

**POSITION PAPER OF THE CENTER FOR SPORTS LAW & POLICY**  
***Whether Artificially Induced Hypoxic Conditions Violate “The Spirit of Sport”***

The World Antidoping Agency’s (WADA) Code provides that substances and methods may be banned for use by athletes if they meet at least two of the following three criteria: (1) they are performance enhancing; (2) they are dangerous to the health of the athlete; or (3) they violate “the spirit of sport.” In the past year, WADA has become interested in the issue whether artificially-induced hypoxic conditions or hypoxia—for example, altitude training chambers, tents, and masks—ought to be banned.<sup>1</sup> To this end, WADA submitted the questions whether hypoxia are performance enhancing and/or dangerous to the health of the athlete to its Scientific Committees, and the question whether they violate “the spirit of sport” to its Ethical Issues Review Panel. The reports of the Scientific Committees concluded that while hypoxia do have the potential to be performance enhancing, the evidence is not clear that they are detrimental to the health of the athlete.<sup>2</sup> (In fact, there is no evidence that hypoxia—like the natural conditions they mimic—are unhealthy.)<sup>3</sup> Finally, the report of the Ethical Issues Review Panel concluded that hypoxia violate “the spirit of sport” because they involve the passive use of technology.

Based on these reports, and in particular on its Committees’ opinions that hypoxia have the potential to be performance enhancing and violate “the spirit of sport,” WADA’s Executive Committee announced on May 14, 2006, that it would “seek broad stakeholder comment on the question of whether artificially-induced hypoxic conditions should be placed on the 2007 List of Prohibited Substances and Methods (List).” It further provided that “[t]he consultation process on hypoxic conditions will occur in parallel to the process

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<sup>1</sup> It is our understanding that WADA may suspect that some athletes claim to rest in artificial hypoxic conditions as a way to mask their misuse of rEPO, a substance that is already on the banned list. If true, this suspicion at least partly may motivate WADA’s interest in determining whether such conditions might also be subject to placement on the banned list. To the extent this is the case, it would be useful first to establish whether artificial hypoxic conditions can in fact cause the same physiological responses as rEPO at the levels at which WADA is concerned. If they cannot have this effect, then the concern that they may be masking agents for the misuse of rEPO is misplaced. In any event, such a concern is not mentioned in the Panel’s report.

<sup>2</sup> See WADA Note on Artificially Induced Hypoxic Conditions, May 24, 2006, at 2-3.

<sup>3</sup> See, e.g., Brugniaux JV, Schmitt L, Robach P, Jeanvoine H, Zimmermann H, Nicolet G, Duvallat A, Fouillot JP, Richalet JP, “Living high-training low: tolerance and acclimatization in elite endurance athletes,” *Eur J Appl Physiol.* 2006 Jan; 96(1):66-77; Fu Q, N Townsend, M Truijens, E Martini, D Palmer, J Stray-Gundersen, Rodriguez, C Gore, B Levine, “Short-term intermittent hypobaric hypoxia exposure does not alter hemodynamics and baroreflex function in young athletes,” *High Altitude Medicine and Biology* 5:214, 2004.

implemented for feedback on the draft 2007 List which is currently in circulation. Following the consultation period, stakeholder feedback will receive full review by the WADA List Committee in September 2006, which will then consider the appropriate next steps." To facilitate stakeholder commentary, the Chairman of WADA's List Committee, Arne Ljungqvist, sent them a copy of the Ethical Issues Review Panel's opinion that hypoxia violate "the spirit of sport."

This position paper addresses the merits of that opinion, and thus of the view that these methods might eventually be placed on the 2007 List. In particular, it challenges the Panel's novel and highly problematic solution to the longstanding question of how to define "the spirit of sport." While an effective definition of this concept must be developed, it must be defensible both in theory and in practice. It is essential to the integrity of WADA's anti-doping efforts that the Organization not endorse loose definitions that capture too much, and injure its own cause—healthy and honest competition and competitors—in the process.

*A. The Ethical Issues Review Panel's Report is comprised of four parts:*

First, the report explains that WADA's Code "provide[s] [only] general guidance and some examples of elements that are constitutive to or promotive of th[e] concept ['the spirit of sport']." Those exemplary "elements" or "values" include "ethics, fair play and honesty, health, excellence in performance, fun and joy, respect for self and other participants, and courage among others."

Second, the report argues that as the incarnation of "the spirit of sport," these elements or values dictate that "for any particular means for enhancing performance . . . the crucial test will be whether it supports or detracts from sport as the extension of natural talents and their virtuous perfection."

Third, while the report acknowledges that "[s]port has embraced technology and the expert systems that go into the design of improved equipment and refined training methods," it argues that the "passive" use of technology and expert systems fails this "crucial test"—that is, it argues that the passive use of technology and expert systems is not virtuous and for that reason violates "the spirit of sport." In doing so, the report distinguishes between the "active" and "passive" use of technology and expert systems, suggesting that active use passes the crucial test and thus is consistent with "the spirit of sport."

Fourth, the report applies this active/passive distinction to artificially induced hypoxic conditions and concludes that when they are used passively—for example, as part of a "train low—rest high" conditioning program—they violate "the spirit of sport." Anticipating the response that artificially induced hypoxic conditions merely level the playing field between athletes who have easy access to high elevations and those who do not, the report suggests that such an argument could just as easily be made to support a parade of horrors including gene doping, and concludes that "[h]onoring 'the spirit of sport' does not require an absolute leveling of athletes' circumstances."

B. *Our critique of this report relates to points two through four as follows:*

1. *The use of “virtuous perfection” of an athlete’s “natural talents” as “the crucial test” for determining whether something violates “the spirit of sport” is unworkable.*

The authors of the Ethical Issues Review Panel’s Report on artificially induced hypoxic conditions suggest that “the spirit of sport” might be interpreted to mean “the expression of natural talents and their virtuous perfection.” The report then suggests that this aspiration is “the crucial test” for determining whether something violates “the spirit of sport.” “Virtuous perfection” of “natural talents,” however, is no more useful as a workable test for line drawing than “the spirit of sport.” While this point seems to us self-evident, one need only imagine a diverse group of intelligent people trying to sort substances and methods according to their lack of virtue to understand not only how subjective but also how arbitrary the task would be. If “the spirit of sport” is going to be a standard for banning a substance or method, it must be defined in a way that permits fair and consistent application. It is neither fair nor consistent to define the term in a way that authorizes the arbitrary application of an ambiguous term that provides no guidance at all in establishing the line between virtue and its opposite.

2. *The distinction the panel draws between “active” and “passive” uses of technology fails as a rule to determine whether something violates “the spirit of sport” because it is overbroad and otherwise impossible to sustain.*

The report presumes at the outset that technology and expert systems are not inherently problematic, and thus that their use by athletes does not automatically violate “the spirit of sport.” It argues, however, that the “passive” use of technology is not virtuous. Specifically, its authors write that

[o]ur analysis of artificially induced hypoxic conditions . . . alerted us to an important distinction between technologies and expert systems that operate on the athlete, and in relation to which the athlete is merely a passive recipient, versus technologies with which the athlete actively engages and interacts as part of the process of training and competing in order to enhance performance.

They further emphasize their belief that

[f]rom the athlete’s point of view, my responsibility for my performance is diminished by technologies that operate upon me, independent of any effort on my part.

This distinction between the active and passive use of technology and expert systems fails as a rule.

First, the distinction is overbroad because it encompasses methods that WADA and its stakeholders would never classify as contrary to “the spirit of sport.” Specifically, there are many training methods and expert systems that “operate on the athlete, and in relation to which the athlete is merely a passive recipient” that are both widely used and widely accepted as legitimate. Electrical stimulation machines, massage equipment and therapy, and ice and heat treatments all immediately come to mind in this respect; and there are certainly a myriad of other such illustrations. Given the Panel’s definition of passive use, set out immediately above, it would be difficult if not impossible to distinguish artificial hypoxic conditions from these common training methods, technologies, and expert systems.

Second, the Panel’s active/passive distinction is impossible to sustain, because as a physiological matter, the human body is actively engaged in processing these myriad methods, technologies, and expert systems. Rhetoric aside, that an athlete’s body may appear to be still rather than in movement as it interacts with them does not alter the fact that the body is responding and adapting according to their qualities. Indeed, this is precisely why they are useful as tools for training and enhancing performance. Thus, just as ice and heat trigger and stimulate the body’s circulatory response and its ability to heal and regenerate, so too does relative oxygen deprivation trigger and stimulate the body’s manufacture of compensating hemoglobin-rich red blood cells and its ability to deliver endogenous oxygen according to its needs.

*3. The case has not been made that the passive use of artificial hypoxic conditions violates “the spirit of sport;” moreover, such a determination would be arbitrary and enormously difficult to police, thus challenging the integrity of WADA’s anti-doping efforts.*

As discussed, the report’s conclusion that the passive use of artificially induced hypoxic conditions is not virtuous and thus violates “the spirit of sport” is untenable because it is premised on acceptance of “virtuous perfection” as the test for “the spirit of sport,” and of the active/passive distinction developed to flesh out the meaning of virtue in the context of technology use by athletes. Three additional reasons supplement our conclusion that artificially induced hypoxic conditions should not be placed on the banned methods list.

As a conceptual matter, it is difficult if not impossible to distinguish between the artificial manipulation of oxygen levels and the commonplace artificial manipulation of other environmental conditions. Athletes, like all of us, constantly choose to manipulate their environment so as to assure optimal circumstances. For example, we manipulate the temperature and humidity in our homes so that they mimic more preferable climate zones; we make snow where there is little to none so that we can capture at least some of the pleasure and opportunity that is afforded people who live in or can easily attain higher elevations; and both daily and seasonally, depending upon where we live in the world, we alter the relative lightness and darkness of our spaces to assure appropriate sleep and energy. These manipulations are of a fundamentally different sort than those that are at

play when an athlete misuses rEPO or that are contemplated in the brave new world of genetic enhancement.

It is useful in this context to think about the case of marathon world record holder Paula Radcliffe, who is currently featured by WADA as an exemplar of “the spirit of sport,” presumably for her vocal, longstanding, and steadfast anti-doping stances.<sup>4</sup> Paradoxically, she is also associated with the use of hypoxia, and identified as an illustration of the success of that training method. We suggest that this is not a mistake; nor is it the result of what the report calls the “considerable . . . confusion” about the status of this training method. Rather, it is because Radcliffe and other endurance athletes who use hypoxia as part of their training regimens are doing no more than we all do when we manipulate our environments to simulate more favorable conditions. The notion that in a new regime her status would change so radically that she would be branded as acting outside “the spirit of sport” is alarming, and would be unremedied by the fact that in a previous period, her use of this technology was permissible.

Moreover, the designation of artificially induced hypoxic conditions as a violation of “the spirit of sport” is fundamentally arbitrary, because athletes could not be prevented from using other technologies—helicopters or teleskis, for example—to lie (passively) at natural elevations. There is no logical distinction between technologies that all result in the same beneficial ends. Like hot and/or humid air, snow, and light, thin air is thin air however and wherever it can be accessed.

Finally, the report does not explain how a ban on the passive use of hypoxia would be policed. It has been suggested that existing tests to determine elevated hematocrit levels might be useful for this purpose. However, to the extent that these artificial conditions merely mimic natural altitudes, they are unlikely to result in positive test results, unless the levels currently required to achieve positive results are reduced to account for this possibility. But if this were done, WADA and its subsidiary enforcement agencies would face the enormously cumbersome task of determining which positives result from travel rather than from the use of artificially induced hypoxic conditions. It has also been suggested that violators could be turned in by observers, in other words, that a test is not required to find a violation. This alternative should be considered equally problematic from WADA’s perspective, since all that an athlete would have to claim and corroborate to avoid sanction is that their use of the conditions was active. While some substances and methods are so potentially harmful to the athlete or to sport that they merit placement on the banned list simply for the *in terrorem* effect of that designation, without regard to the governing organizations’ ability to police the ban, it would be difficult to argue that artificially induced hypoxic conditions are in this category. WADA ought not to risk its credibility as a strong and effective enforcement agency for such an ambiguous gain.

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<sup>4</sup> See <http://www.wada-ama.org/en/dynamic.ch2?pageCategory.id=394> (explaining that “WADA has launched a poster series to promote the values of sport respect, dedication, character, excellence, solidarity, and courage. The series is titled ‘Spirit of Sport’ and features six athletes in the fight against doping: Canadian basketball player Tracey Ferguson; Brazilian swimmer Gustavo Borges; Japanese judo player Yoko Tanabe; German rower Roland Baar; English runner Paula Radcliffe; and Kenyan runner Kip Keino.”)

## *Conclusion*

We applaud the Ethical Issues Review Panel's willingness to take on this difficult matter. However, if "the spirit of sport" is to be used as a standard for banning substances and methods, it is essential that the term be defined in a way that draws a meaningful line. The Panel has begun that process, although its initial effort falls short of what is required. We urge Stakeholders and WADA's List Committee to reject the Panel's analysis and to refer this matter to the appropriate body or bodies to determine how, if at all, "the spirit of sport" can be used as a standard for identifying substances and methods that should be banned. When the Ethical Issues Review Panel is asked whether particular substances or methods violate "the spirit of sport," like the scientific committees reviewing the questions of performance enhancement and health effects, it should be given specific parameters that will allow it to apply this principle fairly.

Finally, we urge Stakeholders and the List Committee to reject the Panel's specific conclusion with respect to the status of artificially induced hypoxic conditions. We do not believe that this conclusion can stand on the basis of the Panel's analysis. Thus, if it is to stand at all, it must be on alternative grounds. As we have argued, however, the case is otherwise extremely difficult to sustain. It is made even more so by the fact that the athletes who developed and continue to use these conditions did and do so still in an effort naturally to elevate their hemoglobin levels. Hypoxia simply allow low-lying athletes to share in the natural benefits of altitude, without having to leave their homes, families, and communities, and without having to neglect their related responsibilities. WADA ought to support rather than impede such efforts.

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