The increasing importance of sports science and medicine

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The notion that exercise has a multitude of benefits, especially for health, has been around for millennia.1 Physicians’ traditional focus on the prevention of disease and the maintenance of health requires them to find interventions that will help patients, with as few adverse effects and reactions as possible. Only lately has the focus shifted towards acute illnesses and treating patients according to their complaints.1 In any case, diet and exercise have almost always been part of the regimen emphasised by physicians.1 Even ancient physicians recognised the importance of these two aspects of care in the formulation of their treatments.2 This understanding suggests that maintaining health in a preventative manner may be a more appropriate medical approach than treating patients at the doorway of disease.

Most modern diseases can be said to be preventable.2 Almost half of the mortality rate in the United States can be traced to behavioural causes.2 The main causes of early death in the country are smoking and diseases attributable to physical inactivity linked to obesity.2 Physicians should consider returning to an approach of prescribing lifestyle changes before prescribing medication. Prescribing exercise can indeed maximise the health of patients.1 Clearly, exercise is relatively inexpensive yet massively effective for multiple bodily systems. Exercise can be considered a medication, and physicians should be encouraged to start treating physical activity as a prescription that they can recommend to their patients. As more people are beginning to recognise, the benefits of exercise will usually outweigh the risks, and each person should be able to perform at least a minimum amount of exercise.2

There is a growing opinion that, in the near future, lack of exercise may be the most important public health problem.2 Physicians should consider it their duty to modify patients’ lifestyles in ways that lead to the health benefits that science has now confirmed are clear and undeniable. Many conditions, such as depression, osteoarthritis, hypertension, obesity, cancer, and diabetes mellitus have outcomes that are obviously ameliorated by increased physical activity.3

The United States is in love with sports, with 60% of Americans describing...
themselves as sports fans. Billions of dollars are generated every year by various US-based sports leagues, such as the National Hockey League, the National Basketball Association, Major League Baseball, and the National Football League. Collegiate sports are a multimillion-dollar business as well. As the earnings increase, so do the investments that these leagues make in the best players. Because of the financial impact of these various sports, it has become a priority for the leagues to keep their players healthy. As such, optimising performance, improving the best players’ availability, and decreasing the risk of injury have become the main thrusts of sports science and sports medicine when tied to high-performance teams.

Sports science research can help lead to evidence-based approaches that will allow athletes and active individuals to exercise in optimal ways. There is a continuing gap between current practices in athletics and the latest scientific evidence, compounded by an era of anti-intellectualism and ‘fake news’, as well as a burgeoning disbelief in fact and science. Non-peer-reviewed articles are proliferating, as are so-called ‘predatory’ journals and conferences, which can contribute to the dilution of good science that could be used for the benefit of athletes, active individuals, and indeed, all patients who are trying to exercise more.

Coaches and athletes need to listen more carefully and more often to sports scientists, whose findings can be supported and dispersed by sports medicine physicians. Widespread support for the use of unproven supplements in sports, or wearing specific bracelets or anklets to supposedly improve athletic ability, are but a few of the pseudoscientific practices that coaches and athletes need to discuss further with scientists and physicians. Conversely, those engaged in the science of sports medicine and the provision of health care need to improve their ability to translate terms and ideas that may not be easily understood by those engaged or about to engage in sports and exercise activities.

Knowledge transfer is key, and sports communities all over the world should be able to engage with sports scientists and medical providers more directly. We now have the ability to leverage social media, application software, and other forms of technology to achieve this. Our use of these evolving tools should focus on sports physicians and athletes being proactive, using exercise as prevention, rather than reactive, treating maladies as needed. The idea that ‘exercise is medicine’ should become second nature in the world of primary care and sports medicine.

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