Bone density in elderly women

Editor,—In the article by Rhodes et al, “Effects of one year of resistance training on the relation between muscular strength and bone density in elderly women”, I was surprised to see no mention of HRT status in the women in the trial. Given the relatively small number of women taking part, surely this is quite an important variable?

Blinding the outcome that is being measured is often used to eliminate bias in research studies. However, the design strategy needs to be flexible enough to incorporate the distinctive features of the intervention under investigation.

C GISSANE
Department of Health Studies, Brunel University
Osterley Campus, Isleworth Middlesex TW7 5DU, United Kingdom

Author’s reply

Editor,—The answer to this inquiry is very simple. None of the women in our study were on hormone replacement therapy.

E C RHODES
School of Human Kinetics, Vancouver British Columbia V6T 1Z1, Canada

Who should be blinded?

Editor,—I was very pleased to read the recent article by Eston and Rowlands on the various stages of development of a research project. It is important to have a research methodology that deal specifically with sports science/medicine examples. Even though the authors described the paper as “a brief guide to the most common sequence of stages”, it nevertheless addressed many good points about research design. However, their description of blinding was perhaps oversimplified, disregarding experimental design in some areas of sports science/medicine research. They stated that in a single blind study the participants do not know which treatment they are receiving, and in double blind studies neither the participants nor the tester know which treatment the participants are receiving.

Research in sport and exercise medicine encompasses a number of professions, who differ in the way they provide treatments and interventions. In some of these disciplines, the way the intervention is administered will prevent researchers from blinding the investigation as described in the paper. Recent work on the design of randomised clinical trials has suggested that a study may be described as single blind if one of the groups of people involved does not know which intervention has been given to each participant. It was added that it may be the investigators assessing the outcomes that are blinded.

A recently published paper sought to determine the effects of stretching before exercise on lower limb injury. The authors of this study were able to claim that the study was single blind, despite the fact that all participants were aware of the intervention they were receiving. The blinding was achieved by masking the practitioner who diagnosed the injuries to the patient allocation. Blinding the examiner rather than the patient is a common practice when there is no other way to disguise the specific treatment.

A traditional view may state that blinding must be carried out as described by Eston and Rowlands. However, the design strategy needs to be flexible enough to incorporate the distinctive features of the intervention under investigation.

A R CRAWFURD
Ivy Court, Tenterden Kent TN30 6RB, United Kingdom
e-mail: ivycourt@doctors.org.uk

The genetics of physical fitness

Editor,—Might I briefly comment on Dr Lavin’s observation that elite athletes, whom he classed as “freak”, “are as removed from real life as it is possible to be”? “Real life” is what is all around us, from the homeless in the street to the most highly paid sports, pop or business star. Humphrey Lyttelton, whose jazz talents took him on a di- verse path from his high positioned family, was told once by his uncle “Youirs is a different world”. To which he replied “No, it is the same world as yours, only bigger”. Elite competitors have a talent which they market to their best and brief advantage, as do many in the creative arts, sciences, and professions. They also bring enjoyment to many of our lives, and are no more—and no less—“freaks” than genetic outliers in any of the talents.

CRAIG SHARP
Brunel University
Middlesex TW7 5DU, United Kingdom

Serum concentrations of P-selectin decline rapidly in resting humans

Editor,—In assessing the health benefits and risks of physical activity, there has been much interest in the relation between exercise and the immune and inflammatory responses. However, only a very limited number of studies have examined the role of exercise on adhesion molecule profiles. P-selectin (CD62P) is an adhesion molecule expressed on activated platelets and endothelial cell/s and is one of a group of related molecules that play an important role in leukocyte rolling on the vascular endothelium. Therefore it is intimately involved in the regulation of immune and inflammatory responses. Circulating forms of several adhesion molecules, including P-selectin, have been observed in humans, and elevated levels may reflect acute infection or inflammation. Alterations to the concentrations of circulating adhesion molecules have also been associated with increased risk of specific diseases. High levels of soluble P-selectin, for example, have been associated with cardiovascular risk.

My colleagues and I are interested in the influence of smoking on the aetiology of chronic inflammatory periodontal disease and have recently completed a study in which we observed the acute in vivo effect of smoking a standard 2R1 research cigarette on the serum concentration of a range of adhesion molecules and on adhesion molecule expression on circulating monocytes and neutrophils.

As part of the experimental protocol, all subjects, who were apparently healthy, rested in a dental chair in a semi-reclined position for one hour. There were no statistically significant differences between the serum levels of soluble P-selectin of heavy smokers (n = 9; serum cotinine concentration >100 ng/ml), light smokers (n = 10; serum cotinine concentration 60-100 ng/ml), and non-smokers (n = 10; serum cotinine concentration ≤10 ng/ml) at baseline. However, an incidental and unexpected observation was that soluble P-selectin concentrations fell significantly over the one hour rest period, independent of smoking status, as shown in fig 1.

It may be relevant to note that Kirkpatrick et al reported an increase in soluble P-selectin on repeated exercise in subjects with intermittent claudication. They concluded that the rise in soluble P-selectin after exercise may indicate progressive platelet

![Figure 1 Mean concentration of soluble P-selectin (ng/ml) in serum at rest of resting heavy smokers, light smokers, and non-smokers at baseline and various time points after smoking a standard 2R1 research cigarette (non-smokers did not smoke). Differences in the concentration of soluble P-selectin between smoking groups at baseline were analysed using a two group t test. No significant differences were found. Variations in the concentration of soluble P-selectin, with respect to smoking group and time, were measured by two way repeated measures analysis of variance with a post-analysis contrast performed using the Student-Newman-Keuls method. The decrease in the concentration of soluble P-selectin with time was significant in all smoking groups (p<0.001). Adapted from Scott et al.](https://www.bjoms.bmj.com/content/34/4/403-406.403)

www.bjoms.bmj.com
activation. Jilma et al had previously shown that, in healthy men, exercise could lead to an increase in the serum concentration of soluble intercellular adhesion molecule-1, another adhesion molecule involved in the chain of receptor-ligand interactions regulating leucocyte transmigration in inflammatory and immune responses.

We have shown that a period of rest can lead to a rapid decrease in circulating concentrations of soluble P-selectin. This observation is, to the best of our knowledge, entirely novel and may represent an important insight into the complex relation between physical activity and the inflammatory response. Further studies by those with expertise in sports physiology and medicine may be warranted.

**Exercise at altitude**

**Editor,—**In the early sixties I established a record for the running ascent of Kilimanjaro (which started at a mere 5184 m), and Bailey around 6000 feet (1828 m), and both of us in 13 hours and 20 minutes, both from a start of down the same mountain (36 miles) in 13 hours and 20 minutes, both from a start of 1210 m.

Athletes who want up to date advice on sports nutrition are the targeted readers for this book. It would also be a useful addition to the bookshelf of a sports coach or scientist.

The second edition enhances the chapters on weight control and eating disorders and covers the full spectrum of sports nutrition, with advice for training, competing, and recovery, as well as healthy eating for life.

The author is one of the best known writers on sports nutrition in the United States, a registered dietitian and athlete. She deals with the subject in a “user friendly” American style with lots of practical advice, as well as the theory behind why certain practices should/should not be carried out.

About one third of the book is devoted to recipes, with a useful nutritional analysis. They are generally quick and easy to prepare, with ingredients that for the most part are available in the United Kingdom, although the terminology occasionally differs. As with all American cookbooks, the ingredients are measured in cups, which I find “off-putting”.

There is a good bibliography and reference section for those who want to delve deeper into specific subjects.

This is an excellent book if you are American, and I found much of the practical advice useful. For the British reader, there are perhaps too many references to American food products and RDAs referring to nutrients per pound body weight or to 8 oz of fluid, whereas we are now thinking in terms of kg and 100 ml respectively.

**Analysis**

**Presentation** 14/20
**Comprehensiveness** 16/20
**Readability** 14/20
**Relevance** 17/20
**Evidence basis** 16/20
**Total** 71/100

**NEIL M ISAACS**

**Accredited Sports Dietitian and Consultant in Sports Nutrition, 14 Rossett Park Road, Harrogate HG2 9NB, United Kingdom**

**Interactive skeleton. Sports and kinetic edition.** P Bahamas, J Anderson, D Field. (Technical information: PC, Pentium processor, 16 MB Ram 16 bit or Hi Colour display; Windows 95/98 NT4.0; MAC, Powermac or better processor; 6 MB free Ram; thousands of color display; Mac OS 7.1 or higher. £99.) Primal Pictures Ltd (www.pralipictures.com).

I found that this disc was easy to load—my Pentium 233 64 MB RAM achieved it automatically with no obvious help from myself. Initial browsing was fun; the graphics were clear and the instructions concise. With no difficulty I could locate bones and muscle attachments while reading the relevant text alongside the images. Rotating the image and zooming up and down the body was no sweat, even for a 37 year old barely literate novice. There were a number of nice features such as images of anatomical dissections or x ray photographs that could be enlarged and labelled at will. The spoken dialogue was, however, rather basic. The search facility was also poor, searches for sacroiliac joint, sinus tarsi, and subacromial bursa all drawing blanks.

Did I like it and would I buy it? Personally, I prefer to refer to good old fashioned textbooks and to visualise anatomy from a real life skeleton, and hence would not invest. I was impressed by some of the imagery and tools. The ability to take an image and transfer it to a PowerPoint slide was most useful. My lasting impression was one of a gimmick that was fun, but when push comes to shove, my colour atlas would be my first choice. I’m certain that students of anatomy—whether medical, physiotherapy, or sports science—would find it of use, especially the quiz facility.

**Analysis**

**Presentation** 18/20
**Comprehensiveness** 10/20
**Readability** 16/20
**Relevance** 16/20
**Evidence basis** 12/20
**Total** 72/100

**BRUCE THOMPSON**

General practitioner

Lurgan, Northern Ireland


Here we are, at the second edition already, only five years after the first appearance of the first edition! Has sports medicine changed that much? With this in mind, I compared the editions and found some interesting similarities and differences. The four editors and seven of the chapters are the same. Eleven chapters have new authors, and seven chapters are new. Some chapters have been dropped from the second edition, although some of these are covered elsewhere. There is no preface to the second edition which is odd, but the already good layout is improved by the use of a bold type face for paragraph headings. I found no typographical errors but the antipodean x ray photograph on page 21 was challenging.

The chapter contents are largely the same between editions and authors, and the core knowledge base is essentially unchanged. The evidence base is a mixture of clinical experience, empiricism, and scientific trials, which come from a group of authors of national and international standing. There are some useful additions to some chapters, for example the inclusion of valvular disease in the chapter on sudden death. The chapter on the immediate treatment of severe injury is improved with the use of ATLS guidelines. I thought that the chapter on benefits of exercise could have been expanded, and I particularly found no comment on the effects of exercise on pregnancy and vice versa. In chapter 1, I think it would have been useful to mention the need to know the occupation of a sportsperson unless they are lucky enough to participate in sport full time.

**BOOK REVIEWS**


Athletes who want up to date advice on sports nutrition are the targeted readers for this book. It would also be a useful addition to the bookshelf of a sports coach or scientist.

The second edition enhances the chapters on weight control and eating disorders and covers the full spectrum of sports nutrition, with advice for training, competing, and recovery, as well as healthy eating for life.

The author is one of the best known writers on sports nutrition in the United States, a registered dietitian and athlete. She deals with the subject in a “user friendly” American style with lots of practical advice, as well as the theory behind why certain practices should/should not be carried out.

About one third of the book is devoted to recipes, with a useful nutritional analysis. They are generally quick and easy to prepare, with ingredients that for the most part are available in the United Kingdom, although the terminology occasionally differs. As with all American cookbooks, the ingredients are measured in cups, which I find “off-putting”.

There is a good bibliography and reference section for those who want to delve deeper into specific subjects.

This is an excellent book if you are American, and I found much of the practical advice useful. For the British reader, there are perhaps too many references to American food products and RDAs referring to nutrients per pound body weight or to 8 oz of fluid, whereas we are now thinking in terms of kg and 100 ml respectively.

**Analysis**

**Presentation** 14/20
**Comprehensiveness** 16/20
**Readability** 14/20
**Relevance** 17/20
**Evidence basis** 16/20
**Total** 71/100

**HELEN M ISAACS**

**Accredited Sports Dietitian and Consultant in Sports Nutrition, 14 Rossett Park Road, Harrogate HG2 9NB, United Kingdom**

**Interactive skeleton. Sports and kinetic edition.** P Bahamas, J Anderson, D Field. (Technical information: PC, Pentium processor, 16 MB Ram 16 bit or Hi Colour display; Windows 95/98 NT4.0; MAC, Powermac or better processor; 6 MB free Ram; thousands of color display; Mac OS 7.1 or higher. £99.) Primal Pictures Ltd (www.pralipictures.com).

I found that this disc was easy to load—my Pentium 233 64 MB RAM achieved it automatically with no obvious help from myself. Initial browsing was fun; the graphics were clear and the instructions concise. With no difficulty I could locate bones and muscle attachments while reading the relevant text alongside the images. Rotating the image and zooming up and down the body was no sweat, even for a 37 year old barely literate novice. There were a number of nice features such as images of anatomical dissections or x ray photographs that could be enlarged and labelled at will. The spoken dialogue was, however, rather basic. The search facility was also poor, searches for sacroiliac joint, sinus tarsi, and subacromial bursa all drawing blanks.

Did I like it and would I buy it? Personally, I prefer to refer to good old fashioned textbooks and to visualise anatomy from a real life skeleton, and hence would not invest. I was impressed by some of the imagery and tools. The ability to take an image and transfer it to a PowerPoint slide was most useful. My lasting impression was one of a gimmick that was fun, but when push comes to shove, my colour atlas would be my first choice. I’m certain that students of anatomy—whether medical, physiotherapy, or sports science—would find it of use, especially the quiz facility.

**Analysis**

**Presentation** 18/20
**Comprehensiveness** 10/20
**Readability** 16/20
**Relevance** 16/20
**Evidence basis** 12/20
**Total** 72/100

**BRUCE THOMPSON**

General practitioner

Lurgan, Northern Ireland


Here we are, at the second edition already, only five years after the first appearance of the first edition! Has sports medicine changed that much? With this in mind, I compared the editions and found some interesting similarities and differences. The four editors and seven of the chapters are the same. Eleven chapters have new authors, and seven chapters are new. Some chapters have been dropped from the second edition, although some of these are covered elsewhere. There is no preface to the second edition which is odd, but the already good layout is improved by the use of a bold type face for paragraph headings. I found no typographical errors but the antipodean x ray photograph on page 21 was challenging.

The chapter contents are largely the same between editions and authors, and the core knowledge base is essentially unchanged. The evidence base is a mixture of clinical experience, empiricism, and scientific trials, which come from a group of authors of national and international standing. There are some useful additions to some chapters, for example the inclusion of valvular disease in the chapter on sudden death. The chapter on the immediate treatment of severe injury is improved with the use of ATLS guidelines. I thought that the chapter on benefits of exercise could have been expanded, and I particularly found no comment on the effects of exercise on pregnancy and vice versa. In chapter 1, I think it would have been useful to mention the need to know the occupation of a sportsperson unless they are lucky enough to participate in sport full time.
The keynote lectures by Professor Norbert Bachl (Austria) and Dr Bob Cantu (USA) have attracted a lot of interest but in view of recent events at the Sydney Olympics, the session hosted by the British Olympic Association and the Diplomates has also attracted a very large audience. Booking and enquiries should be made to Mrs Sue Roberts, BASEM Company Office, 12 Greenside Avenue, Frodsham, Cheshire WA6 7SA, UK.

Dilemmas in sport: a journey through ethics, the law and medicine

The Institute of Sports Medicine together with the Sports Medicine Section of the Royal Society of Medicine have organised a meeting entitled “Dilemmas in sport: a journey through ethics, the law and medicine”. This all day meeting will take place on 8 November 2000 at the Royal Society of Medicine in London. A wide range of speakers from the world of sport, politics, and the law will address many of the controversial aspects of sports medicine including the ethics of boxing and drug in sport. John Lloyd Parry, a BASEM stalwart, is the current President of the section of Sports Medicine at the RSM.

Drugs in sport

The issue of drugs in sport continues to become increasingly complex. Advising athletes about prohibited and permitted medications is difficult. New initiatives by the British National Formulary and MIMS should help doctors to avoid any possible prescribing pitfalls. UKSPORT have produced a Competitors’ and Officials’ guide which has been made available to teams and officials at major events. There is also an information line at UK Sport, which is supported by a range of fact sheets.

Centre for Sport and Exercise Science

Sheffield Hallam University have renamed their Sports Science Research Institute. It will now be known as the Centre for Sport and Exercise Science (CSES). It will have three subdivisions: the Centre for Sport Performance, the Centre for Corporate Wellness, and the Centre for Exercise and Health. It is fascinating to see this evolution of sports science and the greater inclusion of aspects of exercise and health.

How to complain about the Journal

You probably didn’t know this but this journal, as with other journals published by the BMJ Publishing Group, is regulated by the press complaints commission. The publishing group pay a fee to be part of this system of regulation and adhere to a code of practice and are professionally self-regulating. The code of practice includes guidance on maintaining the highest professional and ethical standards. It protects both the rights of the individual and the public’s right to know. If you do have a problem with any aspect of the journal, please do let us know and we will try to resolve any difficulties. If you have a serious problem, a copy of the guidance notes may be obtained by the press complaints commission, the British Olympic Association, the Diplomates has also attracted a very large audience. Booking and enquiries should be made to Mrs Sue Roberts, BASEM Company Office, 12 Greenside Avenue, Frodsham, Cheshire WA6 7SA, UK.

19th congress of sports medicine

13–14 October 2000; Bruges, Belgium

Topics include:
- Sports physiotherapy
- Children and sports
- Arthroscopy and sports traumatology
- Medical ethics, doping, and sports

Further details: Dr Michel D’Hooghe, President Brussels, Hospital AZ Sint-Jan AV, Ruddershove 10, B-8000 Brugge, Belgium. Tel: +32 50 452230; fax: +32 50 452231; email: brucosport@azbrugge.be

Website: http://user.online.be/brucosport/index.htm

Symposium: training, overtraining, and regeneration in sport—from the muscle to the brain

26–28 October 2000; University of Ulm, Germany

Topics include:
- Training and regeneration in sports
- Metabolism, training, and monitoring
- Cellular protection and immunological function
- Muscular adaptations and stress proteins and cytokines
- Peripheral mechanisms for adaptation and regeneration
- Hypothalamic hormonal regulation and the central nervous system

Further details: Dr JM Steinacker, Abt. Sports medicine and rehabilitation medicine, Medizinische Klinik und Poliklinik, Universität Ulm, 89070 Ulm, Germany. Tel: +49 731 502 6696; fax: +49 731 502 6686; email: org.sportmed@medizin.uni-ulm.de

Website: www.uni-ulm.de/sportmedizin

www.bjsportmed.com
An introduction to sports physiotherapy  
28 October 2000; Wales, UK  
Further details: Dawn Walling. Tel: +44 (0)20 7251 0583 x 238; email: dawn.walling@nsmi.org.uk

British Association of Sport and Exercise Medicine congress  
3–5 November 2000; Tewkesbury, UK  
Final bookings should be received by 2 October 2000.  
Lectures include:  
- Muscular conditioning during space station MIR flight  
- Health enhancing physical activity—an upgrowing challenge for sports medicine  
Please note that there have been some small changes to the congress programme.  
Further details: Mrs Sue Roberts, BASEM Company Office, 12 Greenside Avenue, Frodsham, Cheshire WA6 7SA. Tel/fax: 01928 732 961; email: basemoffice@compuserve.com  
Website: www.pmhcs.com/basem

6th International Sport Sciences Congress  
3 November–5 November, 2000; Ankara, Turkey  
Further details: Associate Professor G Demirhan, Hacettepe University, School of Sport Sciences and Technology, Beytepe 06532, Ankara, Turkey. Tel: 90 312 299 2167; email: demirhan@ada.net.tr

20th national congress of the Société Française de Médecine de Sport: Physical activity, sport and health  
6–8 December 2000; Paris, France  
Topics include:  
- Physical activity and fertility  
- Sport and aging  
- Rehabilitation  
Further details: Pranacom, 40 rue des Blancs Manteaux, 75004 Paris, France. Email: pranacom.ifrance.com  
Website: www.sfms.asso.fr

True or false?—answers  
(T = true; F = false)

p 326: Petrella RJ. Is exercise effective treatment for osteoarthritis of the knee?  
1(a) T; (b) F; (c) F; (d) T. 2(a) T; (b) T; (c) F; (d) F. 3(a) T; (b) T; (c) T; (d) T. 4(a) T; (b) T; (c) T; (d) T. 5(a) T; (b) F; (c) T; (d) T. 6(a) T; (b) F; (c) T; (d) T.
Who should be blinded?

C Gissane

*Br J Sports Med* 2000 34: 403
doi: 10.1136/bjsm.34.5.403-a

Updated information and services can be found at:
http://bjsm.bmj.com/content/34/5/403.2

These include:

**References**
This article cites 2 articles, 1 of which you can access for free at:
http://bjsm.bmj.com/content/34/5/403.2#BIBL

**Email alerting service**
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/