Letters to the Editor

Doping taboos

I read with interest your editorial entitled “Doping Taboos”. I have a particular concern at present involving the use of drugs and asthmatic athletes.

Up to 16% of children may have asthma and in adults this prevalence may approach 12%. Conventional therapy for asthmatics involves the early introduction of anti-inflammatory agents such as inhaled corticosteroids with the use of short acting β₂ agonists as required. Both these groups of substances are allowable by the International Olympic Committee, apart from the short acting β₂ sympathomimetic fenoterol which is metabolised to para-hydroxyamphetamine. A problem that is arising in clinical practice is the use of long acting β₂ sympathomimetics, notably the use of salmeterol. National guidelines on the management of asthma are moving towards the earlier introduction of this drug if the asthmatic’s symptoms are not adequately controlled on 800 μg of budesonide or beclometasone daily. In fact, the Swedish National Asthma Guidelines¹ suggest that salmeterol should be introduced at this stage. Unfortunately salmeterol remains a banned substance, as confirmed by correspondence from the doping control unit of the Sports Council and from the International Olympic Committee Medical Commission.²

Salmeterol does not appear to have been abused to the same extent as clenbuterol, another long acting β₂ agonist. Clenbuterol decreases fat content and increases lean body mass in animals. Doses to achieve repartitioning are far in excess of those required for bronchodilator activity.³ As salmeterol is a recognised part of the management of asthma, it does seem inappropriate that this drug remains a banned substance at present, resulting in a possible reduction in asthma control.

Salmeterol by inhalation is particularly useful in prolonging protection against exercise induced bronchoconstriction, with its effects lasting for at least 12 hours⁴ and it is probably the most effective drug for this common complaint.

As salmeterol remains a banned substance at present, a large group of patients is denied the conventional treatment which is used on a regular daily basis by a growing proportion of the asthmatic population.

I would, therefore, fully support the editorial comment that theoretical consideration should not prevent the use of drugs which are given as first line orthodox treatment of common conditions.

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References


Achilles tendon rupture


Achilles, the Greek demigod who gives his name to the calcaneal tendon, was killed by an arrow released by Paris, a common mortal, not by Apollo.¹ According to Greek mythology, Apollo is one of the sons of Zeus and Leto, not a goddess. He merely guided the arrow shot by Paris to the only vulnerable point of Achilles, namely his heel.¹

Dr Krueger-Franke and colleagues should be congratulated for the amount of dedicated work that they have performed along the years, as theirs is probably the largest reported series to date of repaired ruptured Achilles tendons. However, their complication rate is very high, and the number of patients available for follow up is only approximately one third of the group originally treated. This low follow up rate may significantly bias the outcome of their study, as the patients reporting for further examination may be the ones experiencing symptoms.

Although the non-operative functional treatment advocated by German orthopaedic surgeons has recently been proven to be effective, a recent study of functional treatment following surgical repair has shown that calf circumference difference can be only 0.8 cm, and isokinetic strength, power, and endurance can all exceed 90% of the unaffected leg.² Even using more conservative immobilisation regimens accompanied by intensive postoperative rehabilitation, strength and endurance can closely approximate the uninjured side.³

As in other cases, “in medio stat virtus”. Younger, athletically active patients may be treated surgically. For older ones, or those with reduced functional requirements, a conservative approach can be considered. For both groups, functional treatment would probably be helpful to reduce the problems and the evils of prolonged immobilisation. The definitive answer is likely to be given by well controlled prospective randomised trials.

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Key Issues in Musculoskeletal Physiotherapy

Jack Crosbie and Jenny McConnell

This publication is a review of topics related to physiotherapy for musculoskeletal conditions and will be most appropriate to the needs of those who seek to understand in detail the scientific foundations underpinning musculoskeletal therapy. The book is one of a series intended to promote those intellectual processes that the general editors consider critical to clinical management. These include an accurate understanding of the clinical significance of theoretical data that informs practice, and the continued systematic development of methods of treatment and evaluation.

Chapters are contributed by a variety of authors drawn from medicine and physiotherapy, and each explores some aspect of the anatomical, physiological, and biomechanical mechanisms relevant to musculoskeletal rehabilitation. The topics covered are diverse and include skeletal muscle performance, pain sensitivity, articular adaptation and joint stiffness, muscle disuse atrophy and strength training, and the clinical significance of correct alignment of the body segments.

Unfortunately within the general field of musculoskeletal pathophysiology and therapy the contents do not address a specific theme. This lack of focus may render Key Issues in Musculoskeletal Physiotherapy less popular than other similar publications, although the subjects discussed are, individually, of considerable importance.

Each section is well referenced, as one would expect with this type of work, and the authors consider their material thoroughly. Some sections are more applied than others, such as that on segmental alignment. The authors generally explore the scientific fundamentals of the topic, review the experimental and clinical data and then attempt to distil the significance of this to physiotherapy practice. The style of presentation does, however, tend towards extended discussions unrelieved by adequate structure, a weakness inherent in many traditional scientific reviews. The clearest chapters are those on the physiological factors governing skeletal muscle performance, nociception, the treatment of stiff joints and promotion of effective segmental alignment. Certain topics are illustrated well but, in general, greater reliance upon good quality diagrams would benefit the reader.

This book will primarily be of interest to those whose work is concerned with musculoskeletal rehabilitation, research, or the training of therapists, and provides another interpretation of the relevant scientific and clinical literature relating to this subject. Key Issues in Musculoskeletal Physiotherapy is, however, unlikely to differ sufficiently from existing works to be assured of a place on every departmental bookshelf.

Geoffrey C Goats

Taping Techniques: Principles and Practice

Rose Macdonald

This book of taping techniques is a reference work likely to become an indispensible resource for all those concerned with musculoskeletal rehabilitation and the prevention of injury. Functional taping can assist the healing process by supporting and protecting injured structures, thus allowing an earlier return to normal activity. These techniques will be of particular interest to physiotherapists, occupational therapists and physicians practising in sports medicine. Taping techniques can, of course, play an important role in general rehabilitation and Taping Techniques is also recommended to this wider readership.

Taping Techniques is an edited work and the contributors, specialists in physiotherapy, podiatry and nursing, are drawn mainly from the world of sports medicine. The text explains in detail both the purpose and practical application of a wide range of taping procedures. Part 1 is concerned with general issues that include the history of taping, an introduction to foot biomechanics and therapy, and a review of the taping literature. Part 2 is, in essence, a regional atlas of taping techniques appropriate to the ankle, Achilles tendon, foot, knee, shoulder girdle, elbow, hand and wrist. There is also additional material on spicas and basic first aid.

The style of writing is, in general, clear and concise. The introductory and review sections are discursive but the majority of the information is organized as highly structured ‘notes’ accompanied by informative line diagrams. This method of presentation will encourage practitioners to use the book as a clinical manual to be consulted when the need arises or as an aid to teaching.

A methodology section is devoted to each particular region of the body. Taping techniques are described and illustrated individually, and related to the common pathological conditions that affect specific anatomical structures. The text lists the indications and contraindications for each procedure, and the materials required during an application. There are also full details concerning the function of each technique, optimum positioning of the patient during treatment and the practical methodology itself. Concluding remarks concern those functional checks that allow one to ensure that the technique has been used effectively and gives details of any practical tips that the author has discovered through experience. The book contains both an index and a glossary.

For those practising in sports medicine, whether training or qualified, or working in other fields of physical rehabilitation and injury prevention, this book provides a well structured, easy to use and comprehensive practical guide to taping techniques. As a work of reference it is to be recommended warmly.

Geoffrey C Goats

Skeletal Muscle in Health and Disease: A textbook of muscle physiology

David A Jones and Joan M Round

It may be difficult for many clinicians to keep up with the rapid developments in muscle physiology and be able to relate them to occasional clinical problems. This small 221 page book is clearly written, well organized and graphically illustrated. Its early chapters review muscle physiology including structure, innovation and electrical activation. The mechanism of force generation is described and the chemistry and age-related changes reviewed. Training mechanisms for both power and endurance have a chapter each