Warm up

Nothing like a bit of challenge or controversy. Five targets and five authors. See if you agree. Marion McMurdo stops short of recommending bungee jumping and waterskiing for octogenarians, suggesting that we should not parcel up our older folk in bubble wrap (p 295). Exercise has benefits for us all and we should look beyond young and middle age. After all, older folk are getting younger every day. Tim Noakes challenges current practice and belief in the severity and frequency of dehydration (p 296). Clearly, we have been overreacting by giving every collapsed athlete intravenous fluids. Not everyone who falls over is hypovolaemic but changing current practice may be difficult. Paul McCrory looks at concussion severity scales and what he says makes a lot of sense (p 297). Many aspects of hospital or specialist practice do not apply just as easily in the field, especially in sport. Finding new and better methods will not be easy. Peter Sharpe examines the evidence for antioxidant supplementation (p 298). I sense that it will be difficult, to resist the tide of advertising promoting antioxidant supplements in exercise. The argument for supplementation is seductive, its just that the evidence is not there. Seductive advertising is exactly the problem in cigarette promotion through sport. Clive Bates tells us it is (p 299). Formula One, cigarette boxes on wheels, as glamorous as ever.

Elsewhere in the journal epidemiology features heavily. We review the electrocardiographic changes in 1000 junior athletes (p 319), explore pain symptoms among adolescents (p 325), record injury rates in gymnasts (p 312) and injuries to polo riders (p 329), and attendances at an accident and emergency department (p 333). Two papers dealing with treadmill exercise produce an unexpected contrast in perceived exertion (pp 336 and 352). But if you are really looking for the unexpected we have a real gem that made us all smile. Ever seen a rhinoceros running a marathon? (p 365).

Fair, honest, ethical, and last

Sport is judged by rules and regulations, white lines and touch lines, starting blocks and finishing posts. The referees decision is final, never questioned. If a call is marginal we can wait for the magic eye or consult the video replay. Medicine lives in a different world and in medical ethics there are many questions but few definite answers. When the quantitative world of sport meets the qualitative world of medical ethics, confusion reigns. The world of sport would like us to apply absolute rules to qualitative variables and is frustrated by our collective indecision. Many aspects of sport and exercise medicine are on the margin.

Corticosteroid injections have a definite place in orthopaedic medicine. They are relatively safe and effective and can ease the disablement of severe arthritis. If a young footballer has an irritable knee, joint changes, and an intermittent effusion, the clinical situation is not so clear. At what stage is it appropriate to inject a joint and is it possible for a 20 year old to give informed consent when, even if our explanation is perfect, he or she cannot begin to understand the implications of severe osteoarthritis at the age of 40? And this is one of the easier decisions.

Children now specialise in sport at a younger age. To achieve peak performance they must invest hours in training and preparation. This is at a cost. They inevitably bypass the normal educational and social learning environment. Four hours of sensory deprivation immersed in a swimming pool is hardly a creative environment. But, who is really making the decisions that allow these children to dedicate so much of their valuable childhood to sport? A child cannot make an informed decision, so is there a role in sports medicine for the child’s advocate?

The influence of medicine in sport has the potential to both aid performance and to harm long term health. Recent interventions of a medical nature raise further ethical questions. If playing sport in a hot and humid environment where dehydration is a fact, not just a risk, it may be appropriate to give intravenous fluids. But, is this medical manipulation or simply optimal care in extreme conditions? Athletes go to altitude because of the evidence of benefit, but only wealthy athletes from rich associations can afford to go. To exploit the benefits of altitude it is now possible to live in an atmospherically regulated house and mimic the effects of living at altitude. Such physiological manipulation challenges our historical notions of what is fair and ethical, but athletes and scientists will always look for every advantage.

We would all advise athletes to eat a healthy balanced diet, but there is evidence that some nutritional supplements have an ergogenic effect. A carbohydrate boosting
diet has been used by marathon runners for years and creatine, with its recognised benefits, is used in many sports. Such dietary manipulation or supplements are not prohibited but do challenge our conception of straightforward athletic competition between participants. Psychological preparation is an integral part of the preparation of athletes in many sports, but this too may raise ethical questions when used to the extreme.

Modern medicine has the potential to push performance to the limits, and it is increasingly difficult to define the limits of fair medical intervention. Some of the controversies in sport and exercise medicine have no solution. We cannot even give a definite judgment on sex identification, and some aspects of drug testing have fallen into disrepute. Each time we seem to have achieved a definitive test, the answer slips out of reach.

Cheating attracts a definite value judgment. You cannot cheat a little bit, so it is exceedingly difficult to make judgments in a grey area without coming down on the side of right or wrong. If we could take out the absolute value judgment then perhaps we could debate some of these difficult areas less emotionally. One of the traditions of medicine is informed debate and there are many discordant notes in the ethics of every part of medicine. Sport is combative, but confrontational argument has no place in medicine. Snap decisions, taking sides, and retreating to defensive positions cannot help us reach consensus. Some decisions may be at variance with the views of the club, coach, or country. We must be able to argue that we should be fair, ethical, and honest and that this does not always mean coming last.

DOMHNALL MACAULEY

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British Association of Sport and Medicine in association with the National Sports Medicine Institute

Education programme 1999

All courses consider aspects of sports medicine other than injury. The number of delegates on these courses is limited.

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Education programme 2000

**General Sports Medicine Course**
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**General Sports Medicine Course**
Lilleshall Hall National Sports Centre, Shropshire (residential) 24–29 September

For further details of these courses please contact Mr Barry Hill, The National Sports Medicine Institute, c/o Medical College of St Bartholomew’s Hospital, Charterhouse Square, London EC1M 6BQ.
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