Book Reviews

Exercise and Sport Sciences Reviews

K. B. Pandolf and J. O. Holloszy
Williams & Wilkins Ltd.; 68300047 0;
£41.00; 1990; 464pp

This is the 18th volume in the excellent review series. Approximately half the volume is occupied by eight topics in exercise physiology and biomechanics, beginning with Katz and Sahlin on the role of oxygen in glycolysis regulation in which they note that, at 40% VO_2 max, glycolysis is increased 25-fold with no increase in muscle lactate. Stainsby and Brooks follow with a beautifully balanced article on lactic acid control. Young completes an energetics trio in considering energy substrate utilization at altitude and in the heat and cold. Then follow two articles on weightlessness, concerning effects on exercise and bone properties. The former article illustrates the tethering procedures necessary to run on a treadmill at zero G. There is some current confusion regarding methods of assessment of body fat, and Baumgartner and colleagues discuss bioelectric impedance as a measure of body composition. Reid and Jensen discuss body segment inertia parameters in terms of selecting a set of prediction equations, in which age and sex are primary factors. Finally, Lavay and colleague consider the difficult problem of measuring cardiovascular endurance of persons with mental retardation.

On the sports medicine side are two good reviews, first on the important topic of coronary heart disease risk factors are exercise in childhood, with the interesting suggestion that lipid deposition on the intima and media of blood vessels may be limited by low intensity exercise, i.e. without causing changes in VO_2 max. Next, Bruce Baker discusses prevention of ligament injuries to the knee.

In one of the most interesting reviews, North and colleagues consider the beneficial effects of exercise on clinical depression, work that is ably paralleled on this side of the Atlantic by Professor Steinberg. Finally, an excellently readable and informative volume is completed by Sallis and Colleagues on determinants of exercise behaviour, Weiss and Bredemeier in a timely debate on sports ethics,

and Walter and Hart on epidemiological methodology in exercise science research.

Y. Koutedakis

Advances in Sports Medicine and Fitness

W. A. Grana, J. A. Lombardo, B. J. Sharkey and J. A. Stone
Year Book Medical Publishers Inc.;
81513580 7; £48.00; 1990; 266pp

This third volume in *Advances in Sports Medicine and Fitness* is devoted entirely to the paediatric athlete. The editors and contributors have presented a well organized volume which addresses many of the problems and concerns related to the participation of the young person in sport. There are four diverse sections including Sports Science, Medical Disorders, Sports Traumatology and Rehabilitation.

In the first section on 'Sports Science', the issue of performance potential and trainability of children and youth is well explored. In addition, the controversies surrounding both endurance and resistance training are discussed. In 'Medical Disorders', the chapters comprise thorough reviews on the preparticipation examination, cardiovascular problems, chronic fatigue and psychosocial development in the young athlete. The latter chapter exposes the need for future research in a complex area. The 'Sports Traumatology' section examines four primary areas including the pathophysiology of growth centre injury due to acute and chronic trauma, elbow and knee ligament injuries as well as the management of meniscal problems. Finally, the last section on 'Rehabilitation' presents one very useful chapter on 'Unique Factors in Rehabilitating the Young Athlete'. Rehabilitation exercises are summarized and principles and methods of therapeutic modalities outlined.

This volume may be best suited as a reference book with the underlying views based on the American health-care delivery system including prevention, treatment and rehabilitation, and the community and educational school system sports programmes. However, this should not be a deterrent as it is a

valuable update and review. Its concise form makes it easy to read, but the cost of £48.00 may be prohibitive. As a whole, this book would prove most valuable to the sports physician or physiotherapist involved in a children or youth team sport.

Nancy Laurenson MSc

Colour Atlas of Low Back Pain

K. Mills, G. Page and R. Siwek
Wolfe Medical Publications Ltd. 0 7234
0959 5; (1990) £25.00; 92pp

This 92 page *Atlas of Low Back Pain* begins with a short text on some causes of low back pain in text form then devotes 21 pages to photographs of examining technique. There is then a 28 page chapter on investigations which concentrates mostly on plain radiographs of the lumbar spine then the *Atlas* considers treatment ranging from home remedies through to spinal surgery. Only 2 pages in the book were devoted to history taking. This probably reflects the authors' statement that no amount of talking and listening will localize the specific painful spinal joint.

The photographic coverage of the chapter on physical examination is well illustrated and comprehensive.

I found the chapter on investigations weighted heavily towards plain radiographs of the lumbar spine. I would expect a book published in 1990 to have more detail of computed tomographic scan and magnetic resonance imaging of the lumbar sacral spine.

The chapter on treatment provides an overview of most forms of therapy available in the management of back pain.

One major omission is the lack of any mention of back school programmes which are known to be cost effective in the management of problem back patients. The surgery photographs add little to an understanding of low back pain.

This book's main recommendation is its extensive chapter on examination of the low back pain patient where the peripheral neurological examination is comprehensively addressed.

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