

Written Statement of

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**Hearing on
The Use of Performance Enhancing Drugs in Olympic Competition
Before the
Full Committee on Commerce, Science, and Transportation
United States Senate**

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Dear Mr. Chairman and Members of the Committee;

I am honored to be here today and appreciate the opportunity to testify. My name is Dr. Gary I. Wadler and I am an Associate Professor of Clinical Medicine at New York University School of Medicine, a Trustee and Vice-President of The Women's Sports Foundation and a Board Member of OATH. Additionally, I am a former Trustee of the American College of Sports Medicine, the largest sports medicine and exercise science organization in the world, and currently I serve as Chairman of its Health and Science Policy Committee. I am also a member of the Technical Advisory Group of the CASA National Commission on Sports and Substance Abuse. At the local level, I serve as Chairman of the Nassau County Sports Commission in Nassau County, New York. Thus, I am in a unique position to address the subject of performance enhancing drugs from many perspectives - the health perspective, the science perspective, the community perspective and the public policy perspective. As a Board Member of OATH (Olympic Advocates Together Honorably), I have also had the opportunity to address the subject from the athlete's perspective. OATH is the world's leading athlete-centered movement committed to restoring and maintaining the values underlying the Fundamental Principles of the Olympic Charter by promoting ethical guardianship, responsible governance and effective management of the Olympic Movement. I have no vested interest in testifying today other than to share my views with the Committee about the complex and pervasive subject of performance enhancing drugs in society.

For the past 15 years, I have attempted to focus attention on the cascading problem of drugs in sports.

Drug testing is at a crossroads...the point where everyone agrees - at last that something must be done.

There are four elements to consider in your deliberations.

The first is the WHY:

With so many major public health crises, why should we care if a few elite athletes abuse their bodies?

The answer is that the real abuse we are witnessing is that of the public trust. At a time when role models are crumbling, the Olympics should be one of the purest examples of human achievement.

Athletes commit tremendous time and energy in the pursuit of the Olympic dream. For most athletes that commitment and dedication is motivated, not by the desire for external rewards or pay, but simply by a love of sport for its own sake. Athletes pursue excellence. They push themselves beyond their limits; they try, and when they fail, they try again. It is this kind of heroic dedication and the suspense of seeing who prevails in the Olympic contests that draws and holds the spectators. The world watches as its greatest athletes push the human body and spirit in the pursuit of human excellence. People are drawn to this great Olympic Movement because of the athletes and the Olympic values they live and embody. Olympic athletes affirm an oath at the start of every Olympic Games. The Oath says:

“I promise that we shall take part in these Olympic Games, respecting and abiding by the rules which govern them, in the true spirit of sportsmanship, for the glory of sport and the honor of our teams.”

The athletes’ pledge is to go beyond merely following the rules of sport, to strive for something higher – true “sportsmanship” – for in this lies honor.

Doping is a matter of ethics, which affects not only Olympic athletes but also youth, high school, college and professional athletes. The fact is doping threatens to undermine the ethical and physical well being of children.

There is no doubt that Olympic athletes are role models for younger athletes and alarmingly these young athletes are increasing their usage of steroids. Statistics in the United States indicate that the use of steroids in boys and girls has increased since 1991 and with teenage girls it has increased 100%. What is also alarming is that 3% of girls and just under 3% of boys at the very young ages of 9-13 have used steroids. This is on par with the use of other drugs of abuse as reported by the findings of the 1997 National Household Survey, which found that lifetime cocaine use by children ages 12-17 was 3%. The National Institute on Drug Abuse estimates that 500,000 high school students have tried steroids. These facts highlight the serious nature of the steroid problem and the impact it is having on our youth.

Clearly most athletes, especially Olympic athletes, serve as positive role models, shaping the behavior of our youth. Regrettably, there is a negative ripple effect from those who

resort to doping.

The Olympic Movement is a public trust. It is a trust established to promote the ideals of Olympism. How well the guardians of the Olympic Movement discharge their responsibility to the public they serve will be measured by how well they live up to Olympic ideals. The Congress as well as the guardians of the Olympic Movement need to take this matter seriously.

The Olympic Games are not just multi-sport world championships. When asked, the world public identifies Olympic values of excellence, dedication, fair play and international peace as key ingredients of the Olympic Games. The Olympic Games command the sponsorship they do because the public supports the Games. The Olympic rings connote a higher set of ethics and values and this is what public support is based on. Furthermore, it contributes to physical and moral development of young people.

We cannot allow performance-enhancing drugs to undermine the Olympic Movement. We cannot allow another generation of young people to approach adulthood with a pervading sense of cynicism, and a belief in the power of chemical manipulation rather than the power of character.

The second factor is the HOW?

How do we deal with the crisis, given the clandestine nature of doping and its growing sophistication?

The year was 1886, a period characterized by the genesis of new industries and the creation of great wealth. A period when we believed anything was possible. A period, in short, much like today.

1886 is a significant year because it marked the first recorded fatality from a performance enhancing drug.

An English cyclist died of an overdose of what is only known as "trimethyl", during a race between Bordeaux and Paris.

Of course, in the more than 100 intervening years, doping in sports, like the rest of technology, has grown in scientific and ethical complexity.

A new inflection point of abuse appeared in the 1950s with anabolic, androgenic steroids. Since then the manipulators have consistently stayed a step ahead of the monitors.

In 1956, Olga Fikatova Connolly bemoaned the fact that "These awful drugs, anabolic steroids, have changed the complexion of track and field."

Nearly half a century later that refrain is still accurate, still poignant.

There are two broad ways to deal with doping.

The first is cultural, the second, methodological.

We must work to create a climate where the critical mass of public opinion turns against doping. We need that great Movement of the national hinge, the way it swung in the cases of tobacco, drunk driving, seatbelts and most recently, in the use of off-shore child labor in manufacturing.

We need consumers to put pressure on sponsors to assure that events are credibly drug tested. Only then will we witness a sea-change.

We need to ratchet up, in a dramatic fashion, our commitment to recognizing abuse.

New drugs create new demands. For example, the use of endogenous substances – that is, substances that occur naturally in our bodies, such as testosterone, human Growth Hormone (hGH) and Erythropoietin (EPO) – creates the need for a higher ground of independent, peer-reviewed science coupled with credible year round out-of-competition, random and unannounced testing.

Recombinant hGH means normal height for children otherwise destined to be dwarfs, but for the drug abusing athlete it means bigger, albeit not stronger, muscles. EPO means renewed vitality for those with anemia, but for the drug abusing athlete, it means greater endurance. Derivatives of testosterone mean normal sexuality for those deficient by means of disease or surgery and genetic engineering can only mean new and more complex challenges in the future.

Given the complexities of the drugs and related substances legitimately available, determining whether an athlete has or has not doped requires both good science and good policy.

In 1997, USOC Executive Director Dick Schultz admitted the test to detect testosterone abuse, the so-called T/E ratio, had not been validated in women. Yet it continues to be used by both the IOC and USOC. Bad science. Bad policy.

And let me assure you, whiz-bang new machines aren't the answer, either.

Prior to the Atlanta Games, the IOC extolled the virtues of their expensive new high resolution equipment. But after the games, the positive results were discarded because of "technical difficulties".

About this, Dr. Donald Catlin, Director of the IOC accredited laboratory at UCLA, and a director at the Atlanta Laboratory stated: "There were several other steroid positives from around the end of the Games which we reported. I can think of no reason why they have not been announced."

The Atlanta Games were further clouded by the presence in the urine of the "new" stimulant drug, Bromantan, and why political machinations resulted in five athletes being

cleared of a doping offense by the on-site Court of Arbitration in Sport.

In part what is needed is a federal commitment to research, whether in the form of grants or tax credits with tight oversight controls.

Banned drug lists must be based on a generally recognized body of science, and where one does not exist, it must be based on some clearly reasoned rationale, including issues related to laboratory science.

Because advances in biotechnology have outpaced advances in laboratory science, the detection of certain drugs or biologicals is today either impractical or impossible. To wit, hGH, EPO and most recently, IGF-1.

IGF-1 is a polypeptide that is indirectly responsible for most of the growth-promoting effects of hGH. It is associated with a plethora of physiologic functions many of which are shared with hGH. These include increased protein synthesis, decreased protein breakdown and increased fat metabolism - all attractive to athletes.

Its approved uses in the United States are for a certain form of dwarfism and a rare form of insulin resistant diabetes. Like hGH, IGF-1 is not detectable with current screening methods and like hGH it needs to be administered intramuscularly.

One of the newer performance enhancing drugs, relatively little is known about its abuse patterns, cost, availability and long term side effects. The cost of IGF-1 is about \$3 thousand per month and counterfeit products are problematic.

Sadly, it seems, we define international sports competitions and events, not by the city or country in which they were held, but by the drug that made the headlines - the Clenbuterol Olympics, the Bromantan Olympics, the Growth Hormone Games, the Steroid Pan Am Games, or the EPO Tour de France, or as some have suggested the Tour des Drugs.

There is good reason for this. If we look at the number and kind of new drugs that have come to market since the introduction of doping control in the Olympic movement in 1960s, the number is staggering.

That's today. But what about tomorrow? What is around the corner - brake drugs, blood substitutes, genetic manipulation? It is not a matter of a brave new world, but of brave new worlds.

And just as researchers are closing in on a method to detect the abuse of EPO, a potentially dangerous new EPO replacement, which is likely to increase endurance, has surfaced.

The substance is perfluorocarbon, or PFC, a substance with enormous oxygen-carrying capacity. It has been suggested that the abuse of this synthetic blood - like substance first surfaced in Nagano where it had been allegedly abused by cross-country skiers and speed skaters.

The International Cycling Federation has issued warnings about PFC to its national federations.

Although not officially on the market in the United States, there is active research into PFCs for legitimate medical use. PFC can significantly increase endurance by delivering more oxygen to working muscles.

With the global market for blood substitutes probably exceeding \$2 billion, the number of new products will undoubtedly continue to grow. For example, active research is continuing using purified bovine hemoglobin rather than products of human origin or the use of PFCs to carry oxygen, and work continues on genetically engineered blood substitutes.

The injection of this gene limits the effect of IGF-1 to the skeletal muscles into which the gene is directly injected obviating any adverse effects of IGF-1 on the rest of the body.

With this technique young mice experienced a 15% increase in muscle strength, and old mice a 27% increase. Accordingly, the gene has been dubbed the "fountain of youth" for skeletal muscles.

But in the world of doping, milestones become millstones.

The author of the original study has already expressed concern that this technology may be sought out by athletes who are seeking a competitive edge. Interestingly, muscle strength increased without any exercise and there was no way to detect the use of gene therapy from analyzing the blood.

Trials are to begin in monkeys and, in the not too distant future, the first human study may be done in people with a form of muscular dystrophy.

And in another study, IGF-1 producing genes have been successfully introduced into mouse embryos. Is it a stretch that with the new technologies of genetic engineering that we are arming parents with the tools to create designer offspring whether inside the uterus or out of it?

Of course, the ethical, moral and biological debate transcends sports. Indeed, it touches on the transcendent as George Wald, the Nobel Prize-winning biologist and Harvard professor, opined: "Recombinant DNA technology (genetic engineering) faces our society with problems unprecedented not only in the history of science, but of life on earth. It places in human hands the capacity to redesign living organisms, the products of some three billion years of evolution".

We stand at the brink of an uncertain future. But I personally believe that the unpredictability and the velocity of change are not an excuse for reserving judgment about some profound distinctions that should fundamentally govern our perspective on the role of sports in our social fabric.

With that in mind, the columnist George Will has reminded us: "A society's recreation is charged with moral significance. Sport - and a society that takes it seriously - would be debased if it did not strictly forbid things that blur the distinction between the triumph of character and the triumph of the chemistry."

In order that we not blur the distinctions George Will speaks of, what we must do in this complex and challenging environment, is confront the issues related to doping from the broadest possible perspective.

The third element is the WHO:

The athletes' confidence in the public trust has been shaken. We must place the responsibility for drug testing and enforcement of standards in the hands of a structure with unquestioned probity.

The public trust in the IOC has been shaken by conflicts of interest and by a dangerous opacity, where transparency and accountability are required.

We must call upon the IOC to replace semantics with science, fine print with fine judgment, waffling with wisdom.

Now is the time for an independent and accountable anti-doping agency, nationally and internationally, built on a best-practices model with topnotch due process protections and broad stakeholder input, especially from athletes.

OATH (Olympic Advocates Together Honorably), the world's leading independent athlete-centered movement, has made valuable contributions toward defining this independent body. The OATH Report underscores a credible anti-doping agency needs to be independent, open to public scrutiny and accountable.

New doping control measures must be rooted in sport ethics and values; they must flow from athlete agreement; they must respect athletes' rights to privacy; and they must be independently, accountably and fairly administered.

Moving forward in the fight against doping the IOC's progress is painfully slow and its commitment questionable. By example in 1999 the IOC has undertaken marketing efforts valued at \$150 million in a campaign to bolster its waffling public image and \$25 million to the fight against doping, unquestionably a moral crises of enormous magnitude and the single largest threat to the continued integrity of the Olympic Movement. The priority of image over substance seems clear.

Furthermore, efforts by the IOC this year at their Conference on Doping in Lausanne in February finished far short of expectations. Any ground being made at the conference was seemingly lost in the newly published Olympic Movement Anti-doping Code, which is inadequate in key areas.

The anti-doping code defines doping as:

1. The use of an expedient (substance or method) which is potentially harmful to athletes' health and/or capable of enhancing their performance, or
2. The presence in an athlete's body of a Prohibited Substance or evidence of the use thereof or evidence of the use of a Prohibited Method.

The first part of the definition, taken literally (as it needs to be in a document that will form the basis of legally enforceable rule) would have the effect of banning training. Any method of training is a method of enhancing performance, which, under the definition, is doping and therefore prohibited. Clearly this meaning cannot be what is intended, but the point is illustrative. Unless we know what the enemy is, our battles will be doomed to failure.

The choice of whether to permit or prohibit a substance or practice is a decision about the rules and values of sport. These decisions are similar to decisions about the permissibility of any technological development in sport. They are decisions, but the decisions are not arbitrary. The crucial question concerns, who will be empowered to make the decision and on what grounds the decisions will be made.

The anti-doping code is also deficient in other crucial areas. Doping control can only be accomplished by effective out-of-competition, year round, no notice testing conducted by an independent and accountable agency open to public scrutiny. Research into substances per se without this is essentially pointless. The Anti-doping code refers to such testing but offers no indication of how that testing would be carried out to ensure fairness, effectiveness and respect for the privacy and dignity of athletes.

Interestingly most athletes favor anti-doping regulations. The importance of out-of-competition testing which is unannounced and random is due to the fact that many drugs such as hGH, EPO and anabolic steroids are training drugs and are not taken during competition thus enabling drug tests administered during competition to show no signs of doping. Furthermore, when the test is out-of-competition, unannounced and random, athletes are unable to put someone else's urine in their bladder, a practice not unheard of. However, if these out-of-competition, unannounced and random tests are to be properly administered, athletes consent is required so not to violate their rights.

A credible anti-doping agency needs to be independent, open to public scrutiny, and accountable. The IOC retains control of the new anti-doping code and hence of the new agency, by insisting that all modifications to the code be made by the IOC Executive Board and also by insisting that inclusion or exclusion in the Code is not a matter subject to appeal. The IOC must be prepared to relinquish control of the new agency in order to secure independence and a genuine international partnership. It appears the IOC seems more interested in control than credibility.

The fight against doping is international, requiring cooperation and partnerships. In particular, national governments and international sports' federations are necessary

partners. The current Anti-Doping Code is silent on the commitments required from International Federations and the structure of partnerships with national governments. It is estimated national governments fund 90% of current drug testing, or globally that amounts to \$43.5 million annually.

The IOC's announcement of a new World Anti-Doping Agency suggests that the IOC plans to "go it alone". For example, it has failed to recognize throughout the world that much has already been done in establishing anti-doping agencies from which the IOC could learn, such as in Canada and Australia. Why the reluctance to learn from those with experience and expertise?

There are international models for the structure, composition and mandate of such a body. The International Anti-Doping Arrangement is a working agreement between the national anti-doping agencies in Australia, Canada, Great Britain, Sweden, the Netherlands, New Zealand and Norway. Between them, they have many years of experience of in and out-of-competition testing and disappointingly none of them have been consulted by the IOC to assist in setting up their new World Anti-Doping Agency.

Their recommendations are clear. The new agency must be independent and accountable. This independence must include the independence both to determine the content of the Anti-Doping Code and also the methods of testing, adjudication and enforcement. The new agency must also set consistent minimum standards that would apply to all anti-doping efforts whether those efforts are conducted by the Agency itself, other national testing agencies or the International Federations. These minimum standards would include quality control of doping procedures, a minimum percentage for unannounced testing, consistent sanctions and a fair appeal process.

Athletes are leading the fight against doping. The "Doping Passport" proposed by members of the Athletes' Commission, would be an accessible, and public, indication of an athlete's availability for, and history of doping tests. While the details for the "Doping Passport" have yet to be worked out, the creation of an athlete agreement to end doping and accept the testing required to enforce a level and clean playing field are central elements in The OATH Report's proposal to eliminate doping.

The IOC must go to independent experts to create a new anti-doping agency. It must go to those who have the experience to design and to operate an effective, open and accountable testing program. It must go to medical and scientific experts to determine the effects of new methods of doping and to find safe, effective means of detection. It must go to ethical experts for judgment on the permissibility or otherwise of drugs and practices and the means of enforcement. It must go to legal experts to create a system of adjudication and punishment that is fair and consistently enforceable. It must go to educational experts to develop strategies for encouraging ethical change. And, it must go to athletes to ask them about their bodies and their sports and to seek their wholehearted cooperation and agreement in combating the scourge of doping.

The final essential element is the WHEN:

The simple answer is yesterday.

When a celebrated athlete like Mark McGwire admits using androstenedione – and make no mistake, androstenedione is a steroid – and million of kids witness the presumed power of these drugs – we are clearly on a slippery slope to disaster.

Manufacturers of androstenedione have reported that their sales are up five-fold in the past year. We are living in a culture where young people are particularly comfortable using the internet and the number of web sites which sell androstenedione is staggering not to mention other related steroid supplements. Not surprisingly the Healthy Competition Foundation 1999 survey found that 1 in 4 American teens and pre-teens personally know someone who has used performance-enhancing drugs.

And we cannot wait any longer to act.

Congress must revisit the DSHEA Act of 1994. Substances like androstenedione were never contemplated by this legislation, and if it requires the reclassification of steroid supplements as prescriptive drugs, then let the process begin.

I want to remind you that the current approach simply hasn't worked. Today's half-hearted drug testing and limited enforcement matrix is inadequate and porous. High profile drug cases underscore the work that needs to be done to restore public confidence.

Some assert the IOC deserves a gold medal for stonewalling and inaction. Clearly much work needs to be done to restore public confidence.

We need to use drug-free athletes as role models and to marshal the force of parents and the media. We need to encourage the USOC and the IOC to pursue truly independent and accountable drug testing.

We need to recognize that genetic engineering will create further opportunities for abuse, and will require a greater need for intelligence than ever before.

When it comes to eliminating doping in sports, there can be no compromise, no middle ground, not rhetorical acrobatics. We must go for the gold. Our athletes and the public deserve no less.