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Running for Women – Your complete guide for a lifetime of running

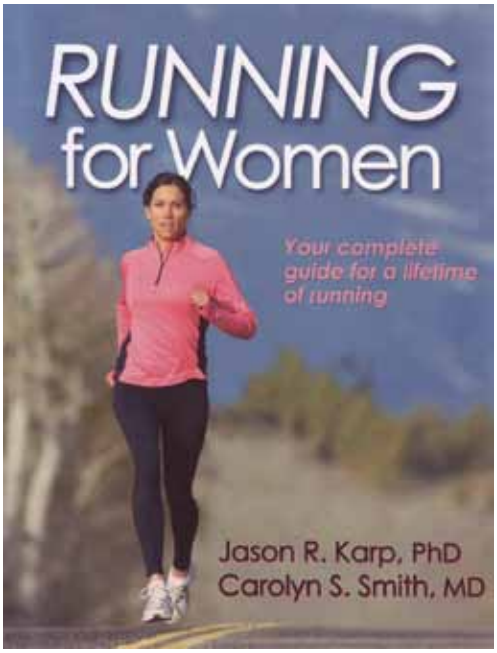
by Jason R. Karp and Carolyn S. Smith

Champaign, Ill.: Human Kinetics, 2012, 218 pp, ISBN: 978-1-4504-0467-9, $17.95

Running for Women is the third book by Jason R. Karp reviewed in New Studies (see NSA, 1/2010 and 1-2/2012), a sign that Karp has established himself as one of the most prolific and respected endurance specialists publishing today.

For this book he has allied with Carolyn Smith, who serves as the Director of the student health service and the Head Medical Team Physician for the Department of Intercollegiate Athletics at Marquette University in the USA. She is also the Medical Director for the athletic training education programme, a successful ultramarathoner, and U.S. Olympic Marathon Trials qualifier. Together, Karp and Smith are highly qualified to deal with the various aspects of running for women.

The first question that might come to mind in this context is, "Why is there a need for a special running book for women?" According to Karp and Smith, the answer is easy: Men and women not only differ psychologically and behaviorally, but there are also many anatomical, physiological, hormonal, and metabolic differences between males and females. Many of these differences influence females' response to running, which raises the question whether women should train differently than men.



In response to the popularity of running among women, a great deal of scientific research has been undertaken to understand what characteristics influence the difference in running performance between the sexes, a difference that averages 10.7% in favor of men across all running distances. This research starts with the heart. During puberty, men's hearts grow larger than those of women, creating a larger, more powerful pump. Men also have more oxygen-carrying hemoglobin in their blood, owing to their greater blood volume. Together, the larger heart and greater blood volume create a cardiovascular system that supplies a greater amount of oxygen to the working muscles, giving men a higher aerobic

capacity. As a result, men are able to sustain a faster running pace. This cardiovascular advantage for men explains why the best female runners don't run as fast as the best male runners in distance races up to the marathon.

In ultramarathons, however, which are run at a slower pace, a narrowing of race performances between the sexes occurs. Cardiovascular differences become less important, and other characteristics, such as fuel use by the muscles and the ability to dissipate heat, become more important. Ultramarathons may therefore represent a unique opportunity for women to excel; scientific research has revealed that women have a greater capacity than men to metabolise fat and conserve their limited store of carbohydrate (glycogen), which may give them an advantage for very long endurance activities. It seems even possible that elite women could beat elite men in ultramarathons. Research is revealing that women ultramarathon runners seem to have a greater resistance to fatigue than do equally trained men whose performances are superior up to the marathon distance.

And then, of course, there's estrogen. It is, according to Karp and Smith, the single biggest factor that differentiates runners in a race. It is a powerful hormone, influencing many physiological aspects, including metabolism, glycogen storage, lung function, and bone health. The more one learns about estrogen, the more runner-friendly it seems. Indeed, estrogen is so important to bone health that its deficiency, which is often caused by irregular or absent menstruation due to a high level of training, is the most significant risk factor for osteoporosis in active women.

Given the widespread effects of estrogen and the cyclic changing of a woman's hormonal environment, it is evident that women should train differently than men or at least alter their training to account for the hormonal changes. So women should no longer simply follow what men are doing. How the changes in estrogen and its sister hormone progesterone across the menstrual cycle affect endurance performance and what implications they have for training is a big part of what this book is about and distinguishes it from all others on the same subject.

The book is divided into three parts. Part I sets the conceptual framework by addressing the physiology of women, beginning with women's differentiating cardiorespiratory, hormonal, metabolic, muscular, and anatomical characteristics. It then discusses how female physiology – menstrual cycle, pregnancy, menopause, and aging – changes the body and affects training and performance. The chapter headings are as follows: 1. Performance Factors and Sex Differences; 2. Menstrual Cycle, Hormones, and Performance; 3. Pregnancy; 4. Menopause; 5. Older Runners.

Part II focuses on the principles and components of training and the types of workouts that target women's different training needs and goals. It discusses the best times of the menstrual cycle to do various types of workouts and proposes guidelines for how women can manipulate their training programms around their cycles to maximise results. It also shows how women can use sex differences to their advantage in training and competition. This part of the book consists of the following chapters: 6. Components of Training; 7. Base Building; 8. Acidosis (Lactate) Threshold Training; 9. Aerobic Power Training for VO2max; 10. Speed and Strength Training; 11. Building Your Training Program.

Finally, part III examines the health and wellness of female runners. It discusses the consequences of disordered eating, osteoporosis, and menstrual irregularities (collectively known as the female athlete triad) and includes chapters on common running injuries and nutrition. It also recommends preventive measures to minimise the risk of injury and disease. The corresponding chapter headings are: 12. Female Athlete Triad; 13. Injuries and Female Runners; 14. Performance Nutrition and Female Runners.

The Appendix of the book is an overview of the evolution of women's competitive running from ancient Greece until the present.

All this is presented by the perfect combination of two highly respected scientists and practitioners. Their experience comes together in this comprehensive book, which is in spite of its scientific basis very readable.

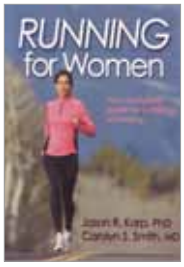
Of particular importance are the detailed sections on running when pregnant and during menopause, as well as the chapter on a balanced diet to maintain health and peak performance. Quite frankly, it is vital that older female runners note the authors' recommendations on the prevention of bone loss and that adequate estrogen is vital to bone health.

Although it is clear that a lot of the information presented in this book can be found elsewhere, not least in other books by Jason Karp, here, everything is written with female runners in mind. That the information is presented in a serious and detailed manner is especially worth mentioning, because many other books geared towards women runners are written in a lighthearted and sometimes even funny way.

Perhaps for some readers the book includes too much biological background information at the cost of practical information in the form of training plans. It is true that the main focus is not so much on practical training, but it is precisely the good balance of theory and practice that is the main asset of this book.

All things considered, *Running for Women* by Jason Karp and Carolyn Smith provides extremely valuable and insightful information about female physiology and highly useful guidance on the best way to train. It is truly a must-read for both women runners and the men who support them.

Reviewed by Jürgen Schiffer



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