SHORT REVIEW

GRAVITY INVERSION BOOTS – A POTENTIAL HAZARD

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(Abstracted by H. Robson)

At the suggestion of a Californian orthopaedic surgeon, that back pain could be alleviated by traction applied by suspending the body from the ankles, apparatus was developed to permit this to be done in comfort, and for prolonged periods up to 20 minutes. Klatz and Goldman, working at the Chicago College of Osteopathic Medicine, reported in 1983 that the procedure could be hazardous by raising arterial blood pressure and intra-ocular pressure. Although various forms of suspension apparatus are being used frequently and indiscriminately in the USA, some people are trying out the technique in the UK, and it has been shown on a television programme presented by a doctor.

METHOD

Student volunteers, 18 men and 2 women, aged 22-33 years, were tested at rest, then after 3 min suspension, and again a minute after they had resumed their seats. Blood pressure, pulse rates, central retinal arterial pressure and intra-ocular pressure were recorded.

RESULTS

A marked rise in systolic blood pressure was noted during inversion, with a significant rise in diastolic pressure (Fig. 1).

A larger rise was noted in both systolic and diastolic pressures in the central retinal artery (Fig. 2).

Intra-ocular pressure also rose in a similar fashion, on average from 20 mm Hg to 35 mm (Fig. 3).

DISCUSSION

The authors consider that although these results are probably of little significance to their students, suspended only for a three-minute spell, prolonged suspension, especially in the middle aged and elderly, could be hazardous. There is a risk with patients with several unsuspected conditions; latent glaucoma, hypertension, atherosclerosis of the cerebral arteries, small aneurysms of the Circle of Willis, hiatus herniae, and uncompensated congestive cardiac failure. Among many of these patients there are likely to be those with back-ache who might be tempted or even advised to attempt

gravity inversion.

We understand that peri-orbital haemorrhage has been reported following inversion, and one of the authors, R. K. reports that his own blood pressure rose from 125/85 to 210/165 during inversion. This diastolic rise is much larger than would be expected during strenuous running exercise.

The authors sent a long press release to this journal, with a request that we report the work to alert doctors and others to potential hazards.

REFERENCE

Klatz, R. M., Goldman, R. M., Pinchuk, B. G., Nehon, K. E. and Tarr, R. S., 1983 "The effects of gravity inversion procedures on systemic blood pressure, intra-ocular pressure and central retinal artery pressure". J.Amer.Osteopath. Assoc. 82: 111-115.

Editor

BOOK REVIEW

Title: WATER SPORTS FOR THE DISABLED
Author: Water Sports Division, British Sports Association for the Disabled
Publisher: E. P. Publishing Limited, 1983
Price: £9.95

Sir Ludwig Guttmann, the great pioneer of the use of sport in rehabilitation said that society as a whole should encourage its disabled fellowmen in their efforts to conquer their disability through the medium of sport and become again full members of the community. The British Sports Association for the Disabled was founded in 1961.

Since those early days, much has been achieved by so many in this field, and the variety of activities now available to the disabled has increased greatly. This attractive and lavishly illustrated book deals with water sports. It is written by a team of experts in co-operation with the Governing Bodies of Sport. Its theme is to widen the horizon for handicapped trainees, but always having in mind safety precautions and careful handling.

The text commences with brief clinical notes on various disabilities. Guidance in the safety measures required is given. Following chapters deal with angling, canoeing, rowing, sailing sub-aqua, water skiing, power boating, model yachting, canal cruising, and swimming. These chapters are beautifully illustrated by photographs, and line drawings of special equipment required, probably saving hundreds of words. Neither are the mentally handicapped forgotten. They have a special chapter describing suitable activities and adventure possibilities.

The closing chapters of the book deal with important subjects such as hypothermia, insurance cover, indoor facilities and access to buildings, handling a disabled person, and voluntary help. Conclusion of the book is with appendices which are full of useful information.

I enjoyed reading this attractive book. It radiated happiness and optimism. It is a credit to the contributors. Its usefulness must be wide and should interest doctors, physiotherapists, physical educationists, voluntary organisations and their helpers. In short, all who are mindful of the needs of others.

Noel Bleasdale