

Sports medicine – still evolving?



The discipline of sports medicine has developed exponentially in South Africa in the last 25 years. The first major scientific publications were on orthopaedic injuries, dehydration or heat stress. Reflecting on how the profession has evolved in content and depth of knowledge is remarkable. In this relatively short time period an enormous amount has been

learnt about the aetiology of injury, the accelerated treatment of injury, and the prophylactic role that physical activity plays in reducing the risk of certain diseases. Injuries that may once have ended the career of a player can now be surgically repaired, with the player resuming his/her place in the team within the same season. The science of fitness is sufficiently advanced to ensure that, for example, a professional rugby player weighing 100 kg can sprint and tackle almost tirelessly for 80 minutes, an elite ultra-distance runner can run 90 km averaging 3 minutes and 36 seconds a kilometre, and an elite powerlifter can bench press over 400 kg. These are just some examples representing extreme fitness that have been achieved, in part, by the application of science.

Recovery after competition or a hard training session used to take place in the pub over a couple of beers. Nowadays, enhancing recovery after exercise has become a specialist field, with some professional teams employing support staff trained in 'recovery'. These practitioners have a repertoire of evidence-based protocols that include compression garments, ice-water therapy, massage, and protein drinks. Accelerated recovery after matches and training is probably as important to a team as the ability to acquire skills and develop new game plans. Failure in any of these facets will lead to a team underperforming. An outsider looking in might form the impression that the application of science and sports medicine to sports performance and injury reduction is 'all wrapped up, signed and sealed'. What more is there to learn? However, anyone in the business of exercise science or sports medicine will know that the fun and games are just beginning.

Take for example the recent predicament that Jake White, coach of the national rugby team, finds himself in (as we go to press). Conventional wisdom has guided the coach in deciding to let his top players miss the overseas leg of the Tri-Nations tour so that they can recuperate and rejuvenate as they prepare for the remaining 12 weeks before the World Cup. Science has shown that after a rugby season 96% of the players have at the very least a nigging injury, 50% of the players have more serious injuries, and 1% will require surgery to repair an ongoing injury. The decision of the coach to rest the players can be supported by strong evidence, and therefore surely he cannot be faulted? However, based on the reaction from certain quarters it seems that these 'evidence-based decisions' are not universally supported. The sponsors are annoyed because of the perceived lack of publicity, and the fans feel that they are being betrayed because their stars are not playing, and 'how can they support a team that is not the best?'. Added to the antagonistic forces are the mumblings from Australia about South Africa being in breach of contract because of the 'under-strength' team. From the ruckus that the coach's well-intentioned decision has caused, it is clear that other strategies will have to be adopted in the future to ensure that the high-profile players are always visible, while at the same time being free from injuries and fatigue. This scenario of sports medicine being at odds with popular opinion is just one example suggesting that the field of sports medicine is still facing new challenges which will have to be met with as much vigour and innovation as the challenges that scientists and doctors were faced with 25 years ago.

On the topic of innovation, this issue of the *Journal* is filled with a range of studies that reflect the creative work of South African scientists and show how local research contributes to the development of sports science and sports medicine. May you enjoy the read!

Mike Lambert

Editor-in-Chief