



Cover credit: Manuela Davies/  
DoubleXposure

Journal of the British Association of  
Sport and Exercise Medicine

**Editor**

Karim Khan (Canada)

**Editorial Office**

BMJ Publishing Group Ltd  
BMA House  
Tavistock Square  
London WC1H 9JR, UK

T: +44 (0)20 7383 6331

F: +44 (0)20 7383 6787/6668

E: [bjasm@bmjgroup.com](mailto:bjasm@bmjgroup.com)

**Guidelines for Authors and Reviewers**

Full instructions are available online at  
<http://bjasm.bmj.com/ifa>. Articles  
must be submitted electronically <http://submit-bjasm.bmj.com>. Authors retain  
copyright but are required to grant  
BJSM an exclusive licence to publish  
<http://bjasm.bmj.com/ifa/licence.dtl>

ISSN: 0306-3674 (print)

ISSN: 1473-0480 (online)

**Impact factor:** 2.126

**Disclaimer:** BJSM is published by BMJ  
Publishing Group Ltd (a wholly owned subsidiary  
of the British Medical Association) and the British  
Association of Sport and Exercise Medicine. The  
owners grant editorial freedom to the Editor of  
BJSM. BJSM follows guidelines on editorial  
independence produced by the World Association  
of Medical Editors and the code on good publication  
practice of the Committee on Publication Ethics.

BJSM is intended for medical professionals and is  
provided without warranty, express or implied.  
Statements in the journal are the responsibility of  
their authors and advertisers and not authors'  
institutions, the BMJ Publishing Group, the British  
Association of Sport and Exercise Medicine or the  
BMA unless otherwise specified or determined  
by law. Acceptance of advertising does not imply  
endorsement.

To the fullest extent permitted by law, the BMJ  
Publishing Group shall not be liable for any loss,  
injury or damage resulting from the use of Heart or  
any information in it whether based on contract,  
tort, or otherwise. Readers are advised to verify any  
information they choose to rely on.

To the fullest extent permitted by law, the BMJ  
Publishing Group Ltd shall not be liable for any loss,  
injury or damage resulting from the use of  
Emergency Medicine Journal or any information in  
it whether based on contract, tort or otherwise.  
Readers are advised to verify any information they  
choose to rely on.

Copyright: © 2010 BMJ Publishing Group and  
British Association of Sport and Exercise Medicine.  
All rights reserved; no part of this publication may  
be reproduced, stored in a retrieval system, or  
transmitted in any form or by any means, electronic,  
mechanical, photocopying, recording, or otherwise  
without prior permission

BJSM is published by BMJ Publishing Group Ltd,  
typeset by Newgen, and printed in the UK on  
acid-free paper from sustainable forests by Latimer  
Trend, Plymouth, UK.

*British Journal of Sports Medicine* (ISSN:  
0306-3674) is published monthly by BMJ Publishing  
Group and is distributed in the USA by Mercury  
International Ltd. Periodicals postage paid at  
Rahway, NJ. POSTMASTER: send address  
changes to *British Journal of Sports Medicine*,  
Mercury International Ltd, 365 Blair Road, Avenel,  
NJ 07001, USA.

**Contents**

**Editorial**

**299** Shoulder to shoulder: stabilising instability,  
re-establishing rhythm, and rescuing the  
rotators!  
*B M Pluim, R E H van Cingel, W B Kibler*

**Shoulder injuries in athletes**

- 300** Current concepts: scapular dyskinesia  
*W B Kibler, A Sciascia*
- 306** Shoulder injuries in skeletally immature  
throwers: review and current thoughts  
*J Leonard, M R Hutchinson*
- 311** Diagnosis and management of superior  
labrum anterior posterior lesions in overhead  
athletes  
*G D Abrams, M R Safran*
- 319** Rehabilitation of shoulder impingement  
syndrome and rotator cuff injuries: an  
evidence-based review  
*T S Ellenbecker, A Cools*
- 328** Clinical and diagnostic tests for shoulder  
disorders: a critical review  
*E G McFarland, J Garzon-Muvdi, X Jia,  
P Desai, S A Petersen*
- 333** Rehabilitation for shoulder instability  
*A Jaggi, S Lambert*

**341** A new classification system for shoulder  
instability  
*J E Kuhn*



**347** Disorder of the long head of the biceps  
tendon  
*B Ejnisman, G C Monteiro, C V Andreoli,  
A C Pochini*

**355** First-time anterior shoulder dislocations: has  
the standard changed?  
*J L Boone, R A Arciero*

**361** Biomechanics and treatment of  
acromioclavicular and sternoclavicular joint  
injuries  
*N A Bontempo, A D Mazzocca*

**370** Clinical tests in shoulder examination: how  
to perform them  
*M H Moen, R-J de Vos, T S Ellenbecker,  
A Weir*

**376** The effects of an exercise intervention  
on forward head and rounded shoulder  
postures in elite swimmers  
*S S Lynch, C A Thigpen, J P Mihalik,  
W E Prentice, D Padua*

**382** Anterior and posterior internal impingement:  
an evidence-based review  
*A Castagna, R Garofalo, E Cesari,  
N Marcopulos, M Borroni, M Conti*



This article has been chosen by the Editor to be of special interest  
or importance and is freely available online.

Articles carrying the Unlocked Logo are freely available online  
under the BMJ Journals unlocked scheme.  
See <http://bjasm.bmj.com/info/unlocked.dtl>

These papers may be seen as "non-conformist" and challenging  
for classic peer review; for further information  
see <http://bjasm.bmj.com/cgi/content/full/42/2/79>

COMPE COMMITTEE ON PUBLICATION ETHICS

This journal is a member of and subscribes to the principles of the  
Committee on Publication Ethics

[www.publicationethics.org.uk](http://www.publicationethics.org.uk)

equator  
network



recycle  
When you have finished  
with this please recycle it

This issue has been supported in part by an unrestricted educational  
grant from the Royal Netherlands Lawn Tennis Association (KNLTB).

**Nutritional supplement series**

**389** *BJSM* reviews: A–Z of nutritional supplements: dietary supplements, sports nutrition foods and ergogenic aids for health and performance Part 7

*L M Burke, L M Castell, S J Stear, L Houtkooper, M Manore, D Senchina*

**SportsMedUpdate**

**392** Evidence-based journal watch

**Interactive cases**

**305** Acute lateral ankle ligament injuries  
*E Verhagen*

**Subscription Information**

British Journal of Sports Medicine is published monthly; subscribers receive all supplements

**Institutional Rates 2010**

**Print**  
£483; US\$942; €652

**Online**

Site licences are priced on FTE basis and allow access by the whole institution. Print is available at deeply discounted rates for online subscribers; details available online at <http://group.bmj.com/group/subs-sales> or contact the Subscription Manager in the UK (see above right)

Personal print or online only and institutional print subscriptions may be purchased online at <http://group.bmj.com/group/subs-sales> (payment by Visa/ Mastercard only)

Residents of some EC countries must pay VAT; for details, call us or visit [www.bmj.com/subscriptions/vatandpaymentinfo.dtl](http://www.bmj.com/subscriptions/vatandpaymentinfo.dtl)

**Personal Rates 2010**

**Print** (includes online access at no additional cost)  
£179; US\$349; €242

**Online Only**

£115; US\$224; €155

ISSN 0306-3674 (print); 1473-0480 (online)