

BACK EXERCISES IN PERSPECTIVE

MRS. H. P. MAREE, B.Sc. Physiotherapy (Rand),
Diploma in Phys. Ed. (National Teacher's),
Teacher's Certificate in Physiotherapy, U.C.T.

This article is not a learned discourse with references because this is a result of practical experience in several fields; among school children, Health Clinics (good and bad), gymnastic clubs, refresher courses for Physical Education and Physiotherapy students and patients.

The standard of perfection of performance varies. It is obvious that the correct result, i.e. the result aimed at, depends upon accurate performance of the exercise and is not just a means of using up energy. The Olympic gymnast has this in common with the patient receiving exercise therapy. In general we are inclined to use our special techniques such as Proprioceptive Neuromuscular Facilitation, as accurately as our experience allows, but when we teach an active exercise we are less stringent in observing the rules of accurate performance.

Whether the patient has previously been treated by mobilising techniques or manipulations, or has had exercises, the purpose of these treatments is lost if the patient himself cannot retain the correct alignment achieved during these treatments. It is well known that a mobile joint demonstrates aches and pains less frequently than a stiffer joint, but it is necessary to be able to adequately control the movements of such a joint.

Back exercises are closely allied to abdominal and postural exercises, and must be considered in the same way as 'Posture' i.e. as static or dynamic. Starting positions are of utmost importance and should be as perfect as possible or the movement that follows will be of inferior quality and value. This is clearly demonstrated by the developmental sequence progressed from positions on the mat to standing and shows that purposive movement is superimposed upon a stable background. In no less a manner is this demonstrated by a

gymnast, and to perfection in a gymnast of Olympic standard. An exactly correct starting position is necessary to the precision movement which follows. The extraordinary mobility of the gymnast's joints is precisely controlled throughout the movement by the strong and well-trained muscles of the trunk.

There is no question of which muscles are the most important in maintaining or performing the postures or movements. All the trunk muscles are of equal importance and co-operate with and support one another perfectly: the back muscles, the muscles of the posterior abdominal wall, and the abdominal corset, and the muscles of the hip joints and pectoral girdle. The area of the "back" is both extensive and deep. "Longitudinally" it includes the area from the base of the skull to the insertion of the hip joint muscles into the femurs. The "depth" is from ventral to dorsal surfaces.

The controversy of back extension exercises as opposed to back flexion exercises is, in my opinion, merely a theoretical argument. The back muscles themselves are both deep and superficial, and the curve in the thoracic area is covered and controlled by groups of more superficial muscles in relation to the pectoral girdle. In the lumbar area one must consider the muscles of the abdominal corset, the hip flexors and the hamstrings in relation to the pelvic girdle. Although the 'back' may be divided into areas by the spinal curves, the function of the back must be considered as a whole, and hyperextension is undesirable because this is limited to the secondary curves, i.e. cervical and lumbar areas.

The aim of "back exercises" is to ensure the alignment of the back as a whole. This stabilising in the good postural position will ensure a more practical and harmonious balance through the back as a whole, and the correct balance of the pelvis over the lower limbs is thus ensured. Exercises done in isolated areas with the sole purpose of strengthening muscles, might well accentuate cervical or lumbar lordosis and malalignment of the bones and joints. Correct alignment of the trunk structure and the pectoral and pelvic girdles in relation to it, does not infer rigidity, but mobility of joints

and muscles, which is well controlled by the strength of those muscles. One cannot achieve correct alignment without mobility, and one cannot control those positions and movements if the muscles are not strong.

The word "back" describes position as opposed to the front; but fundamentally and functionally the back is synonymous with the vertebral column and is the 'core' of the structure.

GENERAL

WORLD FEDERATION OF PHYSICAL THERAPY

Seventh International Congress will be held in Montreal, Canada, in June, 1974.

The Theme of the World Congress is "The Expanding Horizons of Physical Therapy". In keeping with this theme the committee for the Scientific Programme hopes to indicate in the Plenary Sessions how the physical therapy profession is using the Biological and Social Sciences in developing its role and its therapeutic approach.

On Monday, the Bio-sciences will be discussed in terms and their application to the treatment areas encountered in physical therapy; on Tuesday the Social Sciences will be integrated with certain health problems of both individuals and groups. Thursday and Friday are reserved for brief presentations in the major physical therapy specialities, and for Special Interest Groups.

Two half days will be devoted to the Annual General Meeting. One afternoon is allocated for hospital visits and demonstrations. Every attempt will be made to keep terminology simple and to use visual aids to amplify a point. This clarity is essential; even although there will, of course, be simultaneous translations into English, French and Spanish.

Science's challenge of today is an exciting one for our profession; bring your open, questioning minds, and be prepared to meet it.

Registration Sub-committee Report. Plans are proceeding well and member organisations will have information by the end of 1972 regarding such details as registration fees and categories and how and where to obtain the forms. The registration forms will be printed in English, French and Spanish.

We are planning for 1 500—2 000 registrants. It won't be long.

Official carriers such as KLM will be pleased to help you make travel arrangements.

ANTE- AND POST-NATAL SPECIALIZATION

The following letter was read at an N.E.C. meeting recently and it was felt to be of sufficient specific importance to publish it in this Journal.

Any comments or discussion will be welcome.

9th April, 1972

The Secretary, S.A.S.P.

Qualifications for Ante- and Post-natal Specialization

Owing to the comparative newness of this form of education for pregnant and post-parturient women, much confusion concerning the desirable qualifications for those dispensing it has ensued. I would therefore be glad if these notes could be brought before your committee for discussion:

1. Post-natal work is not the cause of the main conflict.
2. Pre-natal work demands a good knowledge of:
 - (a) Kinesiology
 - (b) Obstetrics
 - (c) Psychology and Sociology
3. No general training for Physiotherapists, Remedial Gymnasts, Psychologists, Sociologists—or even Doctors—separately covers, in depth, these subjects. If people belonging to these various disciplines have, successfully, carried out the work in question, it has only been as a result of a tremendous amount of study to bring their thinking and understanding into line with all these subjects.

4. They have, nevertheless, made a valuable contribution over the years and in many countries. Moreover, many of them have been instrumental in raising this work to the level at which it now stands. Cognisance of this should be taken.
5. Names which spring to mind are: Sheila Kitzinger (Psychology and Social Anthropology) (Oxford); Erna Wright (S.R.N. and Midwifery) (England); Frau Edith Risch (Gymnast, S.B.T.G.) (Zurich), and Doctors Grantly Dick Read, Fernand Lamaze, Pierre Vellay and Edmund Jacobson.
6. In "An Approach to Ante-natal Teaching" Sheila Kitzinger says: "One can only hope . . . that in the near future a system of training and certification for ante-natal teachers, both for those who are already Midwives or Physiotherapists, and for those who are now lay teachers, will be evolved. Such a course is urgently required if standards are to be raised." (This quote and much of the thinking in these notes appeared in an article in the *September, 1969, S.A.S.P. Journal*, but no comments were received by either the author or Editor.)
7. The Obstetric Association of Chartered Physiotherapists, a specialist branch of the C.S.P., has recently issued a questionnaire to members practising this work with a view to initiating a training scheme at post-graduate level; a suggested curriculum included lectures by specialists in a, b, and c of par. 2.
8. The National Childbirth Trust of Great Britain has had a Teachers' Training scheme for many years.
9. A course of lectures on Ante- and Post-natal Physiotherapy is a part of our Midwives curriculum, and questions on it are included from time to time in their examination papers.
10. I know of no similar course for our Medical students by a registered Physiotherapist, but I stand corrected.
11. The South African Medical and Dental Council has decreed that only registered Physiotherapists may handle this work. (In the absence of higher education a physiotherapist is presumably deemed capable of conducting this work straight from "school".)
12. The Editor of the S.A.M.J. replied to the above decree cautioning thinking twice before closing the doors to allied disciplines (*27th December, 1969*).
13. A notice of the formation of the Paramedical Association for Childbirth Education, stating aims and objects, has been circularised.
14. What percentage of Physiotherapists, graduating annually, are involved with this work?

Comment:

1. We are not the only country concerned with this problem, but elsewhere attempts to resolve it are taking place.
2. I would like to suggest the institution of a further training at post-graduate level, in which any candidate with a suitable degree or certification, providing she satisfies the standard demanded, may qualify for this specialization.
3. Interaction between the various allied disciplines can only enrich the whole.

Yours faithfully

R. C. HARTE.

DURBAN SCHOOL—KING EDWARD VIII HOSPITAL

Mr. P. Gounden, who qualified at the Durban School in 1969, has recently commenced Teacher training at the University of Durban/Westville.

Mr. Gounden is the first of the Durban diplomates to undertake this training and he will spend his first year at the University studying for the U.E.D. and the second year at the Physiotherapy School, King Edward VIII Hospital.

Contragulations are extended to Mr. Gounden for his achievements so far and he is wished every success in the future.