true for all but the clinical sections, which come with the explicit warning that they are “not intended for the experienced senior physician . . . seasoned by numerous deployments.”

The book is organized into 5 separate sections. The first 2 give an interesting overview to the field of “conflict and catastrophe” medicine in general. These sections start with a background of global trends regarding both conflicts and disasters, then proceed with the “process” of becoming involved in the field. They are clearly intended to help someone who is considering involvement in a deployment of any kind to better understand what he or she might be getting into. The third section is a general overview of certain clinical aspects of medical care in the field. Because this section is more of a general overview and aimed at a wide audience, it loses some practicality; diagnostic and management strategies are only cursorily addressed. To have expanded this section much more, however, would have resulted in a *much* longer book. Only 2 short chapters in length, the fourth section briefly discusses the aftermath of a disaster or conflict and the (hopeful) transition back to normal. The second chapter, though, titled “Hard Knocks and Hard Lessons,” is one of the best in the book and contains brief scenarios that actually occurred and the lessons that can be learned from them. The final section is devoted to resources. Although readers who are looking for extensive checklists will be disappointed, there is a tremendous amount of useful information, from publications such as clinical reference texts to collections of Internet websites related to disaster and conflict medicine. This is in addition to the intelligent design of an existing *brief* and focused list of additional readings and resources at the end of most chapters throughout the book.

Members of the WMS should note that although the title of the book suggests an explicit focus on true disaster and conflict medicine as exemplified by events in Rwanda, Kosovo, or Afghanistan, the content is far more broadly inclusive of any sort of foreign or remote location where exposure to the environment and limited resources are factors. In fact, one of the early (and interesting) chapters is a collection of experiences by doctors who have practiced in 3 separate environments: polar medicine, cruise and expedition medicine as experienced on the Falkland Islands in recent years, and the medical environment involved in oil and gas exploration.

Overall, the book is very well written. The chapters are short, focused, and about as to the point as chapters

can be. At the same time, they are authored with a personable tenor. One chapter even ends, “the authors are happy to answer any specific questions from readers and can be reached via e-mail,” though no e-mail addresses are listed.

The authors do an outstanding job of imparting lessons learned from often painful sounding experiences, striving to make future deployments by the reader better for everyone involved (eg, “Debriefing and post-mission health checks are vital . . . one of the authors of this chapter developed malaria 3 weeks after returning home from a mission in East Africa”). The character of the book is entirely one of practicality and includes a constant and somber tone regarding potential risks and hazards. Although it is mentioned on several occasions that the greatest hazard to personnel is the combination of alcohol and automobile, numerous other hazards and situations are discussed. These include physical hazards such as how to handle road blocks and what to do if you are kidnapped and held for ransom (do not try to escape). They also include less physical but equally dangerous hazards, such as cultural snafus or local politics (eg, when with local officials, “drink moderately or not at all—if necessary blame an upset stomach”). Even the problems encountered upon return home (“repatriation”) are discussed.

Amazingly, even though the chapters are short, succinct, and very readable, they are also complete with specific resources, especially for readers from the United Kingdom (eg, “Been tortured? Contact the Medical Council for the Victims of Torture at 96-98 Grafton Road, London NW5 3EJ”).

The book is an extremely worthwhile read for anyone considering involvement in the field of disaster medicine in a foreign country, and its value is easily doubled if you are in medical training or are from the United Kingdom.

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Tenzing Norgay and the Sherpas of Everest

Tashi Tenzing and Judy Tenzing

Camden, ME: Ragged Mountain Press/McGraw Hill,
2001

US \$26.00, 294 pages

Tashi Tenzing authored this book in honor of his Sherpa people, on whose backs so many western climbers have climbed the Himalayas and achieved fame and fortune. Tenzing is the grandson of Tenzing Norgay, who, with Sir Edmund Hillary, was the first Sherpa to reach the