

# A Review of Anti-Doping Policies Prior to the Formation of the World Anti-Doping Agency

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**Abstract:-** Although attempts to enhance athletic performance extend back before the word "doping" was first used in an English dictionary to denote a combination medicine containing opium, we are still struggling to eradicate substance abuse from sporting. According to ancient Olympic records, athletes back then drank natural substances and animal extracts as performance-enhancing drugs to increase their speed and endurance, hide discomfort, and allow injured competitors to compete. Later, with the development of modern pharmacology in the 19th century, pharmaceutical use increased, and top athletes started experimenting with pharmaceutical combinations to boost power and combat tiredness. There are several records of athletes going to great lengths because this practice was not illegal. Benefits were accompanied by risks, and after a number of fatalities, a code to outlaw performance-enhancing medications was eventually formed. This article seeks to trace the extent of doping use and strategies to curb it prior to the World Anti-Doping Code's adoption in 2004.

**Keywords:** Doping, Sports, Olympic, WADA, Anti-doping policy.

## I. INTRODUCTION

Whether it's a battle, a business transaction, or a sporting event, when humans compete against one another, one side will always try to outperform the other. Such conduct is usually referred to as "cheating" in the world of organised sports, and it has existed for as long as sports have been organised. Substance abuse is a type of deception.

Such conduct is usually referred to as "cheating" in the world of organised sports, and it has existed for as long as sports have been organised. Substance abuse is a type of deception. Participants in the Ancient Olympics allegedly took figs to enhance their performance, which is evidence of doping in sports. With the advent of modern pharmacology in the 19th century, a growing number of sportsmen began using chemical combinations to increase strength and combat fatigue. There are documented cases of athletes going to extraordinary lengths to obtain victory.

Numerous efforts have been made at various levels to combat the problem of doping. The objective of the zane was not to honour the era's greatest athletes, but to permanently punish those who violated Olympic rules. Cheaters who attempted to enter the games were permanently disqualified. The names of the athletes that cheated and their transgressions, such as bribery, family information, and opponent names. To combat the prevalence of doping, sports organizing associations

enacted rules to control the practice, which ultimately led to the establishment of WADA in 1999 and WADC in 2004. In order to prohibit the use of drugs to enhance athletic performance. This research seeks to discover the reasonable rationale behind pre-WADA anti-doping regulations and tactics by tracing their historical development.

## II. THE ERA OF ANCIENT OLYMPIC (776 BC – 394 AD)

The ancient Olympic Games were the most prominent competitions in the Panhellenic Games. They began as a religious festival held in honour of Zeus at the city of Olympia in Greece in 776 BC. In the beginning, the only races were the part of competitions; but over time, other sports including wrestling, boxing, chariot racing, long jump, javelin throwing, and discus throwing were also added<sup>1</sup>. At that time, only male participants were allowed to participate in the competition. The fact that winners were rewarded with huge monetary awards along with celebrity like treatment became one of the major motivators for athletes to improve their performance in each event. As a direct consequence of this, athletes started squandering their time looking for ways to improve their performance, regardless of whether these methods were right or wrong.<sup>2</sup>

According to historical records, ancient athletes used to drink natural compounds, innocuous chemicals, and animal extracts as performance enhancement substance in order to boost their speed and endurance, to mask discomfort, and to enable injured athletes to continue competing.<sup>3</sup> Galen, a Greek physician, observed that athletes in the third century BC utilised specific diets to assist them in increasing their athletic ability. These diets included hallucinogenic mushrooms, sesame seeds, and dried figs.<sup>4</sup> Additionally, players consumed various brandy

<sup>1</sup>Mottram, & Chester. (2018). *Drugs in sports* (7th ed.). Taylor and Francis.

<sup>2</sup>Mottram, & Chester. (2018). *Drugs in sports* (7th ed.). Taylor and Francis.

<sup>3</sup> Reardon, C. L., & Creado, S. (2014, August 14). *Drug abuse in athletes*. PubMed Central (PMC). Retrieved December 14, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4140700/>

<sup>4</sup> As it is documented that the winner of 200-meter race at 668 BC Olympic Games was accused of using dried figs as performance enhancer. Singh. (2017). Doping in sports: An overview of ancient and modern history of doping. *International Journal of Physical Education, Sports and Health* 2017, 4(1), 289–292. Retrieved December 1, 2022, from

and wine concoctions.<sup>5</sup>Not only in Greece, but also in other parts of the world, such as Rome, where gladiators took unnamed stimulants to overcome exhaustion and injuries. The ancient Egyptians drank a unique drink that was prepared from asses' hooves, which were crushed and cooked in oil, then flavoured with rose petals and rose hips. This practice was found to be related to the use of performance-enhancing drugs (PED). Around the year 300 B.C., the Indian physician Sushruta advocated the consumption of testicles as a means to improve virility.<sup>6</sup> Ma Huang is an extract from the plant Ephedra that was used over 5000 years ago to treat coughing and to enhance circulation. A Chinese physician suggested that athletes consume Ma Huang to improve their performance in athletic competition. The stimulant that was found in Ma Huang was discovered in 1924 and given the name "ephedrine." Ephedrine is currently on the list of chemicals that are not allowed to be used in competitive sports.<sup>7</sup>

Although drug usage was socially accepted in ancient Greece, but because sports activities were a part of religious or pious rituals, any form of cheating, including doping was considered unethical and anyone caught engaging in unethical behaviour was subject to severe punishments such as being sold into slavery or being sentenced to death.<sup>8</sup> However, despite stringent regulations, widespread use of performance-enhancing drugs (PED) led King Theodosius to cancel the ancient Olympic Games in 394 A.D., citing the fact that the competitions had become "a hotbed of cheating, affronts to human decency, and doping."<sup>9</sup>

<https://doi.org/https://www.kheljournal.com/archives/2017/vol4issue1/PartE/7-1-45-710.pdf>

<sup>5</sup>Ljungqvist, A. (2017, June 1). Brief History of Anti-Doping. Brief History of Anti-Doping - Abstract - Acute Topics in Anti-Doping - Karger Publishers. Retrieved December 1, 2022, from <https://www.karger.com/Article/FullText/460680>

<sup>6</sup> Vlad, R. A., Hancu, G., Popescu, G. C., & Lungu, I. A. (2018, November 29). *Doping in Sports, a Never-Ending Story?* PubMed Central (PMC). Retrieved December 15, 2022, from

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6311632/>

<sup>7</sup> Rosen. (2008). *Dope: A History of Performance Enhancement in Sports from the Nineteenth century to today*. Praeger. Retrieved December 1, 2022, from [https://books.google.co.in/books?hl=en&lr=&id=yCzBk7F8DGgC&oi=fnd&pg=PR5&dq=history+of+doping+in+sports&ots=DqFGCMqWtC&sig=cCt68ctCm9Im7qvyGYx9\\_5-N8zg#v=onepage&q=history%20of%20doping%20in%20sports&f=false](https://books.google.co.in/books?hl=en&lr=&id=yCzBk7F8DGgC&oi=fnd&pg=PR5&dq=history+of+doping+in+sports&ots=DqFGCMqWtC&sig=cCt68ctCm9Im7qvyGYx9_5-N8zg#v=onepage&q=history%20of%20doping%20in%20sports&f=false)

<sup>8</sup> Reardon, C. L., & Creado, S. (2014, August 14). *Drug abuse in athletes*. PubMed Central (PMC). Retrieved December 14, 2022, from

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4140700/>

<sup>9</sup>Dirix A. Classes and methods in A. Dirix, H. G. Knuttgen and K. Tittel (eds) *The Olympic Book of Sports Medicine*, Oxford: Blackwell, 1998.

### III. THE MODERN ERA OF GAMES:

#### A. SUBSTANCE USE AS AN ORDINARY PRACTICE – 19<sup>TH</sup> CENTURY

From the ancient Greek Olympic Games through the Middle Ages and up to the beginning of Modern Sports, there is a long gap in which there are no accurate records of the use of drugs in sports are available. As a result, the author glosses over the centuries that came before the nineteenth century and focuses on that time period instead. The study made by Paul Dimeo is useful in terms of tracing the scope of performance enhancing substance in the era of modern Olympic Games. He made the observation that: 'there is not a great deal of evidence on drug use in this period. However, it is clear that the myth of the golden age of equal competition based on talent alone does not fit with reality'.<sup>10</sup>

Due to the increasing economic interest in sports, the notion of athletics as a profession, as opposed to a hobby thrived in mid of 19<sup>th</sup> century making sports more organized with formation of sports clubs and societies. These sports clubs used to stage sporting events where fans could pay to watch their favourite athletes, which increased the athletes' renown and income, so driving them to seek out more effective performance-enhancing chemicals. The rise of the pharmaceutical business in the late 19<sup>th</sup> century has contributed a lot in widespread use of substances. As the pharmaceutical industry expanded, pharmaceutical use grew, and elite sportsmen began experimenting with medicinal combinations to increase strength, overcome fatigue, and improve performance. Athletes typically used medicinal products extracted from plant and animal sources, such as caffeine (derived from tea and coffee), strychnine (derived from the seeds of *strychnos nux vomica*)<sup>11</sup>, cocaine (derived from the leaves of the coca plant)<sup>12</sup>, analgesic morphine (derived from the opium poppy), and the depressant alcohol (brewed and/or distilled from a variety of sources)<sup>13</sup>. Tonic beverages containing stimulants, such as *Vino-Kola*, were marketed in athletic magazines as performance-enhancing substances for athletes. University athletic teams in the United States and the United Kingdom reportedly consumed these beverages.<sup>14</sup>

<sup>10</sup> Paul Dimeo, *A history of drug use in sport 1876-1976: beyond good and evil*, 2007 (London: routledge)

<sup>11</sup>April Henning, Paul Dimeo, *Doping: A Sporting History*, 2022 (Reaktion Books)

<sup>12</sup>Thomas H. Murray, PhD "The Coercive Power of Drugs in Sports," *The Hastings Center Report*, Aug. 1983

<sup>13</sup>Ljungqvist, A. (2017, June 1). *Brief History of Anti-Doping*. Brief History of Anti-Doping - Abstract - Acute Topics in Anti-Doping - Karger Publishers. Retrieved December 15, 2022, from

<https://www.karger.com/Article/FullText/460680>

<sup>14</sup> Paul Dimeo, *A history of drug use in sport 1876-1976: beyond good and evil*, 2007 (London: routledge)

There is evidence to suggest that long-duration contests, such as six-day cycle races and six-day ultramarathons, placed a premium on participants' ability to remain attentive and functional for extended period of time. As a result of the demand for ultra-endurance competitions, a culture of using artificial means to enhance athletic performance quickly emerged, and by the 1870s, the use of chemicals as performance enhancers was widespread among athletes in a variety of sports, such as swimming, Cycling, distance runners, and boxers.<sup>15</sup>

### B. EARLY 20<sup>TH</sup> CENTURY

The first recorded instance of drug use in the modern Olympics occurred in the 1904 games in St. Louis, where marathon runner, Thomas Hicks was given doses of strychnine (now often used as rat poison) mixed with brandy and a little egg white by his coach. Surprisingly, despite finishing second, Thomas Hicks was declared the winner as it was found that Lorz (the first-place finisher) had ridden eleven miles of the marathon in his coach's car. Lorz was thought to have cheated, whereas Hicks was not.

This instance demonstrates that despite the popularity of artificial chemical use among athletes, the authorities did not view it as cheating, but rather took it as a means of enhancement and experimentation. At that time, science and medicine were perceived as tools to enrich life, which included better sports performance. It was considered cutting-edge and facilitated widespread doping at all levels of sporting competition. The athlete's win and the resulting admiration overcame any negative perceptions that he had cheated, so motivating him and his peers to dope more. Consequently, what could have been eradicated easily became a serious social and health problem at later stage.<sup>16</sup>

Nearly a decade after the Thomas Hicks incident, sports leaders in the 1920s realised the magnitude of the problem and took steps to prevent doping from sports. For instance, the Official Report of the 1912 Stockholm Olympics prohibited the use of drugs before the start of the race or at any point throughout the competition.<sup>17</sup> Both

<sup>15</sup>Rosen. (2008). *Dope: A History of Performance Enhancement in Sports from the Nineteenth century to today*. Praeger. Retrieved December 1, 2022, from [https://books.google.co.in/books?hl=en&lr=&id=yCz7F8DGGC&oi=fnd&pg=PR5&dq=history+of+doping+in+sports&ots=DqFGCMqWtC&sig=cCt68ctCm9Im7qvyGYx9\\_5-N8zg#v=onepage&q=history%20of%20doping%20in%20sports&f=false](https://books.google.co.in/books?hl=en&lr=&id=yCz7F8DGGC&oi=fnd&pg=PR5&dq=history+of+doping+in+sports&ots=DqFGCMqWtC&sig=cCt68ctCm9Im7qvyGYx9_5-N8zg#v=onepage&q=history%20of%20doping%20in%20sports&f=false)

<sup>16</sup>Ljungqvist, A. (2017, June 1). *Brief History of Anti-Doping*. Brief History of Anti-Doping - Abstract - Acute Topics in Anti-Doping - Karger Publishers. Retrieved December 1, 2022, from <https://www.karger.com/Article/FullText/460680>

<sup>17</sup>In the Official Report of the 1912 Stockholm Olympic Games there is a section entitled 'General Regulations for the Officials for the Marathon Race.' Part of the text of that section states: 'Competitors must not, under penalty of disqualification, take drugs of any kind, either at the start, or during the progress of the race.'

heroin and cocaine were categorised as "prescription only" drugs in the 1920s.<sup>18</sup> The International Amateur Athletic Federations (IAAF) was the first International Sport Federation (IF) to define a definition of doping and anti-doping regulation, as well as restrict the use of stimulants in athletics, in 1928.<sup>19,20</sup> Unfortunately, without any testing mechanism to test the use of banned substance by athlete, the efforts of authorities could not achieve their intended purpose.

### C. EMERGENCE OF NORMS (1945 TO 1965)

In mid of 20<sup>th</sup> century many multi-national drug companies evolved and invested huge sums of money on research into new classes of drugs for the treatment of diseases. Scientific researches such as the extraction of testosterone from bull's testicles in 1927, the discovery of amphetamines in 1930, synthetic testosterone in 1935, and Dianabol (a synthetic anabolic steroid) in 1956. During Second World War non-therapeutic, therapeutic chemicals were used for non-therapeutic purpose to fight fatigue in combat troops and air crew which later mirrored in sports as well like the 'Dianabol' was used by the American weightlifters at the 1962 world championships. Additionally, modern sports was progressively becoming a part of the entertainment business on a global scale, which gave sports a new social meaning for people and transformed athletes into international celebrities. Together (Scientific researches and commercialization of sports) they were encouraging competitors to better their performance by whatever means, fair or unfair, jeopardizing the future of the Olympic competition and undermining the fair play philosophy.

Rather than assuming command in 1940s, the IOC decided to maintain a formal separation from sports science and medicine and in 1952 outsourced these responsibilities to the International Federation of Sports Medicine (FIMS). This delegation demonstrates that the IOC did not view the science and medical matter as a vital one, implying that how IOC failed to understand that drugs could also play a central part in the question of sports' fairness.<sup>21</sup> Authorities' reluctance to penalize the use of

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<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2219897/>

<sup>19</sup>International Association of Athletics Federation (IAAF). "Drugs in Sport/Doping Control," IAAF Medical Manual, [www.iaaf.org](http://www.iaaf.org)

<sup>20</sup><https://worldathletics.org/news/news/a-piece-of-anti-doping-history-iaaf-handbook>, Section 22 of the rule defines doping as; "Doping is the use of any stimulant not normally employed to increase the power of action in athletic competition above the average. Any person knowingly acting or assisting as explained above shall be excluded from any place where these rules are in force or, if he is competitor, be suspended for a time or otherwise, from further participation in amateur athletics under the jurisdiction of this federation."

<sup>21</sup>Vlad, R. A., Hancu, G., Popescu, G. C., & Lungu, I. A. (2018, November 29). *Doping in Sports, a Never-Ending Story?* PubMed Central (PMC). Retrieved December 15,

PEDs in sports and their refusal to accept the detrimental health effects of PEDs became a major factor in the drug's rise just prior to the 1968 Summer Olympics in Mexico.<sup>22</sup>

By the 1950s, not only individual athletes, but also states, had begun to support doping in order to counteract another nation's dominance. The Soviet sports establishment, for example, encouraged its weightlifters to use testosterone to defeat the American team at the 1954 World Weightlifting championships in Vienna.<sup>23</sup> Similarly, after the fall of the Berlin Wall, the East German government's scandalous drive to increase the performance of young athletes by the injection of steroids and other drugs drew public attention.<sup>24</sup>

Although there was little clarity about the short or long term effects of PEDs on athletes' bodies, athletes who were given PEDs by the German government experienced severe medical abnormalities, including premature death, sparking a debate about the effectiveness of performance enhancing drugs and their impact on athletes' health. Many people believed, and continue to believe, that steroids help the body maintain a better nitrogen balance, which aids protein synthesis, which is necessary for tissue and muscle growth, and that the combination of new tissue with strenuous training activities allows them to perform better. However, while researching the effectiveness of anabolic steroids, Dr. Ziegler, a U.S. team Physician, and CIBA, a Swedish Pharmaceutical Company, discovered that it is harmful to one's health and works only as a psychological aspect. Because the experiment was discontinued unfinished, this result cannot be considered conclusive.<sup>25</sup>

In 1957, the American Medical Association (AMA) passed a resolution opposing doping. However, these laws, like the IAAF's, failed spectacularly and had little effect on athletes' drug use because there was no fear of repercussions. By the 1960s, several major new classes of drugs were developed by the pharmaceutical industry. These included oral contraceptives, corticosteroid, beta blockers, tranquilizers and antidepressants. The 1960s heralded the era of experimentation into the non-therapeutic use of drugs both socially and in sports. Skyrocketing the drug use in sports, particularly in Olympic weightlifting and track & field strength events.

The resolution was being reviewed, and anti-doping legislation was being created by governmental and sporting organizations. There was still no practical testing.

The Olympic Games in Rome were the first to be broadcasted live across the world on television in 1960. Live broadcast of the death of an Olympian, Knud Jensen, with millions of spectators was enough to shake the IOC. The reputation of Olympic sports, as well as elite sports in general, was at stake and now something needed to be done. As a result, the IOC created medical commission (IOC-MC), a doping sub-committee, in 1961, to investigate and devise a plan to outlaw drug usage in Olympic sports. Prior to any policy proposal by medical commission, European council and IOC subcommittee, the biological preparation of the athletes taking part in competitive sports, came together in 1963 and declared to fight against the uses of drugs and medicine in sports. They took measures and decided to make international body against doping. This collaboration was mainly concern about to aware the officials, players, athletes and promoters about the doping. Dope test was also recommended. Later, France and Belgium also passed their national anti-doping legislation in 1963 and 1965 respectively.<sup>26</sup>

The establishment of the IOC-MC marked the beginning of the global campaign against doping in sport. The MC had to start from scratch, as at that time, little was known about the kind of PEDs used in sport and the extent to which they were utilized. Practically no rules were in place.<sup>27</sup> With the acceptance of anti-doping policy as proposed by IOC-MC in 1964, IOC finally agreed to prohibit the use of PEDs, sanction those who use or promote the same and ask national sporting organization to make their athletes aware about rules & regulations. Nonetheless, because of the slow pace with which the suggested policy was implemented, the dope test could not begin until 1968.

#### D. ERA OF ANABOLIC STEROIDS (1966 – 1980)

It was only after the death of British cyclist Tommy Simpson during the Tour de France in 1967, a definition of doping<sup>28</sup>, a list of prohibited substances, and promised dope testing (by random urine screening) become a reality in 1968 at the winter Olympics games in Grenoble and then

2022, from

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6311632/>  
<sup>22</sup>Yesalis, Bahrke, & Kinetics. (n.d.). *History of Doping in Sport*.

<sup>23</sup>Mottram, & Chester. (2018). *Drugs in sports* (7th ed.). Taylor and Francis.

<sup>24</sup>Vlad, R. A., Hancu, G., Popescu, G. C., & Lungu, I. A. (2018, November 29). *Doping in Sports, a Never-Ending Story?* PubMed Central (PMC). Retrieved December 1, 2022, from

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6311632/>

<sup>25</sup>Vlad, R. A., Hancu, G., Popescu, G. C., & Lungu, I. A. (2018, November 29). *Doping in Sports, a Never-Ending Story?* PubMed Central (PMC). Retrieved December 1, 2022, from

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6311632/>

<sup>26</sup>Ljungqvist, A. (2017, June 1). *Brief History of Anti-Doping*. Brief History of Anti-Doping - Abstract - Acute Topics in Anti-Doping - Karger Publishers. Retrieved December 1, 2022, from <https://www.karger.com/Article/FullText/460680>

<sup>27</sup>The International Association of Athletics Federations (IAAF) had been the first sport organization to introduce some general rules prohibiting the use of stimulating drugs in 1928, but there is no report on any testing or enforcement of these rules.

<sup>28</sup>“The use of substances or techniques and any form or quality alien or a natural to the body with an exclusive aim to obtaining an artificial or unfair increase of performance in competition.

first Olympic doping case was found<sup>29, 30</sup>. As the list was comprised only of narcotic analgesic and three classes of stimulants<sup>31</sup>, the athletes using anabolic steroid were tension free.<sup>32</sup>The IOC introduced Blood sampling only in 1969 by which presence of steroid is deducted in bodies. In 1968, the International Olympic Committee (IOC) declared that their role would be to organise drug tests only during Olympic Games and to inform National Olympic Committees (NOCs) and international federations (IFs) to take similar action.

A rigorous testing regimen for drugs and stimulants was implemented at the Munich Summer Games in 1972. Over 2,000 urine samples were collected and analyzed, with over 7,000 participants competing.<sup>33</sup>Rick DeMont, a 16-year-old gold medalist in 400-meter freestyle swimming from the United States, tested positive for ephedrine, which he had been taking for his asthma on a regular basis. He also qualified for the final of the 1,500 meter, where he was a clear favourite to win another gold medal. Following the positive test, he was disqualified from the 1,500-meter final and forfeited his gold in the 400-meter. Although Rick DeMont admitted to using ephedrine, he was disqualified because he competed with a banned drug. Unfortunately, there were no exception laws in place at the time to enable the use of prohibited substances for these kinds of circumstances. This occurrence raised the issue of therapeutic use of Drugs.<sup>34</sup>

By 1970, use of anabolic steroids (AAS), which began in the 1960s, had expanded to numerous countries<sup>35</sup>. Abuse of anabolic steroids is linked to a slew of negative side effects. It interferes with the body's regular hormone synthesis. Side effects on the cardiovascular system, mental health, and endocrine system are long-term implications. Infertility, growth abnormalities, feminization, and masculinization are all common adverse effects that are permanent. Abuse of AAS medications is exceedingly harmful, as seen by the proportion benefit – risk.<sup>36</sup>However a general lack of awareness of doping at the time, there was little enthusiasm for, and even opposition to, outlawing them. After much campaigning, the International Association of Athletics Federation became the first athletic organisation to prohibit the use of AAS in 1974, and testing was established during the European Athletic Championships in Rome the same year, although no positive cases were found. For the first time, the IOC outlawed AAS and performed testing for it at the 1976 Olympic Games in Montreal where out of 11, 8 athletes tested positive.<sup>37</sup>

Traditionally, an athlete's response to a positive test has been to question the laboratory procedure. Laboratory errors such as mixing up samples or following erroneous analytical protocols were common allegations. Anti-doping laboratories needed to adopt tight laboratory processes that went beyond what was already in place in conventional medical laboratories in terms of safety and accuracy. The IAAF-MC created procedural guidelines and defined specific needs for doping analysis laboratories in the late 1970s and in 1979 the IAAF Council agreed that only laboratories that followed these standards and procedures would be eligible for doping control, marking the commencement of "accreditation" of doping control laboratories.

<sup>29</sup> A member of the Swedish modern pentathlon team tested positive for alcohol after having consumed some beer, and the team was stripped of its bronze medal

<sup>30</sup> Rosen. (2008). *Dope: A History of Performance Enhancement in Sports from the Nineteenth century to today*.

Praeger. [https://books.google.co.in/books?hl=en&lr=&id=yCzBk7F8DGgC&oi=fnd&pg=PR5&dq=history+of+doping+in+sports&ots=DqFGCMqWtC&sig=cCt68ctCm9Im7qvYGYx9\\_5-N8zg#v=onepage&q=history%20of%20doping%20in%20sports&f=false](https://books.google.co.in/books?hl=en&lr=&id=yCzBk7F8DGgC&oi=fnd&pg=PR5&dq=history+of+doping+in+sports&ots=DqFGCMqWtC&sig=cCt68ctCm9Im7qvYGYx9_5-N8zg#v=onepage&q=history%20of%20doping%20in%20sports&f=false)

<sup>31</sup> List covered sympathomimetic amines, central nervous stimulants, narcotics, antidepressants, and major tranquillizers as prohibited substance.

<sup>32</sup>GummelMargitta, German female shot putter won gold medal in 1968 Olympic with new world record by using steroid named oral turinabol. Whereas use of stimulants by Swedish Gunner LiljenVall was detected

<sup>33</sup> [https://www.researchgate.net/publication/320702966\\_Historical\\_review\\_of\\_doping\\_in\\_sport](https://www.researchgate.net/publication/320702966_Historical_review_of_doping_in_sport)

<sup>34</sup> Vlad, R. A., Hancu, G., Popescu, G. C., & Lungu, I. A. (2018, November 29). *Doping in Sports, a Never-Ending Story?* PubMed Central (PMC). Retrieved December 1, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6311632/>

<sup>35</sup> Rosen. (2008). *Dope: A History of Performance Enhancement in Sports from the Nineteenth century to today*. Praeger. Retrieved December 1, 2022, from [https://books.google.co.in/books?hl=en&lr=&id=yCzBk7F8DGgC&oi=fnd&pg=PR5&dq=history+of+doping+in+sports&ots=DqFGCMqWtC&sig=cCt68ctCm9Im7qvYGYx9\\_5-N8zg#v=onepage&q=history%20of%20doping%20in%20ports&f=false](https://books.google.co.in/books?hl=en&lr=&id=yCzBk7F8DGgC&oi=fnd&pg=PR5&dq=history+of+doping+in+sports&ots=DqFGCMqWtC&sig=cCt68ctCm9Im7qvYGYx9_5-N8zg#v=onepage&q=history%20of%20doping%20in%20ports&f=false)

<sup>36</sup> <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.335.1420&rep=rep1&type=pdf>

<sup>37</sup> Rosen. (2008). *Dope: A History of Performance Enhancement in Sports from the Nineteenth century to today*. Praeger. Retrieved December 1, 2022, from [https://books.google.co.in/books?hl=en&lr=&id=yCzBk7F8DGgC&oi=fnd&pg=PR5&dq=history+of+doping+in+sports&ots=DqFGCMqWtC&sig=cCt68ctCm9Im7qvYGYx9\\_5-N8zg#v=onepage&q=history%20of%20doping%20in%20ports&f=false](https://books.google.co.in/books?hl=en&lr=&id=yCzBk7F8DGgC&oi=fnd&pg=PR5&dq=history+of+doping+in+sports&ots=DqFGCMqWtC&sig=cCt68ctCm9Im7qvYGYx9_5-N8zg#v=onepage&q=history%20of%20doping%20in%20ports&f=false)

<sup>36</sup> <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.335.1420&rep=rep1&type=pdf>

### E. TESTING BEYOND THE COMPETITION (1981 – 1998)

The 1980s was a turbulent for sports, with political difference being manifested through boycotts at the Olympic games of 1980 in Moscow and 1984 in Los Angeles. In addition, there were allegations of a cover-up at the 1983 world track and field championships, and participants withdrew from the 1983 Pan American Games in Caracas, Venezuela, when news spread that testing would be conducted<sup>38</sup>.

However, many revolutionary steps were also taken in this era like in 1985 the inclusion of blood doping as one of the doping method in IOC prohibited list. It done after the use of same was reported in 1984 Los Angeles Olympics. Along with it, beta blockers and diuretics as doping agents and pharmacological, chemical and physical manipulation as prohibited methods were also added to the IOC prohibited list. In Late 1980s, a number of countries, particularly in Scandinavia, developed national anti-doping organizations (NADOs) in an attempt to strengthen anti-doping activities<sup>39</sup>. Also, The court of sports arbitration was created which came into force in June 1984. During this era, the demand to allow the use of prohibited drugs for genuine medical conditions was settled with the introduction of Therapeutic use Exemptions (TUE)<sup>40</sup>.

Initially, IOC accepted the IAAF accreditation procedure, and for a few years, the IAAF and the IOC jointly approved doping laboratories. The IOC assumed full accreditation responsibilities in 1986. The first list of prohibited substances dealt with substances that were taken before a competition. AAS, on the other hand, are taken mainly during training to help the athletes with muscle growth and strength. AAS also allow the athlete to train harder and recover faster. As a result, detecting the usage of AAS would necessitate testing during training times, also known as “out-of-competition testing” (OOCT)<sup>41</sup>. The initial concerns raised primarily on ethical grounds (e.g., the appropriateness of visiting an athlete at his/her working place or home to conduct anti-doping tests) were dismissed following investigations in Norway and Sweden that concluded in favor of OOCT as long as the athlete was a member of a sport organization that signed up to these rules. In the late 1970s and early 1980s, the Scandinavian countries were the first to implement OOCT, but when the concept was explored at the worldwide level, it was

greeted with strong opposition. The Ben Johnson controversy at the 1988 Seoul Olympics contributed to raise awareness of the necessity for OOCT in the battle against AAS misuse, prompting the IAAF to enact the required rule in 1989. The majority of other federations and nations were delayed to embrace OOCT. This led to the establishment of IOC Subcommission for Out-of-Competition Testing in december 1991, with the goal of "encouraging and supporting IFs and NOCs to carry out their own control programmes," however the project failed. Prior to 1999, only 12 Olympic IFs had rules that allowed for OOCT, and only a handful of these conducted such testing; 60% of tests were conducted by the IAAF, 20% by FINA (Fédération Internationale de Natation), and the remaining 20% by a few more sports such as rowing, canoeing, and weight lifting<sup>42</sup>.

Anti-doping activities were taking place but progress was slow until the world's finest male sprinter, Ben Johnson, was discovered doping with anabolic steroids during the 1988 Olympic Games in Seoul. Johnson lost his gold medal following a positive drug test. Later After a second positive test in 1993, Johnson was given a life suspension. This incident raised question on effectiveness of anti-doping policies. Moreover, the inconsistency between rules of two different sports organizations had given rise to various debates. Like, in 1988 Tour de France, Cyclist Pedro Delgado tested positive for probenecid, a masking agent that was banned according to IOC prohibited list but was not on the prohibited list of International Cycling Union. Due to this inconsistency between two prohibited list Delgado was not disqualified and eventually won the race.<sup>43</sup> Therefore, in response to these issues the IOC convened the world conference on doping in sports, in Lausanne, in February 1999 resulting adoption of Lausanne declaration on doping in sports, to form an independent body to lead the fight against the doping and harmonization of doping control<sup>44</sup>.

## IV. CONCLUSION

Although the use of substances in sports can be traced back to the earliest sporting activities, it was the development of pharmaceuticals at the end of the 19th century that led to the rise of harmful chemicals in sports. This compelled the implementation of anti-doping policies. Due to the rule-makers' lack of foresight, they were always behind in the race to catch the rule-breakers during the

<sup>38</sup>Paul Dimeo, A history of drug use in sport 1876-1976: beyond good and evil, 2007 (London: routledge)

<sup>39</sup>Vlad, R. A., Hancu, G., Popescu, G. C., & Lungu, I. A. (2018, November 29). *Doping in Sports, a Never-Ending Story?* PubMed Central (PMC). Retrieved December 1, 2022, from

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6311632/>

<sup>40</sup>Reardon, C. L., & Creado, S. (2014, August 14). *Drug abuse in athletes*. PubMed Central (PMC). Retrieved December 14, 2022, from

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4140700/>

<sup>41</sup>Dirix A. Classes and methods in A. Dirix, H. G. Knuttgen and K. Tittel (eds) The Olympic Book of Sports Medicine, Oxford: Blackwell, 1998.

<sup>42</sup>Vlad, R. A., Hancu, G., Popescu, G. C., & Lungu, I. A. (2018, November 29). *Doping in Sports, a Never-Ending Story?* PubMed Central (PMC). Retrieved December 1, 2022, from

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6311632/>

<sup>43</sup>Singh. (2017). Doping in sports: An overview of ancient and modern history of doping. *International Journal of Physical Education, Sports and Health* 2017, 4(1), 289–292. Retrieved December 1, 2022, from <https://doi.org/https://www.kheljournal.com/archives/2017/vol4issue1/PartE/7-1-45-710.pdf>

<sup>44</sup>Paul Dimeo, A history of drug use in sport 1876-1976: beyond good and evil, 2007 (London: routledge)

time when numerous scientific experiments were occurring. In addition to the rapidly expanding pharmaceutical industry, ideological conflicts, such as whether substance abuse is actually harmful to athletes' health or whether amateur athletes should be treated differently from professional athletes, have also contributed to the unregulated growth of substance abuse. An issue that could have been eliminated in its early stages has grown into a major problem, and we are struggling to deal with it.