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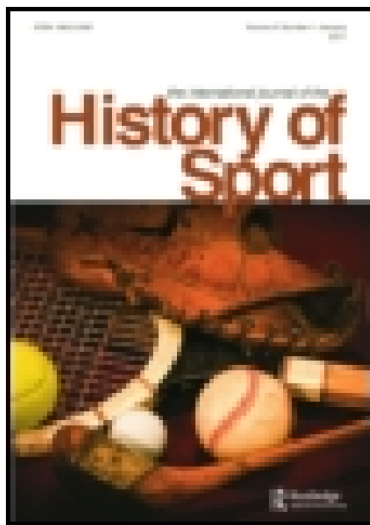
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Manufactured Dope: How the 1984 US Olympic Cycling Team Rewrote the Rules on Drugs in Sports

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At the 1984 Los Angeles Olympic Games, the US cycling team not only won its first Olympic cycling medal since 1912 but also added eight more, marking a triumph for the team and its Polish-born coach, Eddie Borysewicz. Soon, however, news leaked that the seven members of the US cycling team, four of whom won medals, had employed controversial blood transfusions. Though not prohibited by the International Olympic Committee (IOC), the news caused a firestorm within the press and led to a significant revision of the IOC Medical Commission's anti-doping rules. Previous historical scholarship has ignored this event, focusing instead on early doping scandals such as Knud Jensen or more recent controversies such as Ben Johnson and Lance Armstrong. However, this event caused a significant shift within the IOC Medical Commission's attitude towards doping. Prior to 1984, the IOC Medical Commission had hesitated to prohibit any substance, including anabolic steroids, if it could not detect the substance through testing. The willingness of the US team to experiment with new medical procedures to improve performance galvanised the Medical Commission and set in motion new anti-doping policies that remain in place today.

Keywords: doping; blood transfusions; 1984 Olympic Games; Medical Commission; legacy; International Olympic Committee

At a casual glance, the February 1985 cover of *Rolling Stone* appeared like any other. It featured a flattering portrait of rocker Mick Jagger alongside by-lines for an essay from Tom Wolff and an interview with Chaka Khan. But in the bottom left, the magazine known for music, politics and popular culture veered into the realm of sports. With the capitalised tagline 'AN OLYMPIC SCANDAL: How U.S. medalists were doped to win', *Rolling Stone* unwittingly entered a world that had just been turned upside down. The article by Richard Ben Cramer titled 'Olympic Cheating: The Inside Story of Illicit Doping and the U.S. Cycling Team' had everything it needed to become an instant sensation: a former Soviet-bloc coach who spoke with a thick Polish accent, secret meetings in shady run-down motel rooms, a foreign sport that few Americans understood and Olympic heroes suddenly exposed as frauds. The nation, still glowing from the triumphant 1984 Los Angeles Games, quickly took interest. Revealing that a number of US cyclists had used blood transfusions, a procedure where an athlete transfuses blood right before an event to improve their endurance, Cramer accused the athletes of 'illicit doping' and violating the policy of the US Olympic Committee (USOC), which stated that such practices were 'unacceptable under any conditions'.¹ Though *Sports Illustrated* had reported the story three weeks earlier, Cramer's piece reached a mainstream audience,

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helping to define the event for a nation and cementing a tarnished legacy for those involved.²

In the years that followed, historians have unfortunately relegated the blood transfusions at the 1984 Games to a historical footnote – eclipsed by Ben Johnson’s positive test for anabolic steroids at the 1988 Seoul Games and revelations in the early 1990s of systematic doping in the German Democratic Republic. Yet the use of blood transfusions by certain members of the 1984 US Olympic cycling team significantly altered the International Olympic Committee’s (IOC) attitudes and policies towards doping. Indeed, not only can historians consider the event a turning point that marks an end to a wide open era of experimentation with performance-enhancing substances in sport that had occurred during the 1960s and 1970s but also it was a significant reason that the IOC Medical Commission reversed certain anti-doping policies, sending them in the direction of stricter regulation that continues through today.³ By examining how the IOC responded to an emerging performance-enhancing substance prior to its use in competition, the decisions made by athletes and coaches to use the procedure and the IOC’s response in the wake of the 1984 Games, a clearer picture of the historical development of anti-doping emerges. In that sense, one of the legacies of the 1984 Olympic Games is its role in shaping a fundamental and lasting change to how the IOC and later the World Anti-Doping Agency (WADA) approached and understood the issue of doping.

A New Approach to Performance Enhancement

In many ways, the 1984 Olympic Games illustrated many trends that had built in postwar international sport. In her work, *More Than Just a Game*, historian Kathryn Jay documents how ‘winning, often at any cost, has profoundly shaped the sports we play and watch in the decades since World War II’.⁴ Finnish sociologist Kalevi Heinilä notes that this trend towards more competitive sport has resulted in ever-increasing state support for athletes as well as the employment of what he terms ‘dubious means’, which includes not only doping but also the willingness to circumvent the spirit of game rules in order to gain an advantage.⁵ State support, Heinilä notes, increases resources for athletes including ‘the pursuit of sport sciences, scientific training of coaches and other specialists, special service for athletes in the army, training centres with large modern halls and state subsidy for training’.⁶ Though state support for doping existed in interwar sport, the period between the end of World War II and the 1984 Olympic Games had witnessed marked increases in athlete support that fuelled the prewar desire for athletic success on the international stage.⁷ Thus, the culture at the time of the 1984 Olympic Games is best described by Heinilä’s term ‘the totalization process of international sport’, which includes the thesis: ‘the greater the national interest involved in success, the less strictly the Systems [national governing bodies] control the use of dubious means’.⁸ While doping had long existed in twentieth-century sport, changes in postwar interpretations of international competition, including a rise in sportive nationalism, coupled with newly developed pharmaceuticals such as amphetamine and anabolic steroids, supported a growth in doping practices among international amateur athletes.⁹ By 1984, the willingness of coaches and athletes to explore blood transfusions did not necessarily reflect a new culture of increased sportive nationalism and hyper-competition, but rather an extension of a longer pattern in elite sport that simply had continued increasing in the postwar period.¹⁰

At the same time, the politicised struggles over Olympic supremacy that emerged during the Cold War heightened the value placed on Olympic success that had begun

during the interwar years of state-sponsored sport. Yet, Cold War politics, first emerging as the Soviet Union sought admittance into the Olympic Movement and entering the sporting arena in the 1952 Melbourne Games through the Hungarian Revolution and the Suez Crisis, would continue to elevate the political meaning of sporting events throughout the 1960s, 1970s and 1980s.¹¹ This has led some scholars to view the Cold War as the foundational context from which all sporting events of the era flow. Certainly, Cold War athletes and coaches (as well as politicians) on both sides of the East–West divide understood that the public often interpreted sport as a proxy battle for international power and prestige. However, athletes do not need the political subtext to continue their pursuit of success and records. Competitiveness and the desire to push their bodies faster, higher and farther is a characteristic of elite athletics regardless of prevailing political tensions. In that sense, historians should not read the decisions of athletes and coaches, especially around the Cold War, solely as products of politics or sportive nationalism. On the other hand, the sporting structures and support, including the coaching, training and scientific resources, emerged from the increasing value placed on sport due to the politics of the Cold War era. In both the Soviet Union and the USA, political leaders diverted significant resources to support athletes and encouraged narratives linking sport to politics.¹² Thus, while propagandising of athletes and the changing state of sport reflect Cold War tensions, the Cold War's influence on the climate in which athletes, coaches and officials made choices and perceived the meaning of their actions must be weighed against the nature of elite sport when understanding athletes' pursuit of athletic excellence.

At the same time, the influence of the Cold War on doping practices should not obscure the advances in medicine and the science that made doping possible. Doping in the late nineteenth and early twentieth centuries used improved knowledge of physiology and pharmaceuticals to improve the performance of athletes.¹³ In the case of blood transfusions, its path to the Olympic Games began with advances in biomedical technology during the 1940s and 1950s. Scientists had discovered the Rhesus blood types by 1940, which enabled doctors to prevent unwanted reactions caused by mixing incompatible blood, while in 1943 it was discovered that acid-citrate-dextrose (ACD) allowed for greater volumes and longer storage of blood. The introduction of the plastic blood bag in 1950 made collection and transportation even easier.¹⁴ Yet, interest in blood as a means to boost athletes' endurance increased significantly in the 1960s. With Mexico City selected to host the 1968 Olympic Games, sporting and medical officials began to express concern over the city's altitude. This concern combined with a postwar boom in the science of human performance that sought methods to overcome exercise limitations – whether caused by altitude or physiology – to athletes' performances.¹⁵ Scientists increasingly understood that the delivery of oxygen to working muscles constituted a significant barrier during endurance performances. Since red blood cells transport the oxygen, a growing body of scientific literature fuelled speculation about the benefits of reinfusing blood to increase oxygen delivery and improve athletic performance. Simply put, scientists speculated that more red blood cells would mean more stamina in any endurance sport.

Scientific papers published throughout the 1960s and 1970s debated whether blood transfusions could benefit athletes. Swedish scientists, led by Bengt Gullbring and later Bjorn Ekblom, supported this view, arguing that transfusions could boost an athlete's ability to transport oxygen through their blood to working muscles.¹⁶ In contrast, a team led by American physiologist Melvin Williams published concurrent articles pouring cold water on the method's effectiveness.¹⁷ This debate continued to such an extent that by the mid-1970s the scholarly community had taken significant interest in blood transfusions as

a potential ergogenic aid for endurance athletes, but remained unsure if it actually worked. The sporting community had also taken note of the potentially new ergogenic aid. A November 1971 article in *Track and Field News* brought the scientific debate over the benefits of blood transfusions to a North American audience of athletes and coaches interested in improving running performances.¹⁸

By 1976, the idea of blood transfusions had also reached the upper echelons of sport's bureaucracy – the IOC's Medical Commission. The IOC established its Medical Commission at the 65th IOC Session in Tehran in May 1967.¹⁹ The new Medical Commission supplanted the IOC's hastily formed Doping Subcommittee that had guided the IOC in the wake of Danish cyclist Knud Enemark Jensen's drug-related death at the 1960 Rome Olympics.²⁰ Though the IOC had officially banned doping in 1938 in the aftermath of the infamous 'Nazi' Olympics, it had not created a list of banned substances.²¹ Instead, the IOC inserted the language that

The use of drugs or artificial stimulants of any kind must be condemned most strongly, and everyone who accepts or offers dope, no matter in what form, should not be allowed to participate in amateur meetings or in the Olympic Games.²²

The vague statement, which did not list specific drugs or methods of enforcement, stayed in place within the *Olympic Charter* until the Doping Subcommittee set about revising it in 1964.²³ When the formative Medical Commission took over with Prince Alexandre de Merode of Belgium as its chair, the IOC tasked it with not only regulating and establishing its policies on drugs in sport but also sex verification.²⁴ Regarding the former, the Medical Commission adopted the following definition of doping products:

If non-alimentary drugs which excite normal effort either by their composition or by their dosages are used, even therapeutically, they will be considered doping products.

In particular:

Sympathomimetic amines (ex. Amphetamine) ephedrine and similar drugs.

Stimulants for the central nervous system (strychnine) and analeptic and similar drugs.

Analgesic narcotics (ex. Morphine) methadone and similar drugs.²⁵

Over the next three decades, the IOC Medical Commission continued to revisit and develop a more comprehensive list of banned substances.²⁶ While debates over financial support for anti-doping slowed efforts to enforce the Medical Commission's policies, its banned substance list expanded and changed though its definition of doping did not.²⁷ For the IOC's Medical Commission, the vague definition had the dual benefit of being both precise and open-ended. By enumerating a few particular cases, it clearly prohibited the known substances it wished to ban. Yet, it also left open the category of doping to include any drugs which could potentially benefit an athlete, even going so far as to note: 'This list is not restrictive'.²⁸ This intentional language meant that athletes could not dope with drugs not included on the list. As historian Paul Dimeo notes, this language illustrated 'a strangely unscientific approach which perhaps hoped to use the spirit of anti-doping rulings as a guide without needing the absolute fixedness of a specific and comprehensive list'.²⁹ As rumours and innuendo of performance enhancement flooded the pages of a global media dedicated to elite sport, the IOC worked to counteract its broad anti-doping language by listing specific substances it wished to prohibit.

Such was the case with adding anabolic steroids to the prohibited list prior to the 1976 Montreal Games. In fact, the IOC Medical Commission's approach to anabolic steroids helps illustrate the significance of blood transfusions. The Commission had known

anabolic steroids would be an issue as early as 1968 and at different times ‘censured’ anabolic steroids and specifically labelled the drugs ‘doping’.³⁰ Still, it chose not to place anabolic steroids on the banned list until a test for them could be employed.³¹ In the period prior to the ban, anecdotal evidence of steroid use confronted IOC members through the dramatic breaking of records and the changing shape of athletes’ bodies.³² A concerned IOC President, Avery Brundage, regularly corresponded with the Chair of the IOC Medical Commission, Prince Alexander de Merode, about the growing press coverage of anabolic steroids.³³ Merode stood defiant, insisting that with no available test for anabolic steroids, nothing could (or should) be done despite their growing use. Speaking at the IOC’s 1972 annual session in Sapporo, Japan, Merode explained that ‘there had been considerable progress in the field of hormones and steroids but it was not possible at this point to control these substances’. For that reason, he concluded that ‘As the Commission had to be certain before carrying out tests, these products [steroids] were not on the list of prohibited products’.³⁴

Whether Merode realised that these last lines contradicted previous claims that steroids constituted doping is unclear. However, with the statement that steroids were not on the prohibited list, Merode also indicated that, at least in his eyes, they were not prohibited under the IOC’s broadly construed anti-doping language. This language, which included any ‘non-alimentary drugs which excite normal effort’ as doping, should have covered anabolic steroids. If Merode believed that the IOC’s broadly inclusive language encompassed anabolic steroids, it seems odd for him to expressly state that they were not on the prohibited list without any further clarification. While Merode may have despised anabolic steroids, it seems he felt his hands were tied regarding any proactive approach to banning them.

Merode’s tune soon changed. At the 1973 IOC annual session in Varna, Bulgaria, he reported that ‘As far as anabolic steroids are concerned, it is still impossible to establish an effective control’, but added that, ‘in view of their increasing use and the considerable dangers they represent, we feel it necessary to take a very firm stand’.³⁵ Whether the IOC was prepared to formally ban anabolic steroids without the support of a reliable test remains unknown because in 1973–1974 scientists in London had made breakthroughs in a urine test for anabolic steroids.³⁶ These advances led the IOC to believe a test would be ready by the Olympic Games of 1976.³⁷ Once reassured of a working anti-doping test for anabolic steroids in 1975, the Medical Commission announced to athletes and coaches that anabolic steroids would be formally banned at the 1976 Montreal Games.³⁸ The fortuitous discovery of a test for anabolic steroids leaves unanswered the question whether the Medical Commission would have banned steroids without a test in 1976. The growing concern over their use might have demanded such an action. However, the period between the IOC’s first knowledge of steroid use and Merode’s call for a ‘firm stand’ illustrates the Medical Commission’s hesitation to create bans on substances that could not be enforced despite their strong disapproval.

By the time of the 1976 Montreal Games, the IOC Medical Commission had cleared up any ambiguity regarding both anabolic steroids and their prohibited list just as the problem of blood transfusions materialised. The idea to transfuse blood to boost an athlete’s endurance had lingered in the scientific journals of the late 1960s and early 1970s, with rumours of athletes attempting the procedure.³⁹ Unsubstantiated allegations linked the Finnish runner, Lasse Viren, to blood transfusions at the 1972 Olympic Games in Munich, though they did not begin circulating until after his success at the Montreal Olympic Games.⁴⁰ Like many allegations of ‘doping’, Viren’s link to blood transfusions began after the Finn repeated as victor in both the 5000 meter and 10,000 meter track events following

a lacklustre seasons between the Munich and Montreal Games. Suspicious of his sudden turn of form, sports writers asked Viren if he used blood transfusions and the runner denied doing so.⁴¹ Though rumours of blood manipulation existed before the links to Viren, including the Dutch cyclist Joop Zoetemelk at the 1976 Tour De France, Viren often receives credit for being the first Olympic athlete to pursue blood transfusions.⁴² It is also highly unlikely that Viren used blood transfusions prior to or at the 1972 Munich Games. Despite rumours alleging such practices, extensive archival research could not identify media accounts linking Viren to blood transfusions prior to the 1976 Montreal Games. This makes the earlier allegations likely inventions after the fact. Allegations that Viren used blood transfusions in Montreal still persist, though no evidence has provided certainty that the runner did so.

Nonetheless, since blood transfusions expressly did not involve a drug, a strict interpretation of the IOC language meant that Olympic athletes, including Viren, could use blood transfusions without running afoul of the anti-doping rules. Even the conservative American scientist, Melvin Williams, expressly noted this fact, calling the procedure 'blood doping' but explaining that it fell into 'a grey zone of legality for use in amateur athletics'.⁴³ Such concerns reached the IOC Medical Commission in 1976, when the Norwegian Olympic Committee expressed concern about the prospect of athletes using blood transfusions.⁴⁴ Addressing the issue during the 1976 Grenoble Games, the IOC Medical Commission noted that they 'condemned such practices but was not sure how they could be controlled'.⁴⁵ This statement was true for at least two reasons, though the Medical Commission acknowledged neither in their minutes. First, blood transfusions were not a drug and thus fell outside of its definition of doping, no matter how broadly construed. Second, even if the Medical Commission wished to rewrite its definition to include blood transfusions, no test existed that could enforce the ban. Indeed, such a test would not exist until the twenty-first century.⁴⁶

The concern about blood transfusion continued to mount. At the 1976 IOC Session in Innsbruck, Norwegian IOC member Jan Staubo asked about research conducted by the Fédération Internationale de Médecine Sportive (FIMS) on the effects of blood transfusions and athletic performances.⁴⁷ Staubo, likely aware of experiments and research with blood transfusions on athletes in Scandinavia, realised the practice would eventually transfer into Olympic sport. In response, Dr Eduardo Hay, IOC Member from Mexico and a member of the IOC Medical Commission, replied that 'the Medical Commission was aware of these experiments. It could watch out for dangerous substances being used, but was not able to work on other experiments'. Hay added that the Commission 'could only make recommendations in this respect'.⁴⁸ As such, the IOC Medical Commission took no action following its February meeting and the subsequent circular letter on the topic of doping sent out by IOC president Lord Killanin omitted any mention of blood transfusions.⁴⁹ The Medical Commission's revised list of prohibited substances for the Summer Games in Montreal included anabolic steroids but stayed mute on the topic of blood transfusions.⁵⁰ Thus, despite being aware of blood transfusions, the IOC Medical Commission took no concrete steps to prohibit the practice. By the summer of 1976, rumours would circulate that Finnish runner Lasse Viren had used blood transfusions en route to two gold medals.

Despite these rumours, the IOC Medical Commission took no action on the blood transfusion question. In fact, they remained absolutely silent on the issue. From 1976 until 1985, the question of blood transfusion does not appear in the minutes of any IOC annual session, IOC Executive Committee meeting, or IOC Medical Commission meeting, and was not found in any archived correspondence between members of the IOC medical

commission.⁵¹ Instead, the IOC Medical Commission focused increasingly on concerns about anabolic steroids and accurate anti-doping tests. Blood transfusions quickly drifted off of their radar.

The Medical Commission's lack of interest appears tied to multiple issues. Though the issue surfaced in 1976 at both the Grenoble Winter Games and the Montreal Summer Games, the story quickly flamed out in the press. Only a few came forward with evidence supporting such practices actually existed and only a handful of English language newspapers published stories on the topic over the ensuing years between 1976 and 1984.⁵² This holds true even during the boycott-plagued 1980 Moscow Games when notably few press accounts mentioned blood doping, even after Lasse Viren underperformed in both the 10,000 meter race and the marathon and the Finnish runner Kaarlo Maaninka admitted to using blood transfusions in the 5000 and 10,000 meter races.⁵³ With the press expressing little interest in the story, the IOC Medical Commission felt little pressure to act.

Additionally, the Medical Commission, as well as the scientific community and the sporting world, did not know what to make of blood transfusions. As the committee members indicated in 1976, blood transfusions were different than drugs and thus were not clearly doping. Though some had labelled the practice 'blood doping', many others remained confused as to how to classify blood transfusions. The academic community also split. Melvin Williams and his research team labelled the practice as 'blood doping' but concluded that it existed in a 'grey zone of legality' alongside 'selected vitamins and minerals, food supplements, or other drugs consumed for therapeutic or gastronomical reasons'.⁵⁴ Dr E. C. Percy included blood transfusions in an article on doping in sports, but classified it as 'Other "aids"' and classified it with oxygen administration, alcohol and vitamin pills.⁵⁵ The USOC reportedly impanelled a committee of experts in 1976 led by Dr Irving Dardik, a cardiovascular surgeon and member of the USOC Medical Staff, to determine the effects of 'blood doping on performance, and make judgments on their potential benefits to American athletes'.⁵⁶ The sport philosopher W. Miller Brown challenged this viewpoint, labelling the practice as unethical as other forms of pharmaceutical doping.⁵⁷ Thus, in the years prior to the 1984 Los Angeles Olympics, little consensus existed about the status of blood transfusions as a tool of athletes in elite sport. While the term blood doping appears in the early 1970s, the sporting world did not quickly place it in the same category as amphetamines and anabolic steroids.

Adding to this confusion, the Medical Commission remained apprehensive about prohibiting something that it could not enforce through detection in anti-doping tests. This had been the Medical Commission's response to anabolic steroids between 1968 and 1976. When asked directly about blood doping in 1982, De Merode explained that it was not detectable and thus not on the list, adding 'Our position [The IOC Medical Commission] is that it [blood transfusions] should not exist. We cannot prevent it, but we can point out that it is dangerous'.⁵⁸ The IOC Medical Commission had similarly resisted including synthetic testosterone on the banned substance list in 1984 because tests could not differentiate artificial testosterone administered for doping from naturally occurring testosterone in athletes' samples.⁵⁹ With no clear way to check for blood transfusions, De Merode appeared unwilling to prohibit them. Thus, on the eve of the 1984 Olympic Games, knowing full well that blood transfusions existed, the IOC Medical Commission had adopted the 'condemn but not ban' approach to the practice.

Whether this condemnation actually discouraged athletes is debatable. A few rumours, but little evidence, have surfaced linking athletes to blood transfusion in the years between Viren and the 1984 Games. A 1981 *New York Times* article with Finnish distance runner

Kaarlo Maaninka made few waves when the runner admitted to receiving blood transfusions at the 1980 Olympics in Moscow.⁶⁰ Dick Brown, coach of the Nike-sponsored running team Athletics West, reported in 1991 that in the early 1980s he took two unnamed athletes to a medical doctor in Portland, Oregon, to use blood transfusions to boost performance, though all parties felt the procedure did not help and never attempted it again.⁶¹ Francisco Moser, an accomplished professional cyclist, has reported using blood transfusions for his record-breaking attempt at the world 'hour record' in January of 1984, though this remained secret until 1999.⁶² Still, in the doping world where rumours spread faster than practice, the relatively few cases that have surfaced indicate that it is unlikely blood transfusions for athletes had become widespread prior to the 1984 Los Angeles Games.⁶³ However, it was only a matter of time until someone in sport interpreted the Medical Commission's position to mean that if blood transfusions were not *prohibited*, then, despite whatever condemnation, they must be permitted. Moreover, with likely no athletes making use of this procedure, the first to successfully employ it would have a significant advantage over their opponents.

Inside the US Buildup to the Games

The willingness to consider adopting new and controversial performance-enhancing practices illustrates the emerging attitudes towards elite international sport in the 1980s. From almost its inception, international sport had served as a venue for demonstrating national prestige on a global stage.⁶⁴ Fascist Italy, Nazi Germany and Imperial Japan along with the soon-to-be Allied powers of the USA and Great Britain realised international sport's propaganda power during interwar Olympiads. Yet, by 1984, geopolitical rivalries, especially between the Soviet Union and the USA, had elevated the perceived value of athletic success in all areas of Olympic competition to an unprecedented level. Olympic weightlifting witnessed the 'Big Arms' race as Soviet and American athletes battled in a slightly less lethal game of one-upmanship. Ice hockey brought the communist/capitalist ideological rivalry head to head in the famed match known as the 'Miracle on Ice'. The dual track meets between the USA and the USSR had increased state-allocated funds for track and field steadily from 1958 through 1985.⁶⁵ In response to the systematic Soviet sport apparatus, the US federal government passed the Amateur Sports Act, which increased financial support for elite amateur sports.⁶⁶ The USA had also, in part through Title IX, begun improving support for women's sports, an effect illustrated by the success of the US cycling team's female athletes.⁶⁷ On the eve of the 1984 Games, President Ronald Reagan captured the nationalistic importance of Olympic victory during a private luncheon with USOC officials in Los Angeles in 1983:

Millions of young people will be watching the games as you've been told, young people from all over the world as well as our own children, the fiber of tomorrow's America. And I know we won't let those kids down and won't short-change our country by doing anything less than a first-class job. In a free society, it all depends on us.⁶⁸

These sentiments of sportive nationalism in the context of the Cold War illustrate the influence that political rivalries exerted on elite sport. Though the mindset of the elite athlete is always oriented towards greater records and competitive achievement, the Cold War made the resources possible to explore scientific methods of training, new technologies and even questionable practices such as blood transfusions. The influence of the Cold War certainly played out within the US cycling team, which the USOC had revitalised amidst Cold War tensions. The US cycling team had begun a renaissance under the Polish cycling coach Eddie Borysewicz. Known to the cycling world as 'Eddie B.',

Borysewicz had become the first head coach of the US cycling team in 1978. Having raced as an elite amateur, Borysewicz had turned to coaching in Poland. While visiting the US in 1976, Borysewicz met Mike Fraysee, who at the time was on the United States Cycling Foundation's board of directors and had managed the US cyclists at the 1976 Montreal Games. Borysewicz recounted that it was Fraysee who played a large role in recruiting the coach to stay in the USA and eventually lead the entire US cycling programme.⁶⁹

Prior to Borysewicz's coaching, the US cycling team had failed to win an Olympic medal since the 1912 Stockholm Games. The sport of Olympic cycling had remained dominated by European amateurs who grew up in a rich cycling culture. In the USA, cycling had languished since the heady days of turn-of-the-century urban 'Six Day' racing.⁷⁰ Borysewicz brought not only European experience, but also worked to take his American talent over to Europe. With the Cold War boycott of the Moscow Games, Borysewicz's 1984 cycling team would reflect six years of devoted preparations. Adding to that, Borysewicz enjoyed the benefits of the race being on home soil. He recalled in a 2013 private interview that he used parts of the Olympic road racecourse to select his team and ensured they had the best preparations, including cutting edge bicycles by the British bicycle company Raleigh and wheels designed by Steve Hed, the pioneer of aerodynamic cycling wheels. As Borysewicz later explained, prior to the 1984 Game, 'I left nothing to chance. I even put helium into the tires. The spooks were sharp as razors to cut through the air'.⁷¹

Borysewicz's comments illustrate the complex context for the Cold War's influence on elite sport. A fierce competitor, Borysewicz always worked to pursue success for his athletes regardless of the political context. Still, the Cold War Olympic rivalry provided Borysewicz with resources, including his own appointment as head coach. Embracing a methodical, scientific approach, it is easy to see how the idea for blood transfusions could emerge within the US cycling camp. In practice, the idea for using blood transfusions likely traces back to team physiologist Ed Burke, though others on the team and staff may have been aware of the rumoured procedure.⁷² Burke, a trained physiologist and familiar with scientific journal articles, had read an article written by Norman Gledhill published in *The Physician and Sports Medicine* September 1983 issue, which he shared with team head coach Borysewicz.⁷³ The Gledhill article made a persuasive case for using transfusions. Not only did the article cite research on the procedure's positive effects, but also it explained the process, including storage temperature, and pointed out that such a procedure was undetectable in blood tests and not included on the IOC's doping control programme.⁷⁴ For anyone looking for a good reason to use blood transfusions, this article certainly provided it.

In a September 30, 1983, memo to the USA Cycling coaching staff and board members, which included Dave Prouty, Mike Fraysee, Dot Saling, Hannah North, Tom Schuler and Pete Van Handle, Burke wrote:

In preparation for the Olympic Games I am reviewing all avenues of preparation for our team, in addition to, bikes, wheels, clothing, sports psychologist, etc. One significant and controversial area of improving athletic performance is the area of blood boosting. Is it doping or illegal [*sic*]; my personal opinion and the interpretation is no. This is one more area our cyclists will be behind the world of cycling if we do not keep up with sports medicine research.

I would like to take the opportunity to investigate its use with our team, but first we all must discuss this controversial topic. Please give me your opinion on this, I will do nothing further until I hear from you.⁷⁵

Versions of the requested conversations and correspondences that followed differ, though Burke's account in the 1985 *Sports Illustrated* article appears accurate. Having written to

USA Cycling and the USOC, Burke explains that ‘I was getting information that we don’t want to touch this thing with a 10-foot pole because it was controversial...but there wasn’t any more written stuff’.⁷⁶ Aligned with the IOC’s ambiguous anti-doping rules, condemnation alone was not sufficient reason to not do something, especially when driven by the fear of falling behind foreign rivals. Burke received many mixed messages, including a December 28, 1983, missive from Kenneth (Casey) Clarke, the USOC Medical Director:

[Boosting] is fairly widely practiced in Europe, especially among cyclists and Nordic skiers...From a medical point of view, it can now be considered ethical. However, no organization, the IOC especially, has ever clarified the ethical value of IE [Induced Erthrocythemia, or the introduction of a surplus of red blood cells] in sport.⁷⁷

Burke interpreted such statements to mean that he was never expressly told not to use the procedure (even though others assert that he was). To him, the warnings sounded the same: blood transfusions are risky but you are not prohibited from using them.

Having received a grey light, Burke again approached Borysewicz. The Polish-born cycling coach later revealed that he spurned Burke’s advances, insisting that he wanted nothing to do with it, and that it had to be agreed upon between Burke and the individual riders.⁷⁸ For a self-described ‘hands on’ coach, who was interested in every aspect of his riders’ preparations, this decision to remain ignorant of the actions was unprecedented.⁷⁹ Perhaps his personal anti-doping ethic, affirmed by other cyclists who worked with the famed coach, led him to distance himself, while his pragmatic understanding of the rules understood nothing prohibited Burke or the US team from doing something already being practised in cycling.⁸⁰ After all, Borysewicz was not about to compete under a different set of rules. Borysewicz later recounted that he contacted both the Union Cycliste Internationale (UCI), cycling’s international governing body, and the IOC about the permissibility of this procedure and both indicated privately to him that it was not against the rules.⁸¹ Knowing the procedure was permissible, Borysewicz told Burke that any decision would be between the individual athletes and Burke, but that he wanted no part in the decisions to use blood transfusions.⁸²

The exact details of what happened during the Los Angeles Games remain sketchy, though some things are clear. The US cycling team won nine medals, including four golds, far outperforming its closest rival, West Germany, which finished with five medals and one gold. It is also clear that some of the members of the cycling team received blood transfusions during the Games. A member of the US’ silver medal winning team pursuit squad, Brent Emery, admitted on NBC’s ‘Today’ show that he had received a blood transfusion during the Games.⁸³ A committee investigating the issue on behalf of the USOC reported that eight of the 24 cyclists on the team – including four Olympic medal winners – received blood transfusions.⁸⁴

News of blood transfusions did not publicly emerge until January 8, 1985, when team physician, Dr Thomas B. Dickson, told the *Allentown Morning Call*, a local paper that served the cycling hotbed of Trexlertown, Pennsylvania, that the transfusions precipitated Rob Lee’s abrupt resignation as United States Cycling Federation (USCF) president.⁸⁵ Prior to this release, no press accounts had linked the cycling team to blood transfusions. Furthermore, the IOC had appeared in the dark on the issue at their December 1984 meeting in Lausanne, Switzerland, nearly three months following the Los Angeles Games, with no members, including Merode, mentioning the issue.⁸⁶ But by January, *Rolling Stone* had captured the story.⁸⁷ In an effort to preempt what was believed to be a negative article, the USCF fed their internal report to *Sports Illustrated*, who then provided a detailed expose two weeks before *Rolling Stone* released their

article.⁸⁸ The *Los Angeles Times* sports writer, Benjamin Reich, also provided a series of articles in January 1985 detailing the events and reactions.⁸⁹ By the time Richard Ben Cramer's article in *Rolling Stone* reached newsstands, blood transfusions had become an international controversy.

Post-Games Controversy

The intense media scrutiny of the blood transfusions quickly brought the Chair of the IOC Medical Commission, Prince Alexander de Merode, into the spotlight. Responding to questions, Merode maintained that he condemned the practice but repeatedly explained that it was not against the rules. He added in a media interview that 'the only reason the IOC had not banned the practice was that there is no medical test that can detect it after it has occurred'.⁹⁰ Despite clear evidence that athletes had used blood transfusions, the IOC acknowledged it would not seek to strip the athletes of the medals or take any disciplinary action.⁹¹ The USOC and the USCF both agreed not to punish the athletes either, but suspended both Eddie Borysewicz and Ed Burke for 30 days without pay for 'serious errors in judgment', though both had been upfront with their intentions and had not violated any rules.⁹² In a paternalistic passing-of-the-buck to the coaching staff, the USCF board of directors explained that the involved cyclists would not be punished since they were 'not considered responsible for the incident'.⁹³

Following the USOC report, Dr Harvey G. Klein, the recently appointed Chief of the Department of Transfusion Medicine for the US National Institutes of Health, published an article in the prestigious *New England Journal of Medicine* condemning the action.⁹⁴ Klein praised the American medical community for speaking in a singular voice 'forcefully against the practice' and argued that

there can be no medical justification for exposing a normal person to the serious and unnecessary risks of homologous blood transfusion. The fact that the people involved were Olympic athletes alters the circumstances but does not improve the soundness of the medical judgment'.⁹⁵

Klein also cited the blood-borne diseases including HIV and hepatitis as risks. He conceded that autologous transfusions would be more preferable, but feared that 'widespread recreational use of blood transfusions would inevitably result in serious injury to many normal, healthy persons' and that the 'removal of a large number of healthy prospective blood donors from the volunteer blood-donor pool would constitute a serious setback for supportive medical care in the United States'.⁹⁶

Klein's concerns help illustrate an often overlooked aspect of the blood transfusion controversy. Like anabolic steroids, rumours of blood transfusions had existed for some time and athletes admitted to their use. However, the blood transfusions took place in a unique context not shared by anabolic steroids. The 1980s had witnessed a massive increase in global concern about blood-borne diseases, including HIV/AIDS. First clinically observed in 1981, HIV/AIDS entered the lexicon in 1983.⁹⁷ Popular press had covered the growing epidemic in the years leading up to the Los Angeles Games. By the time news broke of blood transfusions, concern about HIV/AIDS and blood frequently appeared in the news media. Despite the media saturation, scientists still understood little about the disease. The relative ignorance about HIV coupled with the newness of blood transfusions likely influenced the negative public reaction that exceeded the reaction to anabolic steroids. Therefore, while the public viewed both anabolic steroids and blood transfusions as dangerous, they never associated anabolic steroids with a recently discovered and poorly understood fatal epidemic.

Such concerns partially explain the IOC's swift reaction. For the first time since 1976, the question of blood transfusions came up at the IOC annual session held June 4–6, 1985, in Berlin, its first session following news of the US cycling team's controversial use of blood transfusions. Prince de Merode announced that the Medical Commission had decided to ban blood transfusions, labelling the practice 'blood doping'.⁹⁸ He explained to his fellow IOC members that the 'the Medical Commission had decided to ban the transfusion or re-infusion of blood or red blood cells as it felt that this was a question of ethics involving too many risks'.⁹⁹ Dr Eduardo Hay, an IOC delegate from Mexico and member of the Medical Commission, added that 'it was not possible for the time being to prove that blood doping had been practiced. The Medical Commission had undertaken very serious studies on the matter'.¹⁰⁰

In his official report to the IOC submitted at the Berlin meeting, Prince de Merode explained that the Medical Commission had devoted a great deal of time to the new doping techniques such as blood doping during its sub-commission meeting in Cologne.¹⁰¹ Here, de Merode noted the influence of Dr Don Catlin, head of the University of California, Los Angeles laboratory, 'who was able to give us an excellent report on the blood doping which occurred during the Games of the XXIIIrd Olympiad in Los Angeles, in addition to a detailed explanation of the dangers of auto- and hetero- blood transfusions'.¹⁰² De Merode further clarified his Commission's thinking on the issue:

The Medical Commission feels that in view of the occurrence in Los Angeles, blood doping i.e. the transfusion or reinfusion of blood or red blood cells should be officially banned by the IOC. Although no feasible detection test is available at the present time, the commission feels that it is a question of ethics. The IOC Medical Commission has recommended to the IOC President the support of experiments being carried out by Swedish scientists on a detection test for blood doping.¹⁰³

Interestingly, these conclusions emerged prior to the IOC Medical Commission receiving any official report on the issue. Once news broke, the IOC contacted the head of its anti-doping laboratory for the 1984 Los Angeles Games, UCLA professor Dr Don Catlin. Catlin created a report titled 'Summary of the Adverse Effects of Blood Transfusion'.¹⁰⁴ This report focused solely on scientific explanations of the procedure and the risks associated with blood transfusions. It omitted any mention of the US cycling team or any other sport-related issue but focused significantly on the risks of HIV/AIDS. Indeed discussion of HIV/AIDS amounted to one quarter of the entire report, more than any other perceived health risk. The report provided Merode with evidence to support the unprecedented action of banning a substance with no test available and he was quick to share it with his colleagues:

As you are aware, during our Session last year in Berlin, it was agreed that blood doping should be prohibited by the IOC. In order to give you further information regarding the dangers of blood doping for the health of athletes, you will find enclosed a comprehensive report prepared on behalf of the IOC Medical Commission, by Dr. Don Catlin of the UCLA, Los Angeles.¹⁰⁵

In that same letter, Merode also included the new prohibited substance list that listed blood transfusions. The new list not only added a new category but also rewrote their definition of doping. In 1984, the *Olympic Charter* stated under Rule 29 that 'Doping is forbidden. The IOC Medical Commission shall prepare a list of prohibited *drugs* [emphasis added]'.¹⁰⁶ In 1987, the IOC modified this claim to include 'banned procedures', tacitly admitting that blood transfusions fell outside of their previous definition.¹⁰⁷ As the Medical Commission explained in their revised list of prohibited substances in 1986, which now included the language for methods, 'the doping definition of the IOC Medical

Commission is based on the banning of pharmacological classes of agents. The definition has the advantage that also new drugs, some of which may be especially designed for doping purposes, are banned'.¹⁰⁸ With that, the IOC brought to a close any debate over blood transfusions and their status in sports.

Rewriting the Rules

The IOC's decision to ban blood transfusions in 1985 is notable for three reasons. First, athletes' and coaches' willingness to experiment with potentially dangerous and untested methods of performance enhancement illustrated that administrators could not rely on suggestions or guidelines to deter athletes and coaches in pursuit of high-performance sport. Though the athletes' attitudes towards doping were not new, administrators had failed to appreciate that deterrence had to come from expressly worded policies that spelled out the prohibited substances and consequences for violations. For the members of the IOC Medical Commission that had followed the development of blood transfusions, they had not grasped that the athletes' and their entourage's desire to win would overpower loose definitions and condemnations. The fallout from this realisation would bring a rapid expansion of substances onto the IOC's banned substance list including human growth hormones, beta-agonists and beta-blockers.¹⁰⁹

This realisation of the changing state of international sport also led to a second notable legacy from the IOC's response to blood transfusions. The debates over financial support for testing and anti-doping that had plagued the 1970s disappeared. A more united and aggressive response took its place. By banning the procedure with no test in place, the decision reversed the IOC Medical Commission's policy to only ban substances detectable through anti-doping tests. This policy had been at the heart of the debate prior to the Medical Commission's ban on anabolic steroids prior to 1976. Following the 1984 Games, the Medical Commission's new approach was to ban new doping methods with the hope of later finding a test. When de Merode banned blood transfusions, he expressed hope that a detection test would quickly be found. Research by the Swedish scientists soon indicated that the detection problem would be more difficult than with anabolic steroids. Having received funds from the IOC for their research, the Swedish team led by Bo Berglund concluded in 1987 that 'no single blood test has been found that can detect blood doping with any certainty'.¹¹⁰ Thus, the IOC would be forced for the first time into prohibiting a substance at the Olympic Games with no reliable test. In fact, the issue with testing for autologous blood transfusions continues to vex scientists in the twenty-first century, who only recently have begun employing an indirect method of detection through the use of blood passports.¹¹¹ Still, the policy implications continued. Going forward, the Medical Commission, and later WADA, implemented a 'ban first, test later' policy as it prohibited new substances such as erythropoietin, human growth hormone and the still non-existent technology of 'gene doping'.

The final implication of this decision was a fundamental expansion of the IOC's definition of doping. Prior to the 1984 Games, the IOC's Medical Commission had consistently defined doping as 'non-alimentary drugs which excite normal effort either by their composition or by their dosages'.¹¹² This, whether intentional or not, limited the doping conversation to purely pharmaceutical compounds. Though synthetic testosterone could still qualify as a pharmaceutical drug in 1984, blood transfusions could not. As previously explained, the experts split on whether blood transfusions counted as doping or fell into an area with vitamins, protein and carbohydrates. Some were left asserting odd claims, such as 'Blood is a drug'.¹¹³ Surely the Medical Commission's emphasis on drugs

did not constrain the committee; this was not the reason that they did not prohibit blood transfusions earlier. However, the language clearly added confusion to whether blood transfusions counted as doping. Following the 1984 Games, the IOC Medical Commission would replace ‘drugs’ with ‘substances’, a more generic term that included blood. The term ‘substance’ would provide WADA with the linguistic breadth to include genetic modifications as doping. This expansion of doping from drugs to substances would also provide confusion over what counts as doping since many substances enhance performance but are permitted.

Yet these three changes following the 1984 Games reveal the lessons that the IOC Medical Commission drew from the event. For the Medical Commission, the approach became one of ‘better safe than sorry’. The culture of sport had changed so much so that few doubted whether athletes and coaches would experiment with substances deemed undesirable and potentially dangerous. The previous approach reflected an emerging subcommittee unsure of their mandate in the wake of Knud Jensen’s death in 1960. The Doping Subcommittee and its successor the Medical Commission had introduced new policies slowly and erred on the side of enforceability. Following the 1984 Games, the previously cautious Medical Commission, who feared backlash from doping controversy, became bullish in their mindset. The ‘ban first, test later’ approach and the ambiguously inclusive language indicated a galvanised Medical Commission now intent on eradicating doping of any kind in sport. The Medical Commission interpreted the emerging high octane Olympic sport to mean that athletes would willingly push all available boundaries in their pursuit of ‘higher, faster, stronger’. With this new attitude, the commission would soon flex its muscles. At the next Olympic Games, held in 1988 in Seoul, South Korea, the IOC would strip Canadian Ben Johnson of his gold medal in the marquee 100-meter track event. This unprecedented move of stripping a high profile athlete during the Games marked a new approach to doping that had been put in place in the wake of the US cycling team’s employment of blood transfusions at the 1984 Games. This approach, which illustrates part of the lasting legacy of the 1984 Los Angeles Olympic Games, has continuously remained in place in the three decades since *Rolling Stone* scandalised the US cycling team’s use of blood transfusions.

Notes on Contributor

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Notes

1. Cramer, “Olympic Cheating,” 25–6, 30.
2. Rostaing and Sullivan, “Triumphs Stained with Blood,” 12–7.
3. Dimeo greatly explores this wide open era of doping in the 1960s and 1970s, while Hunt illustrates the complicated development of anti-doping policy in the 1980s. See Dimeo, *A History of Drug Use*; Hunt, *Drug Games*.
4. Jay, *More Than Just a Game*, 3.
5. Heinila, “The Totalization Process.”
6. *Ibid.*, 130.
7. For context of interwar doping, see Gleaves and Llewellyn, “Sport, Drugs, and Amateurism.” For the increasing state support for Cold War sport, see Espy, *The Politics*.
8. Heinila, “The Totalization Process.”
9. For more on pre-World War II doping practices, see Dimeo, *A History of Drug Use*; Hoberman, *Mortal Engines*; Gleaves and Llewellyn, “Sports, Drugs and Amateurism.”

10. For a more detailed description of this attitude, see Møller, *The Ethics of Doping*.
11. Rider, "The Olympic Games."
12. Hoberman, *The Olympic Crisis*.
13. Dimeo, *A History of Drug Use*.
14. Lederer, *Flesh and Blood*.
15. For more on the growth of science and medicine within the Olympic Games, see Wrynn, "'A Debt Was Paid Off'"; Wrynn, "The Human Factor."
16. For early articles by Gulbring and Ekblom, see Ekblom, Goldbarg, and Gullbring, "Response to Exercise"; Gullbring et al., "The Effect of Blood."
17. Williams, "Blood Injection"; Williams et al., "Effect of Blood ReInjection."
18. Ekblom, "Blood Doping."
19. The Meeting Minutes from the session are unclear, but letters following the session indicate the decision had been made at the IOC session in Tehran. International Olympic Committee, 65th Annual Session, Tehran, May 3–9, 1967, International Olympic Committee Archives, Lausanne, Switzerland (hereafter cited as IOC Archives); J. W. Westerhoff to Arpad Csanadi, July 6, 1967, Brundage Archive, Box 99, Folder "Medical Commission IOC," University of Illinois, Champaign, IL (hereafter cited as Brundage Archives).
20. Verner Møller has clearly explained that though Jensen likely died from heat stroke, his use of the vasodilator roniacol had likely exacerbated his demise. In that sense, the drug did not *cause* Jensen's death but the role drugs may have played cannot be ignored. For that reason, the term 'drug-related' is used. See Møller, "Knud Enemark Jensen's Death." For a thorough development of the IOC's reaction to Jensen, see Hunt, *Drug Games*, chapter 1–2. For more on the history of the Doping Subcommittee and the Medical Commission, see Wrynn, "The Human Factor"; Wrynn, "'A Debt Was Paid Off'."
21. Gleaves and Llewellyn, "Sport, Drugs, and Amateurism."
22. The International Olympic Committee, "The Olympic Charter, 1946" (IOC Archives), 28.
23. International Olympic Committee, Minutes of the 62nd Session of the IOC, Tokyo, October 6–8, 1964 (IOC Archives), 11.
24. International Olympic Committee, 65th Annual Session, Tehran, May 3–9, 1967 (IOC Archives).
25. International Olympic Committee, Minutes of the Meeting of the Medical Commission of the IOC, Mexico City, October 12, 1968, Avery Brundage Archive, Box 99 "Medical Commission IOC" (Brundage Archives).
26. International Olympic Committee, 76th Annual Session, May 21–23, 1975, International Olympic Committee Archives, Lausanne, Switzerland (IOC Archives).
27. Hunt, "Sport, Drugs, and the Cold War."
28. Ibid.
29. Dimeo, *A History of Drug Use*, 113.
30. International Olympic Committee, Minutes of the Meeting of the Medical Commission of the International Olympic Committee, Lausanne, January 25–26, Box 99 "Medical Commission IOC 1966–1969" (Brundage Archives).
31. For a fuller discussion of the IOC and the anti-doping test for anabolic steroids, see Dimeo, *A History of Drug Use*, 111–9.
32. Ibid., 116.
33. Brundage to Merode, September 16, 1969, Box 99, Folder "Medical Commission 1966–69" (Brundage Archives).
34. International Olympic Committee, Meeting Minutes of the 72th Annual Session, Sapporo, 1972 (IOC Archives), 28.
35. International Olympic Committee, Meeting Minutes of the 74th Annual Session, Varna, October 5–7, 1973 (IOC Archives), 23.
36. Dimeo, *A History of Drug Use*, 119.
37. International Olympic Committee, 75th Annual Session, Vienna, October 21–24, International Olympic Committee Archives, Lausanne, Switzerland (IOC Archives), 19.
38. International Olympic Committee, 76th Annual Session, May 21–23, 1975, International Olympic Committee Archives, Lausanne, Switzerland (IOC Archives).
39. In addition, some even go farther back to Jouko Kuha in 1968, but these have even less evidence. Moore, "An Enigma."

40. "Jenner Wins Decathlon, Viren Sets History in Olympics," *Spartanburg Herald-Journal*, July 31, 1976, 18–24.
41. Moore, "An Enigma."
42. López, "The Good, Pure Old Days"; McKay, "A History of Blood Transfusions."
43. Williams et al., "Effect of Blood Reinjection."
44. International Olympic Committee, Minutes of the Meeting of the IOC Medical Commission, Innsbruck, January 30 to February 15, 1976 (IOC Archives), 4.
45. Ibid.
46. The test for blood transfusions would rely on the introduction of the athlete's biological passport, a recording of values taken from several tests over time which can indirectly provide evidence of blood manipulation. For more, see Hamilton and Coyle, *The Secret Race*.
47. International Olympic Committee, Meeting Minutes of the 77th Annual Session, Innsbruck, Austria, February 2–3, 1976 (IOC Archives), 21.
48. Ibid.
49. International Olympic Committee, "IOC Circular Letter Ref No C/1063," April 15, 1976, IOC Archives.
50. International Olympic Committee, Meeting Minutes of the 78th IOC Session, Montreal, July 13–19, 1976 (IOC Archives).
51. This is based on an extensive search of IOC archives in Lausanne, Switzerland.
52. This is evidenced by extensive searches of online newspaper databases and library searches.
53. "Finn Admits Tanking," *New York Times*, December 30, 1981, <http://www.nytimes.com/1981/12/30/sports/sports-people-finn-admits-tanking.html> (accessed May 28, 2014).
54. Williams et al., "Effect of Blood Reinjection," 181.
55. Percy, "Athletic Aids."
56. "Olympic Members Perform Study," *The Robesonian*, August 22, 1976.
57. Brown, "Ethics, Drugs, and Sport."
58. "Drinking Too Much Coffee Could Disqualify Olympians," *Lakeland Ledger*, February 8, 1982.
59. Amdur, "More Drug Testing."
60. "Finn Admits Tanking."
61. Strasser and Becklund, *Swoosh: The Unauthorized Story*, 482.
62. Foot, *Pedalare! Pedalare! A History*, 281.
63. The historiography for doping practices remains admittedly sketchy over actual practices, mainly because those who engaged in them wished to keep them secret. However, rumours of use, including at the 1936 Games by the German team and in cycling, have been shown to have outpaced actual practices. For this reason, the few rumours and cases that have emerged compared to anabolic steroids, amphetamines or other doping practices indicate that blood transfusions had not grown widespread. For more, see López, "The Invention"; Reinhold and Hoberman, "The Myth of the Nazi."
64. For more on the discussion of early sportive nationalism, see the following works: Dyreson, *Making the American Team*; Guttmann, *From Ritual to Record*; Guttmann, *Games and Empires*.
65. Turrini, "The USA-USSR Dual."
66. Hunt, "Countering the Soviet Threat."
67. Jay, *More Than Just a Game*, 161.
68. Ronald Reagan, "Remarks at a Luncheon Meeting of the United States Olympic Committee in Los Angeles, California," March 3, 1983, cited in Hunt, *Drug Games*, 69.
69. Information for this paragraph, including statements in the preceding four sentences, is from an interview with Eddie Borysewicz. Eddie Borysewicz, Interviewed by John Gleaves, Borysewicz Home, Escondido, California, February 22, 2013. Recording of the interview in possession of the author (hereafter Borysewicz Interview).
70. De Wilde, "The Dizzy Race."
71. Eddie Borysewicz, Borysewicz Interview.
72. From Ed Burke to Coaching Staff, Dave Prouty, Mike Fraysee, Dot Saling, Hannah North, Tom Schuler and Pete Van Handle, September 30, 1983, Copy of letter produced by Eddie Borysewicz on February 22, 2013.
73. A copy of the article was produced by Eddie Borysewicz during an interview on February 22, 2013. The article's citation is: Gledhill, "The Ergogenic Effect."

74. Ibid.
75. From Ed Burke to Coaching Staff, September 30, 1983, Borysewicz Interview.
76. Rostaing and Sullivan, "Triumphs Stained with Blood."
77. Ibid.
78. Eddie Borysewicz, Borysewicz Interview.
79. Ibid.
80. Hamilton and Coyle, *The Secret Race*, 27.
81. Eddie Borysewicz, Borysewicz Interview.
82. Ibid.
83. Reich, "Doctor and Cyclist Defend."
84. Reich, "Blood Doping by Cyclists."
85. "Cyclist Accused of 'Blood Doping'," *New York Times*, January 9, 1985.
86. International Olympic Committee, Meeting Minutes of the 89th IOC Session, Lausanne, December 1–2, 1984 (IOC Archives).
87. Eddie Borysewicz, Borysewicz Interview.
88. Rostaing and Sullivan, "Triumphs Stained with Blood."
89. Reich, "Doctor and Cyclist Defend"; Reich, "Blood Doping by Cyclists"; Reich, "U.S. Cycling Federation"; Reich, "Investigation Confirms Blood Doping."
90. Reich, "Doctor and Cyclist Defend."
91. Reich, "Investigation Confirms Blood Doping."
92. Reich, "U.S. Cycling Federation."
93. Ibid.
94. Klein, "Blood Transfusions."
95. Ibid., 856.
96. Ibid.
97. Centers for Disease Control (CDC), "Update on Acquired Immune Deficiency Syndrome."
98. International Olympic Committee, Meeting Minutes of the 90th IOC Session, Berlin, June 4–6, 1985 (IOC Archives), 21.
99. Ibid., 22.
100. Ibid.
101. Ibid., 85.
102. Ibid.
103. Ibid.
104. Don Catlin, "Summary of the Adverse Effects of Blood Transfusion," March 1, 1986, Correspondence dopage 1986–1988 205696 (IOC Archives).
105. Merode to IOC Members, September 12, 1986, Correspondence dopage 1986–1988 205696 (IOC Archives).
106. International Olympic Committee, *Olympic Charter 1984* (IOC Archives), 18.
107. International Olympic Committee, *Olympic Charter 1987* (IOC Archives), 44.
108. International Olympic Committee Medical Commission, *Prohibited List 1988*, Correspondence dopage 1986–1988 205696 (IOC Archives).
109. Hunt, *Drug Games*, 78.
110. Berglund, Hemmingsson, and Birgegard, "Detection of Autologous Blood."
111. Boning, Maassen, and Pries, "Mechanisms of Doping."
112. International Olympic Committee, Minutes of the Meeting of the Medical Commission of the IOC, Mexico City, October 12, 1968, Avery Brundage Archive, Box 99 "Medical Commission IOC" (Brundage Archives).
113. Klein, "Blood Transfusions," 856.

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