



Front cover design and picture credit: Vicky Earle

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 6622

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

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

**Guidelines for Authors and Reviewers**

Full instructions are available online at <http://bjsm.bmj.com/site/about/guidelines.xhtml>. Articles must be submitted electronically <http://mc.manuscriptcentral.com/bjsm>.

Authors retain copyright but are required to grant BJSM an exclusive licence to publish <http://group.bmj.com/products/journals/instructions-for-authors/licence-forms>

ISSN: 0306-3674 (print)

ISSN: 1473-0480 (online)

Impact factor: 4.14

**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 BJSM 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: © 2013 BMJ Publishing Group Ltd 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 Techset, and printed in the UK on acid-free paper.

*British Journal of Sports Medicine* (ISSN: 0306-3674) is published monthly by BMJ Publishing Group and is distributed in the USA by Air Business Ltd. Periodicals postage paid at Jamaica NY 11431 POSTMASTER: send address changes to British Journal of Sports Medicine, Air Business Ltd, c/o Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA.

**Contents**

**Editorial**

- 249** Zero tolerance: the future of head injury in sports  
*M Aubry, J Dvořák, P McCrory, W Meeuwisse, M Raftery, A Sills, L Engebretsen*

**Consensus statement**

- 250** Consensus statement on concussion in sport: the 4th International Conference on Concussion in Sport held in Zurich, November 2012  
*P McCrory, W H Meeuwisse, M Aubry, B Cantu, J Dvořák, R J Echemendia, L Engebretsen, K Johnston, J S Kutcher, M Raftery, A Sills, B W Benson, G A Davis, R G Ellenbogen, K Guskiewicz, S A Herring, G L Iverson, B D Jordan, J Kissick, M McCrea, A S McIntosh, D Maddocks, M Makkdissi, L Purcell, M Putukian, K Schneider, C H Tator, M Turner*

- 259** SCAT3
- 263** Child SCAT3
- 267** Pocket CRT

**Reviews**

- 268** What is the lowest threshold to make a diagnosis of concussion?  
*P McCrory, W H Meeuwisse, R J Echemendia, G L Iverson, J Dvořák, J S Kutcher*
- 272** Day of injury assessment of sport-related concussion  
*M McCrea, G L Iverson, R J Echemendia, M Makkdissi, M Raftery*

- 285** Onfield assessment of concussion in the adult athlete  
*M Putukian, M Raftery, K Guskiewicz, S Herring, M Aubry, R C Cantu, M Molloy*
- 289** Evidence-based approach to revising the SCAT2: introducing the SCAT3  
*K M Guskiewicz, J Register-Mihalik, P McCrory, M McCrea, K Johnston, M Makkdissi, J Dvořák, G Davis, W Meeuwisse*
- 294** Advances in neuropsychological assessment of sport-related concussion  
*R J Echemendia, G L Iverson, M McCrea, S N Maccicchi, G A Gioia, M Putukian, P Comper*
- 299** What evidence exists for new strategies or technologies in the diagnosis of sports concussion and assessment of recovery?  
*J S Kutcher, P McCrory, G Davis, A Pito, W H Meeuwisse, S P Broglio*
- 304** The effects of rest and treatment following sport-related concussion: a systematic review of the literature  
*K J Schneider, G L Iverson, C A Emery, P McCrory, S A Herring, W H Meeuwisse*
- 308** The difficult concussion patient: what is the best approach to investigation and management of persistent (> 10 days) postconcussive symptoms?  
*M Makkdissi, R C Cantu, K M Johnston, P McCrory, W H Meeuwisse*
- 314** Revisiting the modifiers: how should the evaluation and management of acute concussions differ in specific groups?  
*M Makkdissi, G Davis, B Jordan, J Patricios, L Purcell, M Putukian*

**Subscription information**

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

**Institutional rates 2013**

**Print**

£604; US\$1178; €816

**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/subscribe/?bjsm> or contact the Subscription Manager in the UK

**Personal rates 2013**

**Print** (includes online access at no additional cost)

£210; US\$410; €284

**Online only**

£132; US\$258; €179

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

Personal print or online only and institutional print subscriptions may be purchased online at <http://group.bmj.com/subscribe/?bjsm> (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)

**MORE CONTENTS ►**



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



This article has been made freely available online under the BMJ Journals Open Access scheme. See <http://bjsm.bmj.com/site/about/guidelines.xhtml#open>



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



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)



Br J Sports Med: first published as on 1 April 2013. Downloaded from <http://bjsm.bmj.com/> on September 16, 2021 by guest. Protected by copyright.

- 321** What are the most effective risk-reduction strategies in sport concussion?

*B W Benson, A S McIntosh, D Maddocks, S A Herring, M Raftery, J Dvořák*

- 327** What is the evidence for chronic concussion-related changes in retired athletes: behavioural, pathological and clinical outcomes?

*P McCrory, W H Meeuwisse, J S Kutcher, B D Jordan, A Gardner*



- 332** From consensus to action: knowledge transfer, education and influencing policy on sports concussion

*C Provvidenza, L Engebretsen, C Tator, J Kissick, P McCrory, A Sills, K M Johnston*

---

### Electronic page

- e1** Abstracts

Receive regular table of contents by email.  
Register using this QR code.

