Athletic Ability and the Anatomy of Motion, 2nd edn.


This book first appeared in 1982 in a market which had few publications in biomechanics. Professor Wirhed writes as a sports enthusiast who has studied atomic physics and anatomy, this combination leading to his present teaching of kinetics. Newton’s laws and atomic physics sit uneasily together; however, the relevance of the former and the principles of levers to his theme are fully pursued in this book. Now, 16 years after the first publication, many authors have responded to a burgeoning interest in the principles underlying body movement and it is pertinent to ask whether the book still fills a gap. The book has 2 main parts. One is devoted to functional regional anatomy and is interleaved by the other, devoted to biomechanics. The importance of stretching exercises to the development of a flexible body is a pervasive theme throughout the book which almost gives it a special flavour.

The anatomical illustrations (charcoal drawings with red highlights) are attractive but some, such as a lumbar kyphosis in an erect trunk, are plain wrong. A very selective approach has been made to the musculoskeletal anatomy, but it is creditable that the 2 parts of the book are linked wherever possible. Functional correlates are ascribed to every structure mentioned and accompanied by numerous sketches of people engaged in exercises. The sketches in particular could help the nonspecialist to relate their exertions to the contents of the text. The correct names of muscles are used but some alternatives, presumably intended for effective communication, are disconcerting. For example, soleus becomes the ‘flounder’ muscle and gluteus minimus, whose attachments are depicted in an anterior view, is referred to as the ‘small buttock muscle’. These seem unnecessary, as does referring to the lower limb as a leg and the leg as a lower leg. It is refreshing that eccentric actions of muscles are recognised. Most anatomical textbooks distance themselves from daily living by only listing the unopposed concentric actions.

The author suggests that leaders of sports and youth recreation, physical education teachers and physiotherapists will benefit from the book and it is suggested as a textbook for those in training. It will probably stimulate some readers, especially those who seek to understand the rationale behind techniques for developing strength and flexibility and, maybe, as coaches, when looking for effective ways of communicating with athletes. For them, the book probably does fill a gap in the market.

Therapists can obtain more useful information from other sources if their patients are sportspersons. It fails as a textbook on 2 counts. First, there are neither references nor guides to further reading and this would deter the inquisitive student. Secondly, it lacks rigour. For example, the distinctions between mass and weight and between force and power are too often lacking. A Golgi tendon organ is referred to as the Golgi apparatus and the length-tension characteristics of muscles are given as those found in vitro with no hint of the limited outer range in vivo.

Some may conclude that the title is misleading. Athletic ability requires a body that is both strong and flexible, and these are aspects which the book addresses. However, neither quality is sufficient and the book totally fails to address the importance of neural control. There remains a need for a book which discusses the coordinated deployment of the anatomical structures leading to the execution of a perceived athletic skill. It could even have the same title.

DON GRIEVE


It is refreshing to find an anatomy book that exults in being concise; the big books that become bigger with each edition are doomed to failure, in my view, on the general market. Anatomy is fast disappearing from medical undergraduate courses and these days you can even, I am told, become a surgeon with little knowledge of the subject, so the big books won’t even be attractive for that.

I quite like this book. The content is good: it would be perfectly possible by using this book, and attending diligently the seminars, practicals and lectures, to do fairly well in our medical anatomy course, and it would be suitable for nurses and some paramedics, although there is not enough of the right sort of things for physiotherapists. I would lay it out differently, and I would place more emphasis on the anatomy of the clinical examination of a patient (surface anatomy, etc.), but that is a personal matter. I would also include a little piece at the beginning explaining how the mammalian body is simply a modification of the general vertebrate body plan. There are two reasons for this: first, students, in my experience, are fascinated by the insights this provides, and secondly, it is important in the diagnosis of neurological disease to appreciate the segmental vertebrate nature of things.

There is not too much emphasis on individual muscles (good), although we could do with some myotomal innervation (see above). I see that skull foramina are listed and, like many anatomy teachers and examiners have been assiduous over the last 20 years in asking candidates about them. Recently, though, I have started to wonder whether there is any point to this other than as an intellectual exercise (a good enough reason, certainly, but of little value clinically).

The illustrations include diagrams, scans and radiographs (all good), the print is clear and the paper satisfactory. I have, though, one gripe. The book appears to go out of its way to avoid showing external genitalia, and the one female full frontal that is shown is unshaven, so nothing is visible. I protest at the increasingly prudish nature of our society—the body is nothing to be ashamed of—and my heart will be greatly saddened if publishers of anatomy books feel they have to shield penises and vulvas. Where would we be without them?

W. S. Monkhouse