Another major win for physiotherapy — curing patellofemoral pain

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Thanks for the positive feedback about *BJSM*'s recent articles – particularly the January (http://bjsm.bmj.com/content/vol43/issue1) and February (http://bjsm.bmj.com/content/vol43/issue2) issues edited by Professor Steven Blair. Many emails supported the claims that physical activity is the most powerful single medical intervention.[1] The downside is that Neville Owen has made me feel guilty if I sit for a mere 12 hours.[2] The result? Ageing *BJSM* editor shuffling around the streets of Vancouver at 10 pm getting his "fix" in 3°C temperatures. The voices of Steven Blair and Art Kramer in my head[3] penetrating the usual cacophony, "30–60 minutes a day keeps dementia at bay". "Too late!" you say?

MAKING PFJ PAIN HISTORY

Coincidentally with this month's cover story, we learn that Jenny McConnell received Australia's highest honour — the Order of Australia Medal (OAM) — for her "service to physiotherapy as a practitioner and researcher, particularly through the development of innovative musculoskeletal pain management and treatment". Her cataclysmic 1986 paper[4] timestamps the revolution in managing patellofemoral pain with a focused exercise programme. Young clinicians will have trouble imagining patients hobbled with chronic anterior knee pain being told to "retire" (the 1970s panacea for musculoskeletal pain). The more "enlightened" solution was referral for surgeries ranging from "lateral release" to the gruesome "Macquet procedure". Most unfortunately, one unsatisfied surgical patient actually shot a medical receptionist, ostensibly because of the frustration of chronic knee pain. I apologise for resurrecting painful memories but do so neither flippantly nor gratuitously. I underscore the serious nature of our clinical work and the importance of innovations that improve patients' quality of life.

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By providing solutions, physiotherapists, and subsequently enlightened physicians, have reframed patellofemoral pain from a static, degenerative condition to one that results from dynamic "malalignment" or "timing failure". I see parallels with Paul Hodges' and others changing our perception of the spine from being a "structural stack" to a finely tuned cylinder and much more.[5]

This month, *BJSM* shares Collins and colleagues' paper from the BMJ (***see page 169***),[6] which investigated a common clinical combination — exercise prescription plus orthoses — for patellofemoral pain. And on the subject of orthoses, please see the evidence-based guide to prescribing running shoes (***see page 159***).[7]

ACLS, MSCS AND THE I-TEST: ALPHABET SOUP FOR THE SPORTS MEDICINE SOUL

The scourge of preventable ACL injuries remains ever-present.[7] If your daughter's basketball or soccer team is not engaged in preventive programmes,[7 8] speak to the coach and if that doesn't work call your Member of Parliament. Still no good? Consider the World Court (officially known as the International Court of Justice — http://www.icj-cij.org). This is serious. You wouldn't send your kid out cross-country skiing mid-winter in a bikini. Prevention is based on understanding mechanisms and this month we learn about knee joint laxity and its changes during phases of the menstrual cycle from the renowned McCaig Centre at the University of Calgary (***see page 174***).[9] And in keeping with Obama's potentiating stem cell research in the US, (***see pages 195 and 221***)[10 11] we examine exercise influences on multipotential stem cells (the MSCs above). Physical activity influences everything!

You'll love the I-test — *BJSM*'s new imaging feature (***see pages 172 and 173***).[12 13] It vivifies *BJSM*'s commitment to (a) innovation (research), (b) education (I-test and e-learning) and (c) knowledge translation — highlighting programmes that work. I thank editor colleague Dr Babette Pluim (The Netherlands) and Professor Bruce Forster (Canada) for giving *BJSM* readers superb educational value. (***see page 158***); The questions and answers are on different pages to facilitate your placing friendly bets.

CHRONIC GROIN PAIN: LIKELY COMPLETELY SOLVED DURING 2009

This month's cover pays homage to Da Vinci's Vitruvian Man (AD 1487) and (http://bjsm.bmj.com/current.dtl) maintains the thread of our virtual theme issue (articles every month) on groin pain. Last month we launched the 3-part "3G" series — groins, gluteals and the greater trochanter as a novel clinical approach to chronic groin pain.[14 15] Does that pathoanatomical approach simplify it for you? Or are you an advocate of Holmich's tests,[16 17] or the Bradshaw camp?[18] Let's hope that advances for patients soon match up to those we have seen for patellofemoral pain. And next month? Guest editor Dr Jill Cook brings you *BJSM*'s tendinopathy issue. Please see the new-look homepage and blog for more news! (http://blogs.bmj.com/bjsm/)

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I-test: a new clinical education feature for the *British Journal of Sports Medicine*

Bruce B Forster

As part of the *British Journal of Sports Medicine*'s (*BJSM*) emphasis on continuing clinical education, we launch the imaging education feature—"I-test" (imaging test). Each I-test will consist of a short history, key physical examination findings and imaging findings that are needed to arrive at a diagnosis. Images will reflect the breadth of clinical practice and include plain radiographs, ultrasound, computed tomography (CT) and magnetic resonance imaging (MRI). We will emphasise clinical utility—common conditions in which selection of the correct imaging test and interpretation of it will improve patient outcome.

This timely feature is a response to our reader surveys. Imaging continues to be a mainstay in the diagnostic work-up of sports-related injuries. In the US Medicare population, there was a 26% increase in the use of musculoskeletal imaging techniques from 1996 to 2005.[1] However, in that same time period, the increase for musculoskeletal MRI examinations was 354% and for musculoskeletal ultrasound examinations it was 200%.[1] Digital radiographs, ultrasound, CT and MRI are increasingly being ordered by primary care physicians, and are viewed directly by sports physicians, physiotherapists, orthopaedic surgeons, rehabilitation specialists and other related practitioners.

Furthermore, the pace of new developments in musculoskeletal imaging is unrelenting. Ultrasound offers dynamic imaging examination of the musculoskeletal system without ionising radiation, provides important physiological information through colour Doppler and can guide therapeutic intervention.[2] Multidetector CT is capable of the rapid acquisition of a volume or block of anatomy, which can then be reconstructed in any plane or in three dimensions, to facilitate a better understanding of osseous spatial relationships, detect occult fractures and optimise preoperative planning.[3] Even recent graduates will be astounded by the numerous advances in MRI. Examples include the clinical reality of high field imaging with 3.0 T, which allows higher spatial resolution for better evaluation of smaller structures,[4] and also cutting edge physiological cartilage assessment with T1 and T2 mapping, which reveals chondral degeneration before it is apparent clinically or by using other imaging modalities.[5]

BJSM's I-test feature is designed to be practical. It aims to provide value to sports clinicians by illustrating the important synergy between radiology and the management of sports-related injuries. We invite *BJSM* readers to highlight clinical areas of interest (e-mail the editorial office directly at bjsm@bmjgroup.com) and to consider submitting a manuscript for this feature (see Instructions for authors).

So please, give your eyes an I-test!

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