

CORRESPONDENCE

The effects of the COVID-19 pandemic on the use of the performance-enhancing drugs

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To the Editor,

The coronavirus disease (COVID-19) pandemic has been impacting the whole society in every aspect of the daily life, comprising the sport field. Several restrictive strategies have been implemented by governments in an effort to stem the spread of the disease and salvage public health. Such efforts have severely constrained access to non-essential services, leading to the closure of non-essential points of gathering and business and the enforcement of rigorous social distancing and prolonged lockdowns, in addition to masking and stay-at-home mandates. However necessary, there is no denying that such extremely rigorous, and to most people unprecedented, measures have adversely affected the global economy and the daily lives of everyone of us, including professional and amateur athletes (1). The most important sport events were postponed or cancelled, including the 2020 Tokyo Olympic Games. But how was the phenomenon of performance-enhancing drug (PED) use impacted and how was the most concerning issue affecting the integrity of sport affected by the pandemic control restrictions?

The World Anti-doping Agency (WADA) was established in 1999, whereas its code was implemented in 2004 in order to articulate and enforce doping control initiatives and provide educational strategies aimed at preventing PED use (2). Nonetheless, it is worth noting that the prevalence of PED use among athletes

is mostly unchanged since the foundation of WADA. Unfortunately, the use of the performance-enhancing drugs is not limited to athletic performances, but it concerns other settings as well. Nowadays, several strategies for doping control are adopted such as education, deterrence, detection, enforcement and rule of law (3), but the most important anti-dissemination strategy is constituted by information campaigns, especially addressed to youngsters, meant to raise awareness as to the serious health risks involved in PED use. Currently, the primary drivers of anabolic androgenic steroids (ASA) use are 1) the determination to improve performances and prevail no matter what the cost may be; 2) the economic benefits, popularity and fame; 3) greater stamina and resistance. This public health issue has raised particular concerns due to the recent ASA market developments, which is somewhat similar to the illicit market of narcotic drugs. Moreover, it has to be considered that the higher stress and psychosocial condition related to pandemic social restrictions has fueled and exacerbated substance use disorders (4). The prevalence of doping in sport causes unfairness and damages the very fabric of our society, especially insofar as it involves children and young adults who look up to athletes as role models. In this concern, the impact of the COVID-19 pandemic may have led to substantial modifications in substance use patterns and an increased risk of substitution, adulteration, contamination, and dilution with a potentially harmful substance (5, 6).

During the COVID-19 lockdown, WADA and stakeholders suspended or scaled down doping control programs, testing and other activities. As a consequence, athletes have seen the unexpected opportunity to misuse AAS without the possible risk of testing positive (7). This has been controversial, considering the measures taken by governments to flatten the pandemic curve in order to safeguard public health. Indeed, all the technologies implemented for teleworking, such as teaching students on-line, telehealth applications, prescriptions and referrals, and treating patients in hospitals/care homes via video links can also be applied to enhance and uphold sport integrity. Conversely, anti-doping testing for professional competitive athletes has increased, due to the lockdown raising suspicion about doping opportunities. The U.S. Anti-doping Agency has put in place novel measures to combat the lack of anti-doping testing during the pandemic: these include a “in-home self-test” that requires athletes to provide urine and small blood samples at home to be tested in the anti-doping laboratory, under supervision provided by video-conference (8). As such, reports from forensic science and toxicology laboratories are crucial for the early detection and response to such events. Furthermore, toxicology laboratories should assure their continue effort in providing new methods and technologies designed to tackle the consumption of illicit substances and to monitor the constantly changing illegal drug markets (9, 10). The most recent WADA code revision has certainly brought about important progress in the ongoing fight against PED abuse. Indeed, it has introduced the possibility to store the samples for 10 years after the first analysis, maintaining the same legal value if re-tested and use for prosecution purposes (11). In that regard, the prospect of re-testing the same sample with newly developed analytical methods based on innovative technologies may represent a strong deterrent for doping users, since anti-doping research rapidly evolves (6), largely by implementing the same approaches used to fight new psychoactive substances (NPS) use (12, 13). It is worth noting that the NPS phenomenon bears several similarities with doping, especially due to the constant emergence of new substances and methods aimed at circumventing current legal restrictions.

In Italy, the National Antidoping Organization (NADO-Italia) is in charge of guaranteeing compliance with WADA rules and the transposition of the List of Prohibited Substances and Methods. However, the gap between elite athletes and amateur athletes is still broad and unaddressed, since non-professional sport competitions are not adequately overseen, and neither are the competing athletes. This difference may give rise to an important public health issue, on account of the adverse effects of uncontrolled doping agents consumption. In this concern, the Italian anti-doping law created the “Section of the Technical Health Committee for Supervision and Control on Doping and for Health Protection in Sport Activities”, that carries out, among its other tasks, the following activities on amateur sport: 1) updating each year the list of banned substances and practices, adapting it to the WADA list; 2) determining cases, criteria and methodologies for anti-doping controls; 3) promoting research projects and information/training campaigns meant to protect health in sports and tackle doping (14). In conclusion, regarding the highly complex dynamics triggered by the pandemic, new and unexpected challenges have come to the fore in the ongoing fight against substance abuse in its every aspect, such as NPS (15), ASA consumption by amateur athletes, or other substance abuse settings, e.g. driving under the influence of psychotropic substances (16). The current Italian antidoping approach for amateur athletes seems to be a promising strategy to bridge the gap between professional sports and amateur sports. Moreover, youngsters should be thoroughly educated as to the threats posed by such substances, so that they can realize how profoundly and severely drug abuse can affect not only their sport career, but their health and well-being overall.

Conflicts of interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

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