Fig. 2

VO₂ with an increase in grade was not significantly different between P1 (4.37) and P2 (4.69). This indicates that 1 min stages appear to allow an adequate VO₂ kinetic response. Treadmill time was significantly less during P1 (10.1 min) than during the other protocols (Table II) and was consistent with the recommendations that a total testing time of 7 to 10 min in length is adequate to allow appropriate maximal physiological adjustments (Pollock et al, 1976).

There were no differences between protocols in terms of the maximal physiological data obtained, with the exception of RPE max. RPE max was lowest during P1, and significantly lower during P1 than during P3 ($P < 0.05$). Therefore, it appears that 1 min stages are adequate for a VO₂ max test and the shorter testing time may have resulted in a lower perception of test difficulty at peak exercise with no reduction in VO₂ max when compared to protocols of a longer duration.

CONCLUSIONS

Even though all of the protocols tested elicited similar VO₂ max data (1.1% variance between means), we suggest a protocol using 1 min test stages and running speeds that approximate the runner's training pace for the assessment of VO₂ max. This may result in a lower perception of

difficulty throughout the test due to enhanced subject comfort and shorter testing times.

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BOOK REVIEW

Title: **REHABILITATION OF ATHLETIC INJURIES — AN ATLAS OF THERAPEUTIC EXERCISE**

Authors: Joseph S. Torg, Joseph J. Vegso and Elisabeth Torg

Publisher: Wolfe Medical Publications, London 1987

Price: £21.50

275 pages

Index. Numerous half-tone photographs

ISBN 0 8151 8820 X

This book deals with range of motion, flexibility and strength whilst maintenance of cardio-respiratory fitness and specific sports skills are mainly ignored. The book is written for the professional in a well-appointed department of rehabilitation, many pages are devoted to strapping and fitting various types of brace (fifteen pages to knee braces) and indeed external joint splinting is not well-utilised in this country. Of necessity a number of exercises are repeated for differing injuries leading either to repetition or cross-referencing through the book; the cross-referencing is somewhat cumbersome. The book is fully-illustrated with photographs and bibliography at the end of each section which is separated into anatomical and injury-related divisions. The chapter on drug therapy displays a knowledge of the IOC banned list but is not an experienced guide for working within those restrictions as it mainly deals with the pharmacology of the banned drugs. The book also includes the regular use of Phenylbutazone which is banned in this country for sports injuries. No home exercises are given but all in all a useful attempt to rationalise rehabilitation exercises for soft tissues in a well-equipped gym or physiotherapy department, as long as the sportsman can attend regularly.

Malcolm Read