Football blades: a cause for concern

Sporting injuries have always contributed a significant proportion of the workload of the emergency department. The number is increasing considerably for several reasons. A burgeoning range of sporting activities combined with increased disposable income and leisure time has led to greater participation. Consequently research and development aimed at enhancing performance has escalated.

One such development is the use of "blades" instead of the more traditional studs on football boots. Unlike the traditional round peg-like studs, the new blades measure up to 3 cm long and are shaped to contour the foot (fig 1), providing enhanced stability to the standing foot when kicking. Since they were first endorsed by high profile figures such as David Beckham, the appeal to the younger generations has increased to the extent that many junior players use such footwear.

The traditional studs can cause a range of injuries, from minor lacerations (the most common) to more complex punched out soft tissue injuries. The cases described below highlight the potential severity of injuries sustained as a result of direct contact with a football blade.

The first case involved a 14 year old boy with a laceration to the medial aspect of the left knee sustained after a tackle. The laceration was 8 cm in length and extended down to muscle but had not involved the knee capsule (fig 2). The wound was thoroughly irrigated, debrided, and closed with sutures.

The second involved a 28 year old man who was involved in a tackle with a player wearing football blades; as a result of the tackle the leather upper of the football boot was torn with a ragged laceration measuring 5 cm over the dorsum of the foot. The laceration was irrigated, debrided, and sutured.

Sporting injuries presenting to the emergency department are common, and, over the last decade more interest has focused on prevention. One aspect of this is footwear design. Chan et al showed a direct correlation between footwear and both performance and rates of injury. A similar study showed that boots with a greater number of studs were associated with poorer performance compared with those with fewer, primarily because of inferior traction with the ground. A large proportion of football injuries are ligamentous and involve either the knee or the ankle, thus shoe-surface traction is the specific variable most likely to correlate with injury incidence.

These theories led directly to the development of the blade to replace the traditional stud on football boots to improve shoe-surface traction. For this reason a large number of professional footballers use blades, and as a result the appeal to amateur players of all ages is high. As the number of players using such footwear increases, the number of injuries resulting directly from blades is increasing also. Concerns are now being raised in the media as to the safety of such blades, especially in more junior grades of football.

In certain countries there are moves to ban such blades because of safety concerns.

These cases highlight the severity of lacerations that can result from tackles with boots fitted with blades. In the second case report, the blade was actually sharp enough to penetrate the leather upper of the boot before lacerating the skin. Although such injuries have presented to the emergency department for many years, we should be increasingly aware of the potential dangers of this design of stud, especially in junior levels of competition.

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References


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Figure 1 Football boot with blades.

Figure 2 Laceration to left leg.
was found that relapses of non-acute sports related injuries to the lower extremity do not often occur.

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Low back disorders: evidence-based prevention and rehabilitation

There are many ways in which rehabilitative exercise, postural correction, ergonomics, as well as vast numbers of pain relieving techniques can assist in the prevention and treatment of low back pain. Research teams throughout the world are beginning to provide evidence for effective management strategies within their areas of expertise. This research often relies on development of valid and reliable measurement techniques. Some research teams focus on clinical trials, in which validated pain and disability measures are used to provide evidence for efficacy of a particular method of treatment. Other back pain research teams (as that of McGill) focus on the development of management approaches, based on an understanding of how muscles function to provide spinal stability and load transfer through the spine and pelvis. These management strategies have been developed through a focus on either biomechanical or neurophysiological models of muscle function. McGill has developed exercises for prevention and rehabilitation of low back pain based on biomechanical models.

The strength of McGill’s text lies in his anatomical and biomechanical research evidence on how injury develops in specific anatomical structures (including an excellent depth of understanding of “tissue creep”) and the methods through which tissue loading can be reduced to minimise the risk of injury. This important information can direct strategies for the prevention (and rehabilitation) of low back pain, which involve postural correction and adherence to sound ergonomic principles. We would highly recommend this text for these essential aspects of low back pain management.

However, the rehabilitative exercise regimens described by McGill in this text differ markedly from many other evidence based exercise programmes devised for the treatment and prevention of low back pain. Other approaches, which have been based more on neurophysiological research on the joint protection mechanisms, base their exercise treatment on a problem solving approach and, more importantly, on the impairments that develop in these mechanisms, in low back pain patients. These impairments are different in each patient, and depend on issues such as the specific location of the injury, lifestyle factors, and pain. The impairments in muscle recruitment patterns result in some muscles becoming less active or inhibited and others becoming more active, less fatigable, and tight. These factors are used to direct exercise treatment.

Thus McGill’s text is ideal for gaining an understanding of how to prevent and treat low back pain using some important principles of postural correction and ergonomic management. Future clinical trials will be required to estimate the efficacy of the rehabilitative exercise programme.

The book is targeted mainly at health practitioners dealing with ergonomics and occupational health.

The author is well known, well published, and well respected in his area of research. The book definitely has a “feel good factor” and we would buy it. The only issues we found slightly irritating in the book were the rather simplistic explanations of theories of motor control.

Rating

- Presentation: 15/20
- Comprehensiveness: 15/20
- Readability: 15/20
- Relevance: 16/20
- Evidence basis: 16/20
- Total: 77/100

Book Reviews

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Charity runners should be warned of dangers of consuming alcohol after the race

A healthy 38 year old man finished the 2004 London marathon in just over five hours. During the evening celebrations, he had “two gins” and collapsed to the floor hitting his face on the pavement (fig 1). Despite regular fluids during the race and food afterwards, five hours of continuous exercise would have caused hypovolaemia, hypoglycaemia, and reactive insensitivity of the leg veins to the shifts in blood volume which occur on standing. These changes combined with the vasodilatory effects of alcohol would cause orthostatic intolerance. He fainted.

The London marathon attracts thousands of amateur runners who should be warned of the dangers of post-race celebrations.

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Figure 1 Results of the patient hitting his face on the pavement.
Exploring sport and exercise psychology


The days when psychology was referred to as “the art of pulling habits out of rats” are quite rightly now behind us. Indeed, the foreword eloquently describes the rapid and continued growth of psychology and its important role in aiding individuals involved in exercise and sport at any level, which the book explores in detail.

The previous edition (published in 1996) was highly regarded because it provided a sound basis for both student learning and clinical practice. This second edition aims to provide an update of the developments in the field that have occurred since 1996 and to address important topics that were not previously included. This worthy objective is more than adequately met.

The authors, contributors, and editors are all credible authorities in the field of sport and exercise psychology, and this is reflected in the standard of the text. I particularly enjoyed the chapter on hypnosis (chapter 8).

Multi-author books of this type can result in a stilted or disjointed flow for the reader; however, the editors have done a fine job with a readable, well referenced, well organised addition to the sport psychology literature. The book features up to date references (2002), case examples, and three new chapters. It progresses in a logical fashion and each chapter includes a summary and the book a detailed index.

Students and professionals interested in the field of sport and exercise psychology will appreciate this resource.

Rating

- Presentation 16/20
- Comprehensiveness 17/20
- Readability 18/20
- Relevance 17/20
- Evidence basis 19/20
- Total 87/100

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2004 APS Intersociety Meeting – Integrative Biology of Exercise
October 6–9 2004, Austin, TX, USA
Abstracts due May 12, 2004
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, FACSM, Conference Co-Chair, Penn State University, email: jhn3@psu.edu, or Thomas Kaminski, PhD, ATC, FACSM, 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
15–18 October 2004, Brugge (Belgium)
Further details: tel: +32 (0)50 45 29 80; 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, Sognsvann 220, 0806 Oslo, Norway. Email: 2005congress@nih.no; website: www.osotr.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: BASEMinfo@aol.com

BASEM Conference 2006
5–7 October 2006, Oxford, UK
Further details: Email: BASEMinfo@aol.com

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