Book Reviews

Resource Manual for Guidelines for Exercise Testing and Prescription

S. N. Blair, P. Painter, R. R. Pate, L. K. Smith and C. B. Taylor, eds, for the American College of Sports Medicine
Lea and Febiger, 1988: 436 pp

This resource manual has been produced by the American College of Sports Medicine through its certification programme for those training to become health and fitness professionals, and is a very comprehensive overview of the major topics which form the scientific basis of health-related fitness. Note that the emphasis is on health-related rather than sports-orientated fitness, although there is, of course, considerable overlap between the two.

The volume consists of some 48 chapters, written by different authors and each separately referenced, organized into nine sections. Section I is a short pertinent overview of applied anatomy with biomechanics, followed by a longer Section II on exercise physiology which includes metabolism, cardiorespiratory responses and adaptations, fatigue, detraining, environmental considerations and exercise specificity. Section III is 50 pages on pathophysiology. As a former pathologist turned sports physiologist, I was particularly pleased to see two such sections adjacent in the same book. Sodeman's great *Pathologic Physiology* has always been the book of

physiology gone wrong; this section concerns more the effects of pathological processes on system function, including atherosclerosis, heart disease and pulmonary disease together with the role of exercise in hypertension, diabetes mellitus, renal failure and peripheral vascular disease. It also summarizes the variety of medications which affect the exercise response. Section IV discusses health appraisal and exercise testing, including clinical testing, while in section V preventive and rehabilitative programmes in cardiorespiratory fitness, strength, endurance and flexibility are usefully described. Section VI covers safety, injuries and emergency procedures, and section VII deals succinctly but very well with physiological and psychological considerations of ageing, together with exercise prescription for both children and older people. The penultimate section deals with behavioural aspects, including adherence to exercise programmes, cessation of smoking, nutrition and weight management, and stress control. The final section is devoted to administrative, legal and financial aspects of exercise programmes.

Introduced by cardiologist Bill Haskell, and with Forewords by the equally well known Peter Raven and Kenneth Cooper, this is a genuine resource manual with its multiplicity of good authors, and huge amount of relevant information written in fairly small print. The diagrams are plentiful and very compact. It is not a manual for the professional exercise physiologist; it is very much a first class manual for the general practitioner and for all those, including very many sports science students, whose work takes them within the very broad area of health-related fitness. To them, I would thoroughly recommend this excellent and readable book, backed as it is by the authority of the American College of Sports Medicine.

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Benefits of Exercise: the Evidence

P. H. Fentem, N. B. Turnbull and E. J. Bassey
Manchester University Press, Manchester, 1990, £40.00, 344pp, ISBN 0-7190-2430-7

There is currently more interest than ever before in the effects of exercise on health. In particular the effects of activity and inactivity on the preva-

lence and progress of cardiovascular disease have attracted much attention. This is perhaps not surprising as diseases of the cardiovascular system are the biggest single preventable cause of death in developed countries. In 1978 (was it really that long ago?) the authors published *The Case for Exercise* which reviewed the evidence relating to exercise and health in an attempt to identify not only the benefits but also the risks of exercise for different populations. More recently (1988) this was updated as *The New Case for Exercise*. The conclusion of these reviews was that the evidence supported the case for exercise; specifically, preventive effects on the development of coronary heart disease and osteoporosis were identified, together with benefits for those with respiratory diseases, arthritis, hypertension and diabetes. Exercise was also identified as a major factor in reducing the deterioration in physical working capacity which accompanies the ageing process.

In the process of identifying and reviewing the evidence, the authors conducted a wide-ranging search of the published literature. This book is one outcome of that search, and consists of a bibliography of some 2500 relevant references. The references are grouped in sections based on the major body systems. Each section begins with a succinct (one sentence!) summary of the evidence: for example, in the section dealing with the effects of exercise on mood, the summary tells us that exercise cures mild depression in some subjects. You cannot argue with that. This is followed by a slightly expanded definition of the problem, the scope of the evidence, specific methodological problems, and a summary of the evidence. The references themselves are provided with a number of keywords which relate it to other sections.

The authors admit in the introduction that this is not a comprehensive bibliography. In particular, they have concentrated on papers published between 1978 and 1988, although some earlier references have been included. They have also exercised judgment in deciding which references should be included and which should not. In some ways, this is unfortunate, in that others presented with the same evidence would have made a different selection, although this reviewer has no complaints in this respect. It is, however, also inevitable if the outcome is to remain of manageable size. Having said that, the day must be at