Guest Editors' Preface

Towards a Discernable History of Sports Medicine

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Abstract. Elite sport and the structures that support it such as sports medicine are increasingly at the forefront of public consciousness, especially when the Olympic Games come to town, or soccer players, their bodies fine-tuned by an ever growing array of medical personnel, are applauded globally for their highly skilled performances at the World Cup. It would be a mistake, however, to confine the historical study of sport medicine to the world of high level athletics, for the close connection between exercise, sport and medicine for all age groups and in different regions of the world goes back millennia. This issue seeks to help weld the growing challenges of the present to keener insights from the emerging multifaceted history of sports medicine in North America, Europe and the United Kingdom.

Keywords. sport, exercise, medicine, history of sports medicine

Résumé. Le sport d'élite et les structures qui le soutiennent, comme la médecine sportive, captivent de plus en plus la population en général, surtout lors d'événements sportifs prestigieux. Qu'il s'agisse des Jeux olympiques ou de la coupe du monde de soccer, les corps de ces athlètes, applaudis par le monde entier pour leurs performances spectaculaires, sont pris en charge par une pluralité sans cesse croissante de professionnels médicaux. Néanmoins, il serait une erreur de réduire l'étude de l'histoire de la médecine sportive uniquement aux prestations des athlètes de haut niveau niant ainsi les nombreux liens avec l'exercice, le sport, la médecine et cela pour tous les groupes d'âge de toutes les régions du monde depuis des millénaires. Ce constat participe à la mise en

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valeur des différentes facettes de l'histoire émergente de la médecine du sport en Amérique du Nord, en Europe et au Royaume-Uni.

Mots-clés. sport, exercice, médicine, histoire de la médicine sportive

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Elite sport and the structures that support it such as sports medicine are increasingly at the forefront of public consciousness, especially when the Olympic Games come to town, or soccer players, their bodies fine-tuned by an ever growing array of medical personnel, are applauded globally for their highly skilled performances at the World Cup. It would be a mistake, however, to confine the historical study of sport medicine to the world of high level athletics for the close connection between exercise, sport, and medicine for all age groups and in different regions of the world goes back millennia.

In their 1992 history of sports medicine, Berryman and Park point out that the quest for a scientific sports medicine has a long and sporadic history dating back to the Greco-Roman era.[1] Roman physician and philosopher Galen, insisted it was the doctor who decided which exercises were advantageous to the gymnast as well as the gladiator, and he recommended ball games as one of the best forms of sport. In the 16th century, French physician, Mercurialis Laurent Joubert from Montpellier spoke in favour of physical exercise under medical supervision for both the sick and the healthy in *"de Gymnasiis et generibus exercitationum apud antiquos celebrium liber unso"* (1582). Cristóbal Méndez's *Book of Bodily Exercise* (1553)[2] and Marsilus Gagnatus's *De Sanitate tuenda* (1591) both advised upon exercise and medicine. In 1780, Francis Fuller published *Medical Gymnastics* while French surgeon Clemens Joseph Tissot's *Gymnastique Médicinale et Chirurgicale* became one of the foremost precursors of sports medicine in its detailed advice on health and physical activity.[3] In the 20th century, *Exercise in Education and Medicine* (1909) by Canadian-born sculptor, doctor, soldier, physical educator, and athlete, R.Tait McKenzie, was a staple in every physical education department in North America; and British physiologist A.V. Hill won the Nobel prize for his work on the physiology of muscles and exercise. At the Olympics, the first international congress of sports doctors known as the *Federacion International Medico Sportive* (FIMS) took place in Antwerp in 1928.

Of course, long before Western doctors were developing training regimens for athletes and offering advice on exercise to everyday folk, the idea of advising people to keep fit through healing and breathing exercises was well established in Asia and elsewhere. While the ghosts of Hippocrates and Galen and the medical gymnastics of Swedish physical therapist, Per Henrik Ling, still linger in popular wellness ideas and practices, holistic instructions for healing and health enhancing exer-

cises from Ayurveda medicine and traditional Chinese medicine (TCM) can be observed in yoga classes and at community fitness centres worldwide. Indeed, the globalization of sporting and exercise practices has facilitated the flow of an extraordinary and ever growing range of sports medicine techniques and nostrums drawn from various medical traditions as well as technological, ergogenic, and pharmaceutical advances used with increasing frequency in athletic enhancement and body modification. Sports medicine is still considered to be a relatively new medical specialism—though considerable numbers of health professionals deal with athletes and sports injuries in a non-designated capacity in their daily practice.

There are a number of particularly thorny issues involved in mapping out a history of sports medicine some of which are touched upon in this special issue. To the question of what is sports medicine in the mid-20th century, leading American physical educator Charles McCloy answered tautologically "anything that relates to sports or physical welfare that interests those who are interested in sports medicine."[4] In fact, across the 20th-century sports medicine became a shifting landscape of professional emplotments with an ever growing range of practitioners fighting to secure a foothold in an arena of seemingly limitless growth. After all, the current mantra of "sport for all" leads inexorably to "sports injuries for all" which requires logically the provision of sports medicine for all. At today's sports medicine clinic one can expect to get a running injury taken care of while signing up for medically supervised training for the next marathon—an excellent way to keep a lucrative business lubricated. This therapy/enhancement distinction should be a controversial one, notes philosopher Mike McNamee, yet the idea of enhancement is rarely if ever questioned as a proper goal of sports medicine: "sports medicine sits over sports science, which sits in panoramic ascendancy over what I take to be the humanities of sport: history, literature, philosophy, and theology."[5]

Sports medicine has developed as a highly diverse, multi-practitioner, multidisciplinary, multi-specialty activity which includes general practitioners, surgeons, gynecologists, orthopedists, pediatricians, dieticians, physiotherapists, masseurs, rehabilitation therapists, physiologists, exercise scientists, psychologists, chiropractors, members of the armed forces, physical education teachers, coaches, athletic trainers, medical students, and a variety of others. While the January 1991 issue of *The Physician and Sports Medicine* listed 82 groups that considered themselves involved in some manner with providing sports medicine, historians are only beginning to explore the early developments, professional rivalries, and struggles for autonomy of many of these groups in North America, Europe, and the United Kingdom.[6] In *One Out of Many: A History of the American College of Sports Medicine,* Jack Berryman shows how, with virtually any

conceivable aspect of physical activity falling under the "sports medicine" lexicon, the College reached out to a broad spectrum of American society and exerted control over definitions of sports medicine.[7] From its early beginnings in 1954, and inspired by a generation of leading physical educators, the College brought together groups of physiologists, physical educators, and cardiologists who helped thrust sports medicine into national and international prominence. Two other independent groups also contributed to the environment from which ACSM grew—the "team surgeons" who treated sport—related injuries and their partners in this enterprise, the "rubbers" or athletic trainers.

Vanessa Heggie, in this volume, shows how the British experience was rather different, even though the *British Association of Sport and Medicine* was founded in the same postwar era, in 1952. She traces the development of sports medicine in Britain from the late 19th century to the formation of a medical specialty in 2005 with the intent of showing how the specialty was not so much influenced by physical educators and fitness experts as by a concerted focus upon the elite and professional athlete. To become a specialization, sports medicine required a shift in an understanding of the athletic body that would establish a distinction between the normal athlete and the normal citizen. It was a distinction that would later prove to be problematic as sports doctors and sports scientists were pushed to find ways to map their specialist knowledge of the athlete back onto the body politic with the advent of the "new" public health in the 1970s.

While Heggie argues that Britain took the leadership role in the field of sports medicine because of its focus on athletic performance, John Hoberman has long suggested that the scientifically based sports medicine which emerged in Germany at the end of the 19th century occurred earlier and more intensively than in any other country.[8] Long before the feats of the athletic body took on such importance, European scientists were speculating about—and attempting to measure—the physiological foundations of human abilities. Physical anthropologists preoccupied with the measuring of bodies, fears about a lack of national fitness, and a flurry of physical education reforms all played a more important role in emergent European sports medicine than athletic performance. As physiologist Emil du Bois-Reymond pointed out in an 1881 essay on exercise, "if the supreme goal were the creation of accomplished runners and other athletic types then one might as well proceed directly to programming the nervous system with the correct movement sequences."[9]

Gertrud Pfister's paper leads us through the development of physical training systems for health and fitness to the professionalization of sports medicine after World War I when the effects of sport on the human body became topics of intense discussion at the *German Medical Society for*

the Advancement of Physical Activities. She points out that Germany's defeat in World War I made the strengthening of the weakened German nation a critical task for medically oriented physical training and its scientific underpinnings. During the Weimar Republic (1919-1933), however, a proliferation of sports laboratories, sport science organizations, and scientific journals focused attention away from health risks toward sporting performance. And although Germany became the only country in the world at that time with an association of sports doctors, an official qualification for "sports physician" within the medical fraternity was never established.

Since their inception in 1896, the modern Olympic Games have provided a growing forum for sports medicine, most importantly directed toward issues around sporting performance and enhancement but also focused upon the gnarly question of defining normality. Both of these issues are addressed here; for instance, Parissa Safai examines the International Olympic Committee's (IOC) discourse around the supposed heath benefits of the Games and Jim Rupert uses his training as a geneticist to focus upon the history and biology of gender verification in the Olympics. Indeed, few sites have been more important than the Olympics for the exercising of disciplinary power over the athletic body, through training regimes, and in the scientific testing and monitoring of bodily processes. As advice increasingly shifted from early warnings about the dangers of sport and exercise, the use of sports medical personnel to better care for athletes' health needs and generate new levels of knowledge about enhancing athletic performance grew exponentially during the 20th century. The 1928 Olympics, at which the first international sports medicine organization was formed, was also the first Olympics to which the British Olympic Association took an official medical officer. From these beginnings, the size of groups of medical related personnel accompanying national teams to the Games became increasingly bloated, such that the IOC instituted strict rules about the size and constitution of medical care givers while demanding that host institutions provide a dizzying array of medical and paramedical services for all athletes, from hospital beds down to condoms.[10] Canada, for example, brought to Athens in 1996 a chief medical officer, a chief therapist, six physicians, six massage therapists, eight physiotherapists, six athletic therapists, two chiropractors, a nurse, a sport psychologist, an exercise physiologist, and the clinic manager.[11] When the Wellcome Institute for the History of Medicine decided to focus one of its "Witness Seminars" upon the history of sports medicine in England in 2009, Olympic medical support was prominently featured. The Witness Seminar overwhelmingly focused upon narratives about the "fathers" of sports medicine and the Olympics—especially doctors such as Dr. Adolphe Abrahams (brother of Harold Abrahams, Olympic athlete of the film

"Chariots of Fire" fame) who had accompanied all the British Olympic teams since 1912 and Dr. (Sir) Roger Bannister who recalled his own epic four minute mile in 1954 and his long association with Olympic sport.[12]

It is in the realm of health risks, however, that much current research on sports medicine is located. Elite athletes are now understood to require routine medical supervision, not because they have a clearly defined pathology but simply because they are athletes.[13] Parissa Safai's exploration of narratives of health, medicine, and exercise science during the 1968 Mexico City Games and 2008 Beijing Games opens with a review of international media coverage on health concerns due to air quality of the host cities (the thinness and toxicity, respectively) and its potential consequences on athletes' health and performance. She argues that media narratives focused on perceived health risks both on and off the field. A key narrative to emerge from the comparative newspaper coverage was the "culture of risk" in high performance sport whereby perseverance and playing through pain is taken as evidence of strength of character; anything less evokes physical and moral weakness. Media narratives also focused on the increasing medical expertise of sports sciences/scientists in high performance sport, particularly the links between athletic performance and the environment. Athletes, of course are not the only ones considered at risk at the Olympics; public health authorities have increasingly been challenged to work along side medical providers to develop complex risk management plans for public health policies and procedures as well as on site health promotion events for mass gatherings at Olympic festivals.[14] Furthermore, as sport has professionalized so has medical care specialized to complement the process. Owners of sports teams have quickly learned the fiscal good sense of guarding their assets, protecting the shelf life of their star performers through the provision of constant medical surveillance.[15]

Defining normality for the athlete has long been a fundamental question for sports medicine and anxiety around sex, gender, and intersex has led to enhanced surveillance by Olympic authorities and the sports medical fraternity. The desire to anchor biological sex differences in sport has always been contentious (and indeed some feminists argue that difference is itself a construct of a phallocentric culture whose historical function has been that of women's oppression). In his paper, Jim Rupert reviews the science underlying sex testing at the Olympics, their history, and the controversies that accompanied them. He raises the issue of sex testing for sex verification in elite athletic competition which has become increasingly problematic both practically and ethically. In his analysis he traces the dubious scientific reasoning which has been used to underpin the tests for Olympic authorities and the administrative license taken regarding those who failed the tests and among those who

continue to be challenged as "sex imposters." New studies regarding the ethics of gender verification in women's sports competition suggest that ethical and legal provisions on the protection of genetic privacy need to be invoked in the same way as they are in clinical practice in order to avoid the power of common, unquestioned distinctions of everyday life we thoughtlessly make use of although they are false.[16]

The focus of sports medicine, risk, and special populations is taken up in Shannon Jette's paper on the production of medical knowledge concerning physical exertion during pregnancy in the latter half of the 20th century. Drawing on earlier critical examinations of women and exercise in the late 19th and 20th centuries by historians Patricia Vertinsky, Wendy Mitchinson and Helen Lenskyj,[17] as well as primary data produced by experts in the fields of exercise physiology, obstetrics, and sports medicine, Jette argues that recommendations to limit exercise during pregnancy reflected ongoing anxieties about the female body and the perceived "risks" inherent in reproduction. Her paper raises important epistemological questions about how knowledge is constructed, valued, and communicated to the public and targeted population and she illustrates how medical knowledge about the active pregnant body has never been neutral but rather bound up in relations of power and the (bio)politics of risk.

The power to script discourses on health, medicine, and exercise was also influenced by industrial capitalism, addressed in this issue by Nancy Bouchier and Ken Cruikshank. Hamilton's economic expansion was gained at the expense of the city's natural recreational spaces and sites for outdoor swimming. From the late 19th century onwards, swimming had become a most popular, desirable, and healthful recreational activity. While some Hamilton residents were able to travel outside the city to swim in unpolluted waters, those who remained in the city were resigned to bathing in polluted waterfronts, consequently placing their health at risk. Bouchier and Cruikshank address the link between exercise, medicine, and the environment in their analysis of the development of Hamilton's swimming pool system in response to these heightened concerns. A public health crisis was averted with the construction of numerous municipal pools, but outdoor lake, bay, and river systems remained sacrificed to industrial growth, a concern that still resonates today.

In her paper, Roberta Park reflects upon another current concern—the perceived crisis over obesity. Just as Jette, in her study of pregnancy and exercise, warns that we must remain wary of modernist claims about less restrictive guidelines that inspire notions of false progressivism in matters of health, Park signals the fact that there is nothing new in the current "obesity epidemic" with its wrist slapping messages to a society increasingly concerned about overweight and inactivity. She reminds

us that while sports medicine may be considered a relatively new medical specialism, there have been crusaders advising against corpulence and related health and exercise matters for centuries. She shows that physicians, philosophers, and others have a lengthy history worrying about weight and promoting the broader health benefits of exercise, sport, and a balanced diet and that the scientific, medical, and popular literature regarding such subjects is vast. What is needed, she insists, is for sports medical personnel, including physical educators to focus their efforts upon intelligent practice by learning lessons from many past successes in promoting exercise and sport among children and adolescents and rekindling practices once popular and effective but now abandoned.

The rich history of sports medicine is in its infancy and we might draw upon dance scholar Helen Thomas's useful point to further examine this history in terms of "roots and shoots." She draws upon French philosophers Gilles Deleuze and Félix Guattari's distinction between a root as a single source and a rhizome which in contrast is an underground free floating stem which bears both roots and shoots.[18] The rhizome therefore is an arrangement or assemblage which exists only in connection with other arrangements—showing the way in which the sports medicine historian's task is not to make a tracing from partial truth but to attempt to trace the networks and branches through their various points of intersection. This approach might help weld the growing challenges of the present to keener insights from the emerging multifaceted history of sports medicine.

NOTES

1 Jack W. Berryman and Roberta J. Park, eds, *Sport and Exercise Science. Essays in the History of Sports Medicine* (Champaign, Ill.: Illinois University Press, 1992), p. xi.
2 Cristobal Mendez was the first physican to write a book devoted to exercise and Marsilus Gagnatus was a Roman Professor of Medicine. Printed in Seville and comprising 4 "treatises" its full title is *Libro del exercicio corporal, y de sus prouechos,por el qual cada uno podra entéder que exercicio le sea necessario para cóservar su salud.*
3 F. K. Mathys, "The History of Sports Medicine," *Olympic Review*, 242 (1987): 650-53.
4 Charles H McCloy, "What is Sports Medicine?" *Journal of Health, Physical Education and Recreation*, 29 (1958): 45.
5 Mike McNamee, "Whose Promoetheus? Transhumanism, Biotechnology and the Moral Topography of Sports Medicine," *Sport, Ethics and Philosophy*, 1/ 2 (2007): 181-82.
6 See for example, Berryman and Park, eds., *Sport and Exercise Science*; Neil Carter, *Medicine, Sport and the Body: A Historical Perspective* (Bloomsbury Press, 2011); and Vanessa Heggie, *A History of British Sports Medicine* (Manchester: Manchester University Press, 2011).
7 Jack W. Berryman, *One Out of Many: A History of the American College of Sports Medicine* (Champaign, Ill: University of Illinois Press, 1995).
8 John Hoberman, "The Early Development of Sports Medicine in Germany," in Berryman and Park, eds., *Sport and Exercise Science*, p. 233- 82.
9 Berryman and Park, eds., *Sport and Exercise Science*, p. 273.

10 Sarah Teetzel, "Sports, Medicine, and the Emergence of Sports Medicine in the Olympic Games: The Canadian Example," *Journal of Sport History*, 34 (2007): 75-86.
11 The Canadian Academy of Sports Medicine was established in 1970.
12 L. A. Reynolds and E. M.Tansey, eds., *The Development of Sports Medicine in Twentieth-Century Britain,* Volume 36 (London, UK: Wellcome Trust Centre for the History of Medicine, 2009).
13 Nancy Theberge, "It's Not About Health, Its About Performance: Sport Medicine, Health, and the Culture of Risk in Canadian Sport," in Jennifer Hargreaves and Patricia Vertinsky, eds., *Physical Culture, Power and the Body* (London and New York, Routledge, 2007), p.142-58.
14 K. E. Enock and J. Jacobs, "The Olympic and Paralympic Games 2010: Literature Review of the Logistical Planning and Operational challenges for Public Health," *Public Health*, 122 (2008): 1229-38.
15 See Neil Carter, "Metatarsals and Magic Sponges: English Football and the Development of Sports Medicine," *Journal of Sport History*, 34 (2007): 53-74.
16 Claudia Wiesemann, "Is There a Right Not to Know One's Sex? The Ethics of 'Gender Verification' in Women's Sports Competition," *Journal of Medical Ethics* (2010) doi: 10.1136/jme.2010.039081.
17 Patricia Vertinsky, *The Eternally Wounded Woman: Women, Doctors, and Exercise in the Late Nineteenth Century* (Champaign, Ill: University of Illinois Press, 1994); Wendy Mitchinson, *The Nature of Their Bodies: Women and Their Doctors in Victorian Canada* (Toronto: University of Toronto Press, 1991); and Helen Lenskyj, *Out of Bounds: Women, Sport and Sexuality* (Toronto: Women's Press, 1986).
18 Helen Thomas, "Physical Culture, Bodily Practices and Dance in Late 19th Century and Early 20th Century America," *Dance Research: The Journal for the Society for Dance Research*, 22, 2 (2004): 190; Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. B. Massumi (London: Athlone Press, 1982), p. 8-18.