



Substance use in elite and recreational sport

A socio-cultural, medical, and regulatory field of tension

Katinka van de Ven^{1,2,3} , Bengt Kayser⁴ , Malte Christian Claussen^{5,6,7} , and Samuel Iff^{5,8} 

¹Centre for Rural Criminology, School of Humanities, Arts, and Social Sciences, University of New England, Armidale, Australia

²Drug Policy Modelling Program, Social Policy Research Centre, University of New South Wales, Sydney, Australia

³Human Enhancement Drugs Network (HEDN), New South Wales, Australia

⁴Institute of Sport Sciences, University of Lausanne, Switzerland

⁵Department of Psychiatry, Psychotherapy, and Psychosomatics, Psychiatric University Hospital Zurich, University of Zurich, Switzerland

⁶Private Clinic Wyss AG, Münchenbuchsee, Switzerland

⁷Adult Psychiatry, Psychiatric Services Grisons, Chur, Switzerland

⁸Institute of Social and Preventive Medicine, University of Bern, Switzerland

The sports world can be represented as a continuum of rule-based play involving at least some physical activity and skills, ranging from improvised soccer on the school playground all the way to elite sports at Olympic level. Whereas recreational sports are often promoted for public health reasons, elite sports, affecting only a small fraction of the population, drives for maximization of performance at a potential health cost [1, 2]. Hence, recreational and elite athletes inhabit distinct socio-cultural, medical, and regulatory environments. Since the inception of the World Anti-Doping Agency (WADA) in 1999, an international regulatory framework restricts the use of various methods and substances in elite-level sports because they may enhance performance, represent a potential health risk and/or are against the ‘spirit of sport’ [3]. Since athletes can also have health issues necessitating treatment, exceptions can be made through so-called strictly regulated Therapeutic Use Exemptions (TUEs) [4]. Despite some regulatory restrictions, however, use of medication by recreational athletes, or outside of sports by gym and fitness goers is not uncommon and rather tolerated by society [5, 6]. In the present special issue of *Sports Psychiatry*, a series of articles discusses some of the socio-cultural, medical, and regulatory issues related to the similarities and differences of substance use between recreational and elite sports. Collectively these articles advocate for a more “health-based” approach, especially in recreational sport. In addition, instead of the current prohibitive zero-tolerance punitive environment created by the anti-doping movement for elite sport – which increasingly encroaches into recreational sport and the gym and fitness realm –, arguments are

presented in favour of fostering individual physical and mental health and of promoting unstigmatized access to necessary treatment, including for those who tested positive for doping use.

Elite athletes, for example, just as anybody else, are vulnerable to a range of mental health issues, such as anxiety, depression and substance use disorders. In addition to non-sporting factors (e.g. major life events), sporting factors can also be triggers for mental issues (e.g. injury or the performance culture) [7]. For elite athletes too, as well as recreational athletes, there are barriers for seeking help for mental health issues, such as stigma, limited mental health literacy, or negative past experiences with mental health treatment-seeking [8, 9, 10, 11]. In the past decade there have been increased calls to develop a more comprehensive mental health framework to promote the mental health and wellbeing of elite athletes, and to respond to those who are at-risk of developing or are experiencing mental health issues [12]. Still a lot needs to be done in this area including better describing and understanding the needs of different types of elite athletes, as well as recreational athletes and gym goers. Pitt et al. [13] discuss in their contribution to the present special issue that very little research exists on the mental health of elite Olympic Weightlifters. However, it is quite plausible that the so-called “iceberg profile”, originally described by Morgan [14] hides the less successful athletes who may actually be at increased risk of developing mental health issues, leading to accelerated drop-out from sports and other unwarranted consequences. This profile characterises successful athletes’ tendency to have below the population averages for the five negative mood states,

with one positive mood state (vigour) being one standard deviation above the population mean. Indeed, we still know rather little about the mental aspects of quitting a high-level sports career.

Similarly, as raised by Piffaretti et al. [15] in their contribution to the present issue, elite athletes who are under or have received a sanction for an anti-doping rule violation (ADRV) are at particular risk of developing mental health issues. As they argue in their commentary, the premiss that all doping behaviours are foremost grave moral failures that must be harshly punished must be abandoned. Indeed, the strong public moral opprobrium to which athletes with an ADRV are exposed can be very difficult to endure. This can be especially so when the intent to dope is not clear, since a large number of athletes with an ADRV likely did not intend to illicitly seek performance enhancement but fell victim to the harsh strict liability rule of anti-doping (up to 40% of ADRVs according to De Hon et al. [16]). As Piffaretti et al. note, all athletes with an ADRV need and deserve help, and it is important that we resign the “moral” approach to anti-doping for a “health-based” approach to uphold a comprehensive safeguarding practice [15].

Not only do we need to improve mental health and sports psychiatry services for elite athletes, but also for recreational athletes, gym-goers and other people who use image and performance enhancing drugs (IPEDs). There is significant stigma around IPED use [10, 11]; in a recent global study, involving 2385 men who use anabolic-androgenic steroids, 55% reported feeling discriminated against for their use [17]. This stigma and discrimination lead individuals to conceal their use when presenting to health professionals or could deter them from seeking help. However, as non-prescribed IPED use may lead to adverse long-term effects, with some being serious in nature (e.g. cardiovascular damage, liver toxicity and infertility), this reluctance to seek medical assistance is problematic [18]. There are also other barriers hindering the provision of quality care such as the lack of knowledge of GPs around IPEDs [17, 19], leading to a lack of engagement with this patient group. Furthermore, as raised by Diethelm et al. [20] in the present issue, there is also the fear of criminal liability of healthcare professionals treating patients who use anabolic-androgenic steroids for non-medical purposes in some countries. Their specific commentary is focussed on Switzerland in which the dilemma is discussed of prescribers who want to treat this group but are worried this may lead to criminal liability according to Article 22 of the Swiss Sports Promotion Act (SpoPA). The fear of prosecution leads to healthcare professionals refusing essential treatment to people who use anabolic-androgenic steroids, which causes unnecessary suffering in patients.

Just as anybody else, elite athletes may also have health issues that need to be treated with pharmacology. For some substances that are listed as for forbidden in sports, exceptions can be obtained by means of the TUE framework. The treating physician and elite athlete file an application for a TUE which can then be granted or refused. The intentions for allowing a TUE are good, since they seek to give athletes access to the same state of the art medical treatment as available to any other person with the same health problem. However, there is reason to suspect that TUEs may on one hand be underused, leading to subpar medical treatment of athletes, but on the other hand also unwarrantedly exploited for performance enhancement purposes. In their letter in the present issue, Schneeberger et al. remind us of the important increased prevalence and treatment of ADHD with methylphenidate in the USA [21]. Athletes can also suffer from ADHD and may need treatment with a stimulant, but stimulant use by athletes is a contentious issue because of their purported performance enhancing effects and related health risks. Schneeberger et al. therefore argue that sport psychiatrists need to be more involved in the continued work on the TUE framework and its application. Liebrez, Smith and Buadze report results of an inquiry that leads to suspect that treatment of ADHD among world-level elite cyclists may be not optimal [22] in the present issue. By analysing secondary, publicly available data about professional cyclists who were monitored for anti-doping during the years 2020 and 2021 and matching these data to the TUEs granted for otherwise prohibited medications, they concluded that ADHD may be undertreated among elite-level cyclists. The reasons for such undertreatment can only be speculated but may include stigmatisation, negative conceptions of doping allegations, and possible medicolegal recriminations.


This collection of themed articles illustrates the tension between therapeutic and extra-therapeutic use of substances in and outside of sports well. While in democratic societies some substance use for performance enhancement or for a psychotropic effect would seem to be on course to be eventually normalised and regulated, within professional sports the dream of a “clean” sport still has the overhand. It is promoted with such a strong drive that it has a totalitarian ring to it, carrying a risk of spiralling towards dystopian features in a dynamic of what Dimeo labelled the *dichotomy of “good anti-doping” up against “evil doping”* [23]. This dynamic has created a tension with health consequences for individuals, who whether elite athletes or not, need attention and professional care. The articles in this issue remind us again that the mental health issues in sports are real and need to be better taken care of. Let’s rise to the challenge.

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ORCID

Katinka van de Ven

 <https://orcid.org/0000-0003-3026-9978>

Bengt Kayser

 <https://orcid.org/0000-0002-9776-7501>

Malte Christian Claussen

 <https://orcid.org/0000-0002-8415-3076>

Samuel Iff

 <https://orcid.org/0000-0002-4441-5465>

Samuel Iff, M.D.

Sahlistrasse 1
3012 Bern
Switzerland
samuel.iff@pm.me