The literature contains several cases of exertional rhabdomyolysis, a potentially dangerous condition that cause the release of intracellular contents from skeletal muscles in concentrations that may lead to renal and other systemic complications. The concern of the general public for body fitness has led to widespread frequenting of fitness centres and the use of widely advertised electronic devices, which can be readily purchased and used at home. Our patient was not a bodybuilder and did not take anabolic-androgenic steroids. He just used the electronic muscular stimulator at home. To our knowledge, this is the first report of rhabdomyolysis caused by an electronic stimulator. The purpose of this report is to assist clinicians in recognizing this condition and to warn people against careless use of these devices.

REFERENCES


COMMENTS

This case presentation provides evidence of the possible misuse of “home electronic stimulators” resulting in appreciable injury to the user. These devices are advertised as an easy route to a “six pack” set of abdominal muscles. The reality is that there is little evidence to support their use in exercise to achieve cosmetic or strength changes. Importantly, there may be people that are susceptible to the injury defined in this case, particularly with prolonged use (using the stimulator for several hours daily rather than in a short term) and professional exercise sessions.

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BOOK REVIEWS

Drugs in sport: the pressure to perform

This is a paperback book produced by the British Medical Association and is touted as “an invaluable aid.” I would beg to differ, and, in addition to several factual inaccuracies, the overall impression was that this had not been written by anyone who had been involved in the care of the elite athlete. Would you care to write a text by reviewing relevant material, but you can tell if the authors have eliminated any name as a doctor involved in elite sports medicine in the UK despite this being a British book. Furthermore, the topic of doping is ever evolving, and it will become increasingly inaccurate with the adoption of the World Anti-Doping Code for the 2004 Olympic Games. Doping is an area where accuracy of information is imperative. A lot of the information looks almost like a “cut and pasted” from the IOC’s website, which for accuracy at the time of production, is fine but the authors lack the ability to translate this into meaningful practical issues. For example, in discussing caffeine it states “because caffeine is so widely consumed in beverages…, the IOC permits a maximum of 12 mg/ml in urine”. So what might this mean in practical terms for the athlete? However, this is no longer pertinent because caffeine is now restricted, its use only being monitored. With regard to information on local anaesthetics, it says “local anaesthetics are permitted in sport, if medically justified and subject to certain restrictions, principally relating to the route of administration.” What exactly would this mean to the young sports doctor trying to decide whether to use an injection or not? Yet again the evolving doping world does not place restriction on the use of local anaesthetics now. The detail on the IOC’s requirement for evidence of asthma is so sparse that the doctor would not know what evidence is required. The process of therapeutic use exemption (TUE) which is now required for notification of β2 agonists and corticosteroids and other substances on the banned list required for therapeutic reasons had not started when the book was published, but is now one of the major logistical minefields that sports doctors face. It correctly states that pharmaceutical, chemical, and physical manipulation are prohibited methods of doping, but is unable to give the reader any examples of what this might mean, how athletes have tried to beat the tests in the past, and why the regulations on the sample collection procedure had to evolve as a result.

I became increasingly angry and frustrated as I continued to read this text. The issue on confidentiality of information seemed black and white to the authors. The dilemma for the team physician when one of the players admits in confidence to anabolic steroid abuse before a major game and, if tested positively, would result in the team being eliminated provides a scenario that requires a greater challenge to the management of the issue. This is particularly the case if the doctor is employed by the sport to care for the athlete, and the athlete is funded by the World Class Performance programme with money paid to them by their sport. The notion that the National Sports Medicine...
Institute is a membership organisation is false (also sadly the organisation no longer exists!). The proposal to involve the Health Development Agency in education issues in doping is flawed, as they have no prior experience in this area. Carbohydrate loading using an intensive seven day training to deplete stores initially on a protein rich diet has not been recommended for some years. I could go on and on. Why oh why didn’t they have knowledgeable authors with working experience in the topic? To anyone other than those with a passing interest in what was happening in anti-doping a few years ago, it is potentially dangerous and should not be purchased.

Target audience: essentially sports scientists and coaches, with clinicians as a secondary audience.

Rating

- Presentation 13/20
- Comprehensiveness 15/20
- Readability 13/20
- Relevance 13/20
- Evidence basis 18/20
- Total 72/100

A D J Webborn
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Cross country skiing


Heikki Rusko has put together a comprehensive text with largely evidence based opinions on sports science and coaching and their relevance to Nordic skiing. In depth analysis and discussion on central issues is interesting, although at times becomes bogged down with too many laborious statistical graphs. Generally the development of key themes progresses logically and is easy to follow, but sometimes the text becomes unnecessarily complex and detracts from the issue. Summary boxes at the end of each section listing key points are particularly useful in pulling together complex topics, and good recommended reading lists give plenty of scope to explore topics further. If you are a clinician you may be disappointed in the lack of detail on musculoskeletal and medical issues, which have huge ramifications in this sport and make up many of the day to day duties for the sports physician.

I loved the section on the team physician which gives very practical advice for those sticky situations often encountered on tour and has obviously been written from a position of personal experience! Descriptions of skiing techniques is incredibly detailed and backed up with data gathered from elite athletes. It makes reference to the "1970s survey of elite US college athletes". This is the questionnaire in which athletes provided their (theoretical) response to taking an undetectable drug that would guarantee a gold medal but would lead to their early death. I had always thought this to be a sports medicine urban myth—but to my surprise a reference is provided.

The introduction briefly reviews the history, legal regulation, and ethics of doping agents and also athletes' attitudes to the problem. The main categories of ergogenic drugs are then scrutinised, including their therapeutic categories, potential to enhance sporting performance, and their adverse effects in the short or long term. Further chapters deal with doping in elite sport and the use of anabolic androgenic steroids in British gymnastics. A pedantic thought, should that plural actually be gymnasia? The three appendices at the back of the book detail the UK anti-doping programme, laboratory analysis procedure, and contact details of UK national governing bodies.

One paragraph on page 85 is particularly topical - "Sports medicine - is there a lack of control?" This refers to a 1988 Lancet editorial recommending that sports medicine should be brought under the umbrella of a recognised body with accredited training. Progress over the intervening 15 years has hardly been rapid, but at least there’s a joint government/profession working group currently taking this forward.

C Jarvis
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The malalignment syndrome:
implications for medicine and sport


The concepts of malalignment and imbalance have gained popularity in sports medicine over the past 10 years, and have been used to explain many of the injuries seen in athletes and physical activity participants present. Rather than simply treating local symptoms, sports medicine practitioners are now looking more globally for contributing factors to injuries and encourage preventative measures that address these more global deficits. The malalignment syndrome is a comprehensive text that can assist sport medicine practitioners in understanding how malalignment contributes to a range of conditions, and how various sports and physical activities can impact on the alignment of anatomical structures. The book addresses not just the assessment and diagnosis of malalignment syndrome, but also several approaches to treatment, including manual therapy, orthotics, injection, surgery, and self-help techniques.

As a clinician, academic, and researcher, I have found the level of detail in this book excellent. The authors and contributors have provided comprehensive material that is well supported by research evidence where available. Biomechanics, as it relates to malalignment, can be quite daunting for many practitioners. However, the author has managed to use clear explanations and weave biomechanical information into an understandable and applied context. The large number of figures used in the book compliments the text and allows the reader to fully understand the concepts being discussed. Some photographs, however, require greater clarity in print.

Of interest is the way in which implications are drawn for several areas of medicine including neurology, gastroenterology, orthopaedics, cardiology, and gynaecology. A potential danger of covering several areas in a single chapter is that each chapter is given only superficial attention. In this text, however, comprehensive summaries are provided for each specialty area. Greater use of brief case studies would, however, be beneficial. The malalignment syndrome is also discussed with reference to a wide variety of sports and physical activities, including climbing, waterskiing, swimming,
weightlifting, and throwing sports (chapter 5). This specific information provides a comprehensive overview for those working with particular sports, although further references for each sport would allow the interested reader to pursue further knowledge. The equestrian sports were singled out for a chapter of their own (chapter 6), whereas this information may have been better placed with all the other sports.

This book is an excellent resource for either the sports medicine practitioner or academics preparing theoretical and clinical teaching on malalignment syndrome. Upper level students in the breadth of sports medicine and rehabilitation professions would also find this book a well written resource.

### Rating

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G Kolt
Faculty of Health, Auckland University of Technology, Private Bag 92006, Auckland 1020, New Zealand; gregory.kolt@aaut.ac.nz

### CALENDER OF EVENTS

#### The Leeds Sports Imaging Course

6–7 September 2004, Leeds, UK.

This two day course is aimed at both radiologists and clinicians who are involved in sports imaging. The course will comprise an imaging and clinical overview of all relevant joint, bone and soft tissue sporting injuries.

The faculty will comprise internationally recognised skeletal imaging and clinical experts from the UK, Europe and North America who will deliver state of the art lectures and lead sessional discussions. Each session will cover the spectrum of injury for a specific anatomical area beginning with clinical lectures that will allow the subsequent imaging lectures to be placed in context. All aspects of imaging will be discussed but will concentrate on the use of ultrasound, conventional MR imaging and MR arthrography for the diagnosis, staging and prognosis of sporting injuries. Therapeutic image guided intervention using fluoroscopy, CT and ultrasound will also be demonstrated.

13 RCR category one CME credits have been awarded.

Further details: Carol Bailey, Course co-ordinator, MRI Department, B Floor, Clarendon Wing, Leeds General Infirmary, Leeds LS1 3EX; tel: +44 (0)113 3928286; fax: +44 (0)113 3928241; email: Carol.Bailey@leedsth.nhs.uk

#### 2004 APS InterSocity Meeting – Integrative Biology of Exercise

October 6–9 2004, Austin, TX, USA

Further details: Email: meetings@the-aps.org; website: www.the-aps.org

#### Australian Conference of Science and Medicine in Sport

October 7–9 2004, Alice Springs, Northern Territory, Australia


#### BASEM Conference 2004

14–17 October 2004, Belfast, UK

Main themes: Overuse Sports Injuries and Muscle Injuries. Keynote speakers include: Chris Bradshaw, Medical Director, Olympic Park Medical Centre, Melbourne and Kim Bennell, Assistant Professor, School of Physiotherapy, Melbourne University.

Further details: Email: fionnuala.sayers@greenpark.n-i.nhs.uk

#### 2nd International Ankle Symposium

15–16 October 2004, Newark, DE, USA

The meeting will examine ankle instability and other related ankle pathologies from a multidisciplinary perspective. Attendees will include clinicians and scholars from the disciplines of orthopedics, podiatry, physical therapy, athletic training, biomechanics, and sports medicine. This conference aims to build on the success of the inaugural symposium held in Ulm, Germany in December 2000. Emphasis will be on oral and poster presentations of original research along with selected plenary presentations.

The deadline for abstract submissions is July 1 2004.

Further details: Jay Hertel, PhD, ATC, FACSMB, Conference Co-Chair, Penn State University, email: jnh3@psu.edu, or Thomas Kaminski, PhD, ATC, FACSMB, Conference Co-Chair and Host, University of Delaware, email: kaminski@udel.edu. Website:http://www.udel.edu/ias/

#### The 23rd Congress of Sports Medicine of the AZ Sint-Jan AV

15–16 October 2004, Brugge (Belgium)

Further details: tel: +32 (0)50 45 29 00; 45 22 30; fax: +32 (0)50 45 22 31

#### 1st World Congress on Sports Injury Prevention

23–25 June 2005, Oslo, Norway

This congress will provide the world’s leading sports medicine experts with an opportunity to present their work to an international audience made up of physicians, therapists, scientists, and coaches. The congress will present scientific information on sports injury epidemiology, risk factors, injury mechanisms and injury prevention methods with a multidisciplinary perspective. Panel discussions will conclude symposia in key areas providing recommendations to address the prevention issue in relation to particular injuries and sports.

Further details: Oslo Sports Trauma Research Centre and Department of Sports Medicine, University of Sport and Physical Education, Sognsveien 220, 0806 Oslo, Norway. Email: 2005congress@nih.no; website: www.ostrc.no

#### 4th European Sports Medicine Congress

13–15 October 2005, Lemesos, Cyprus

Further details: Email: pyrgos.com@cytanet.com.cy

#### BASEM Conference 2005

10–12 November 2005, Edinburgh, Scotland

Further details: Email: basemoffice@compuserve.com

#### BASEM Conference 2006

5–7 October 2006, Oxford, UK

Further details: Email: basemoffice@compuserve.com
Cross country skiing

P Blackman

doi: 10.1136/bjsm.2003.008250

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http://bjsm.bmj.com/content/38/4/506.1

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