

It might be wise to point out here that no mention has been made of the term "trainer" to this point. No mention has been made of it because less than 1% of our member colleges employ full-time trainers. The bulk of our trainers are usually "student trainers," or the coach acts as his own trainer.

5. It is the expressed feelings of the NJCAA that the proper use of drugs in athletic competition should originate from only one source, that source being the medical doctor. To allow any one else who might be connected with our athletic programs to become involved in any form, shape, or manner in the dispensing of drugs to our athletes would border on the criminal.

The NJCAA has for years required every athlete to have a physical examination. This examination is a part of the total eligibility program each athlete must pass before he is allowed to compete in the NJCAA. We feel this mandatory examination is a step in the right direction in safeguarding our athletes.

After making this attempt to answer the questions posed by your committee, and considering our replies, it became evident that perhaps you might detect a "head in the sand" attitude.

Gentlemen, it has been only four years since I left my position as coach and athletic director in a metropolitan area. There, for fifteen years, I never encountered a drug problem. Now, because of the very nature of our organization, I am in direct contact with our coaches and athletic directors every day and still have not found drugs to be a problem voiced by these people.

Perhaps the key difference, which has been mentioned previously, should be emphasized once more—money. Until the financing of athletics becomes a product of our program, we do not feel the pressure of competition will become great enough to precipitate the use of artificial stimulants instead of the natural stimulant provided by competitive sports.

Senator BAYH. Thank you.

Our next witness is Mr. Harold Connolly, former Olympic champion, and four-time Olympian, track and field coach and English teacher at Santa Monica School, California.

We appreciate your coming and again, it is a long way from California to have to come and sit and wait. I apologize for the delay.

**STATEMENT OF HAROLD CONNOLLY, FORMER OLYMPIC CHAMPION—FOUR-TIME OLYMPIAN: TRACK AND FIELD COACH AND ENGLISH TEACHER AT SANTA MONICA HIGH SCHOOL, CALIFORNIA**

Mr. CONNOLLY. On July 9, 1972, I weighed 250 pounds. Today I weigh 203. The difference in body weight, I am sure, is due in considerable measure to the fact that I stopped taking anabolic steroids. From July 10, 1972, the day after the Olympic tryouts in the hammer throw, I have not taken any drugs whatsoever, but for the 8 years prior to that, I would have to refer to myself as a hooked athlete. Like nearly all of my competitors, I was using anabolic steroids as an integral part of my training for the hammer throw.

Over the years I tried every variety of anabolic steroid available in the United States. In recent years I even tried European varieties of steroids which were brought back by fellow American athletes thinking that the Europeans might have something better than we had. I was administered these drugs and given prescriptions for them by American physicians and by doctors in Finland, where I taught for 2 years, 1962 to 1964, on a Fulbright grant. During this whole steroid drug experience, no one seemed to quite know what he was doing. The doctors varied their recommended dosages, and nearly

always the dosages I took exceeded what the doctors recommended because my fellow athletes kept insisting I was taking far too little. I never had any noticeable side effects except perhaps on a few occasions an excessive retention of water. I was convinced they made me stronger and heavier.

Just prior to the 1964 Olympic games in Tokyo all around me it seemed that more and more athletes were using steroids for athletic preparation, and one began to feel that he was placing himself in a decided disadvantage if he did not also get on the sports medicine bandwagon. I first became exposed to the use of drugs as a means to improve athletic performance at the 1960 Olympic games in Rome. I heard from some American weight lifters that the Russians were using some bodybuilding drug which increased their muscular proportion and their strength. When I came home, I asked a physician I knew what it might be, and after a little research, he told me that the only thing he could find that would fit the description were anabolic steroids. For a 4-week period I tried, under the doctor's direction, the steroid Dianabol. I had no noticeable changes in body weight or strength and I very quickly abandoned its use. I didn't use these drugs again until 1964 for the Tokyo Olympic games.

The big question which remains in my mind is how much in actuality did the taking of these drugs improve my performance in the hammer throw? To be sure, using them I gained weight and strength. The difference between my world record while on drugs (233 ft., 9½ inches) and my world record while completely free of drugs (231 ft., 2½ inches) was only 2 ft., 7 inches better, certainly not a significant difference.

The first time I became aware that amphetamine stimulants were also being used to increase athletic performance was likewise at the 1960 Olympic games. A teammate from another weight-throwing event with whom I was rooming tried to convince me to use the same dosage of amphetamine he used before each competition. Since I never had tried these drugs, and didn't want to risk any unusual responses, I declined. After the competition in which I did rather poorly, a German athlete friend of mine in the same event remarked that I had looked lethargic and he asked me if I had taken anything to get excited. When I told him I hadn't he was amazed and told me I was a fool.

The following year I experimented on myself with the use of amphetamines for competition and found that they did me much more harm than good. They caused me to become hyperexcited and lose control of my coordination. For my particular metabolism and mental makeup, they were of absolutely no help, and I ceased using them. I noticed, however, how many other athletes in my event and other events were using amphetamines, and I was amazed.

In 1972, as I looked around I realized the world of international track and field had undergone fundamental changes since my first Olympic experience in 1956. I am sure that in the Melbourne Olympic games very few athletes used drugs to increase performance. There were certainly no anabolic steroids being used to my knowledge. By 1960 and 1964, it was mainly the weightmen and weight lifters who

were using the steroids. But by 1968, athletes in every event were using anabolic steroids and stimulants. The use of marijuana by a number of athletes also became a favorite method of relaxing after a hard workout or competition. Tranquilizers also came into wide use as a means of coming down from an amphetamine high. Perhaps because I dislike any form of smoking so much, I never had the slightest interest in marijuana. Moreover, I am also averse to the use of marijuana or alcohol because I feel they impair judgment.

The so-called restorative drugs which I had never heard of before the 1964 games started to come into wide use. Enzymes, muscle relaxants, and anti-inflammatory drugs were being widely used. Many athletes I knew strongly relied on the use of anti-inflammatory drugs after very strenuous weight training sessions to reduce the soreness they would ordinarily feel the next day. Drugs were frequently used in combinations. One world record holder I knew would combine methamphetamine or Ritalin and Darvon. The amphetamine to get him up and the Darvon to reduce all skeletal pain and to keep him from being too agitated by the amphetamine. These drugs were used both for training and for competitions. It was not unusual in 1968 to see athletes with their own medicine kits, practically doctor's bags, in which they would have syringes and all their various drugs.

I recall one incident in 1964 which clearly points out the level of awareness and concern of the medical staff which was assigned to look after the Olympic athletes in Tokyo. A roommate of mine had brought with him his drugs, the most potent had to be refrigerated. It consisted of a mixture of an anabolic steroid and straight testosterone in a large vial which was to last him through the period of the games. He had a note from his doctor with instructions that he be given injections of this concoction twice a week. He boldly presented it to the medical staff of the team, they placed the drug in their refrigerator and the team nurse gave him the injections right on a schedule, twice a week. In 1964, I don't believe the use of anabolic steroids had been declared an illegal drug by the IOC. However, our Olympic medical staff were really not very concerned with what he was receiving.

In 1968 in the training camps prior to the Mexican trial games, the situation had reached the state of openness where athletes in various events were obligingly injecting each other with their various vitamin B12, liver and steroid shots. I knew any number of athletes on the 1968 Olympic team who had so much scar tissue and so many puncture holes in their backsides that it was difficult to find a fresh spot to give them a new shot. I relate these incidents to emphasize my contention that the overwhelming majority of the international track and field athletes I have known would take anything and do anything short of killing themselves to improve their athletic performance.

I would like to mention here some words about the use of drugs by women in track and field. I think it must be all the more frustrating and discouraging for a young lady to rise in athletic achievement, climb to the heights, only to find at the top that so many of her competitors are using drugs to give themselves an unfair advantage in competition. One of the primary reasons why the United States does not have among its girls a world class discus thrower or shot-

putter is the fact that their competitors abroad are using anabolic steroids to give them that extra male power which they utilize so well in their events. You must keep in mind that a great number of European countries have highly sophisticated sports medical programs where the use of drugs by their athletes is very carefully supervised. This is particularly true in the case of the women from the Eastern European countries. I know that our American girls are just beginning to take steroids to compete with their sisters from Europe. This is an unfortunate situation but all the more important is that they do not have the careful medical supervision in their use of drugs as do the European girls.

Women using these drugs run much greater risks than men, and therefore, their use becomes a very dangerous practice. An interruption or total cessation of the menstrual cycle, the growth of excessive facial and body hair, and the onset of personality changes sometimes occur when taking steroids. After the athletic season and the removal of the steroids and the application of estrogenic hormones is supposed to reverse the unwanted side effects. There is a possibility of irreversible side effects.

At this point one might ask the question: if these drugs are being so widely used by international athletes, are college and high school athletes turning to them as well? A few years ago, a friend of mine who threw the javelin and was a place kicker on a leading California university football team told me that every 2 weeks the entire team lined up, pulled down their pants, and were given their shot by the doctor. My friend was certain from his track and field experience that they were receiving anabolic steroids, but his teammates had no idea what the shots were. Just the other day a high school football coach told me that one of the leading southern California high school teams has a player that supplies amphetamines to all his teammates before every game. The coaches are aware of what's going on but they steer clear of this situation.

The 2 years I was coaching high school track and field in 1964 to 1967, I knew from the remarks of their teammates that 2 of my athletes on a team of 110 were using amphetamines during competition. I never could catch them actually taking the drugs, but I strongly warned them against the risks they were running if they were acting so foolishly. They simply smiled and continued to get high. I am sure the incidence of drug use to improve athletic performance has grown considerably among high school athletes since 1967. And other drugs which were not even mentioned in 1967 by high schoolers are now much more prevalent. Just last fall I was told by some high school football players that a teammate of theirs was going to give it a try in a game with mescaline. This would have been unheard of in 1967.

The International Olympic Committee has set down a series of strict regulations in respect to the use of drugs in Olympic competition. The International Amateur Athletic Federation, the governing body for track and field, has also established strict rules in respect to drug usage in competition. Both organizations have published an extensive list of prohibited drugs. Where a man is suspected of having taken a stimulant, urine tests are given, and should they prove positive, he

would be banned from competition. In respect to the use of steroids the regulations against them are practically unenforceable because the drug is so difficult to detect and the test is so elaborate. The California Interscholastic Federation, the governing body for high school athletics in southern California, has no specific rules against the use of drugs in sports but leaves it to their member schools to establish the regulations for its athletes.

Rules regarding the use of drugs have been passed by sports organizations and schools and undoubtedly new regulations will follow. The July 17, 1969, issue of Sports Illustrated expounded that sports is:

... designed to focus attention on the participants; to measure their weakness, virtues, strengths, speed, agility, stamina, intelligence, instincts, resistance to pain and pressure, and their self control. The mystery and drama of sports for both participants and spectators has always been the unfolding action that occurs when men match these intangible elements of their characters

From my personal experience as an athlete, I believe there is even more to the mystery of sport. The traditionally accepted moral and philosophical concepts regarding competition or competitive sports are being openly challenged by man's instinctive desire to ascend to untrodden levels of human accomplishment using any road which may get him to his goal.

The code of conduct among athletes in respect to adhering to the extrinsic rules, by that I mean the on-the-field regulations governing the competition, is among the most exemplary in the world. Would that more of our political, military, and industrial leaders exercised the same ethical consciousness. The intrinsic rules, however, are a different matter. I think most adult athletes feel what they do to their bodies is their business. What they eat and drink, what vitamins they take, and what drugs they use to improve their athletic performance should be left to them. They feel any other athlete in today's world can seek out or be provided with similar scientific resources.

From a practical point of view, it is impossible to equalize athletic opportunity for all the athletes from every nation in respect to food, equipment, facilities, financial subsidy, geographic locations, social systems or the accessibility of scientific knowledge and modern pharmacology. Regulations against so-called "unfair athletic advantage" as altruistic and they may seem, have failed.

Thus, far the most effective means to achieve the most balanced advantage for athletes from diverse nations has been the situation that has naturally evolved notwithstanding the strictures. That is: each separate nation provides all the best it possibly can for its own promising athletes, everything from education and jobs to sports medicine.

But what of the possible dangers associated with using drugs in sports, particularly for youth? Because so many young athletes continue to use these potentially dangerous drugs, even faced with the possibility of loss of reputation and expulsion from their sport, we must confront the problem honestly. We know too little about the actual effects of many chemical substances used by athletes. If we accept the reality of how many youngsters are indiscriminately using drugs for sports, I believe we have the obligation to ascertain the information which will help protect their physical and mental health.

Of course, the righteous will say, "Those who violate the rules must face all the consequences." I consider this an abrogation of responsibility. If we simply say the use of such and such a drug is prohibited in sports, we make it impossible to do what is most necessary—extensive research involving hundreds of competing athletes, and it must be immediately begun.

The Amateur Sports Act of 1973, which I pray is enacted into law, can provide the authority and means to initiate truly meaningful research into sports medicine, the kind that I know is being done in Eastern Europe. But we need not cheat on the international rules. The Amateur Sports Board could, I believe, secure a temporary dispensation from the drug rules for hundreds of volunteer American athletes in various Olympic sports to participate in blind tests of the actual effects of various restorative and addictive drugs on athletes. The honest and factual information that could be derived from this type of approach would do far more to stem the severe dangers to our young athletes we now face under our present procedures.

Present and future information on the effects and dangers of using drugs in sports must be honestly presented to our high school and college athletes. It is not sufficient to have an NCAA newsletter with an unconvincing drug warning to coaches and athletes or some other occasional periodical articles on drugs in sports lying in coaches desks or hanging from the bulletin boards. Informative and authoritative films on the subject must be produced for high school athletes. Symposia with experts and prominent athletes must be presented in our schools to inform our youngsters. The best of these meetings could be filmed, edited, and made available throughout the Nation on educational television or directly to schools.

I have requested the school board where I teach to allow me to work with them to begin next fall a program dealing with the use of drugs in sports. I hope Santa Monica, Calif., will lead the way for other communities to do the same.

As I look back at the 8 years I experimented on myself, I feel fortunate that the cautious doses I took did not result in the painful, debilitating side effects a number of athletes I knew experienced from overdosing on sports medicine. I was lucky, but what of today's youngsters with the peer group pressures, the greater prevalence and availability of all manner of drugs, and the increased demands of athletic competition?

It is clear to me that sports organizations need to obtain and more efficiently implement restrictions on all drugs which pose a potentially serious threat to health. As ineffective as this deterrent may be, it protects some athletes. I also believe, because of their enormous influence over hundreds of thousands of American youngsters, our professional athletes should be compelled to conform to strictly enforced drug rules particularly in regard to the use of amphetamines. This single step would do more in a very short time to reduce the use of amphetamines by high school athletes than anything else I can think of.

Over the long haul, however, the tide of indiscriminate use of drugs in sports can only be turned by a thorough nationwide educational program based on extensive research. Soon my two sons will be entering high school athletics. I want them and all other youngsters to be

adequately informed and warned about the use and measure of drugs in sports and I intend to do everything I can to achieve that objective.

Senator BAYH. Thank you, Mr. Connolly. It is a privilege for the committee that you, as an Olympic champion, would take the time to let us have your first-hand experience.

Could you tell us a little bit more about how you initially became involved with these drugs? You paint a rather frightening picture here of experimentation and rumor and resort to trial and error in an effort to achieve excellence in the United States as contrasted with a calculated and scientific approach in some of the other countries. Could you give us a little more insight as to how one athlete started using drugs?

Mr. CONNOLLY. Athletes are a very tight fraternity of individuals particularly in associated events like weight throwers or sprinters or middle distance runners, and sooner or later they communicate with each other about their training. And they will here talk of other athletes using certain substances that are supposed to enhance their ability. When I began, it was things like vitamin B and wheat germ oil and proteins. Then along comes someone and says, try this, and he holds out a little pill and, as I tried to indicate, most athletes that I have known on the top levels are so involved about proving excellence for one reason or another, whether it is a personal challenge or a quest for the clamor and fame of victory, they are interested enough to try it. They will want to be assured that they will not drop dead from it, of course, but they will try it even though there is some warning about side effects.

That is pretty much how it begins, but their motives are different from the other population of youngsters who may be trying drugs for other reasons. It is a very isolated thing, this use of drugs in sports; it is for the specific reason of improving performance and therefore it is narrow enough in its scope that it can be looked at for its results rather than looking at the general drug problem among high school students and the general population.

Senator BAYH. Apparently there are some doctors that are administering this drug. You cited one example.

Mr. CONNOLLY. There are no Federal, as far as I know, prohibitions, on a doctor administering steroids or amphetamines with prescription under his control and care and I have known some doctors that got sort of a kick out of playing with the athletes and seeing how much they can bring his performance around. It is a bit of a game for them. You take a healthy, strapping individual who is doing very well in sports, and the doctors will administer these substances to him and just see what the results will be and with the breadth of drugs that are available in pharmacology, they can be used for any number of the athletic associated situations.

Senator BAYH. Apparently the experience you had with steroids initially with normal dosages was nothing; is that correct?

Mr. CONNOLLY. That is right. Taking the dosage that was indicated on the bottle resulted in nothing happening.

Senator BAYH. Would you care to tell us—we would like it for our record—just how large a dosage you took ultimately?

Mr. CONNOLLY: I never went as far as what I know athletes are taking now. I was always a little reluctant, and maybe I thought too much about the possible side effects and then of course you begin to imagine you are feeling them, so you cut down on the dosages. I guess I didn't have the courage some of the athletes have today, but the dosages that have been used are 8 and 10 times what is recommended by the pharmaceutical companies.

Senator BAYH. Eight and ten times?

Mr. CONNOLLY. Right.

Senator BAYH. Do these athletes who take that kind of dosage have side effects?

Mr. CONNOLLY. I think some do, but most don't because the doctors, most doctors, are too frightened of the possible consequences. The doctors who do work with the athletes who take these massive dosages monitor them carefully with liver function tests when there begins to appear some deviation that is alarming, they take them off the drug and apparently the side effects are fairly quickly reversible with that drug.

Senator BAYH. You mentioned at the outset of your testimony you are presently weighing 203 pounds?

Mr. CONNOLLY. That is right.

Senator BAYH. That is a pretty good sized man, I would say, and when you were competing in 1972, you weighed 250.

Mr. CONNOLLY. That is right, sir.

Senator BAYH. You have lost 47 pounds during the period you have come off steroids?

Mr. CONNOLLY. That is right.

Senator BAYH. How much did you weigh when you set that record? You mentioned the two records. I don't remember the specific dates, but there were two.

Mr. CONNOLLY. About 253 pounds, but the dilemma for me is that I don't have any question in my mind that it increases strength, sheer strength and body mass, but from my personal reaction to those drugs, I think it inhibited me in other ways like body flexibility. I felt retention of fluid in my joints, and perhaps the advantage in greater strength and weight was counterbalanced by the loss of flexibility and the loss of mobility in my knees and so forth. And that is why I feel research has to be done because maybe if I had never taken them at all, I would have achieved the same results. I might not have been as heavy—I certainly wouldn't have been—or as strong, but I might have even performed better in my particular event.

Senator BAYH. You mentioned that when you set the world record of 233 feet, 9½ inches, that you had been using anabolic steroids, and when you set the previous record of 231 feet, 2½ inches, you hadn't been?

Mr. CONNOLLY. That is right, and when I wasn't using the drugs and I broke the world record, I weighed about 227 pounds, and when I broke it the next time—I don't think with a very significant improvement in performance—I weighed 253 pounds.

Senator BAYH. During that period prior to your first record, you had not used drugs?

Mr. CONNOLLY. No.

Senator BAYH. And during the period between the first record and the second, you had, and you put on about 25 pounds?

Mr. CONNOLLY. That is correct.

Senator BAYH. Over what period of time does a normal athlete take these anabolic steroids—approximately?

Mr. CONNOLLY. The rule of thumb now is you take them for 3 months, and then you go off for 2 weeks to a month, and then go back on them, but I have known athletes that have been on them continuously for 2 or 3 years.

Senator BAYH. Does this have any mental effect or psychiatric effect?

Mr. CONNOLLY. I didn't notice in my own case, but the person who is taking drugs never notices his own changes. I don't think they do, because I didn't feel any psychological changes or any apprehensions or any agitation or anything like that, but I have noticed in other athletes who use all manner of drugs, including steroids, but particularly amphetamines in large doses, that there appears to me to be personality changes.

Those are the guys who use them in training and in competition, and the tolerance of the drug grows so that they would take a dose of such magnitude, that if I were to take it, I would be right up on that ceiling. They have to take that much to get the jolt from it, and that I think is very dangerous.

Senator BAYH. When you suggested that you found no benefits from amphetamines—

Mr. CONNOLLY. No, sir.

Senator BAYH. Was this because of psychological negative reaction you had, or just because there was no physical effects?

Mr. CONNOLLY. There probably were a number of reasons. One, I didn't like the feeling afterwards. I didn't like the withdrawal, or whatever it was; the headaches the next day. I didn't like being awake in bed until 3 in the morning unable to sleep and I didn't want to have to resort to barbiturates or tranquilizers or alcohol to put me to sleep. The whole thing was repugnant to me.

As far as improving my athletic performance, I was erratic when I took amphetamines, but other athletes have used them in practice and gotten used to them. I didn't want to go that far, but others have gone that far.

Senator BAYH. What is the general dosage of amphetamines?

Mr. CONNOLLY. It really depends on the particular drug you take but somewhere between 10 and 20 milligrams, but when you develop a tolerance to it, through using it in training, you got up to 40 and 50 milligrams.

Senator BAYH. In your experience, have you known any athletes that have become dependent on amphetamines?

Mr. CONNOLLY. Yes, psychologically in that they couldn't possibly face a major competition without them. To that extent, they were addicted.

Senator BAYH. What about physically?

Mr. CONNOLLY. I am not a medical man, so I couldn't determine that. I only can say how they felt, that was that they just couldn't face a major competition because when we had the Olympic tryouts

in Eugene, Oreg., last July and they knew every man was going to go through urine tests, many of these athletes I knew were not about to risk taking the amphetamines, and they were in serious trouble. They had to go through a period of withdrawal or whatever; maybe psychological withdrawal, and they had to find other substitutes to substitute that they felt wouldn't be detectable. Strong caffeine type things was what they used. They just couldn't go in these without taking something, and they risked detection. They reckoned that if they are going to test them and they found caffeine, well, I can say I had a cup of coffee, but they were taking caffeine dosages that were very high.

Senator BAYH. Now, so far we have talked about champion athletic competition both national and international. What of the situation in and around Santa Monica, the colleges, the universities, the high schools there, where we are not talking about world champion events?

Mr. CONNOLLY. It is difficult to ascertain because you can talk to coaches and they will say we don't have any discernible problem, but how can they really tell unless they have direct information from some former member of a team they coached, or some present member? They can't really know. You can't distinguish between the natural excitement of a team after a game—the hyperactivity they demonstrate and so on—from a person who is on amphetamines. I know that high school athletes use these things, Senator. You could run perhaps some surveys, but I think that it is a waste of time because I assume they are and I know there are high school athletes using steroids and we all know in track and field of numerous high school athletes, particularly weight men, who use steroids to achieve the improved results that they appear to be achieving.

And I think that now that the youngsters are going to learn that their pro idols are using amphetamines to get through the NBA or the baseball season, they begin to think well, if they can take it, I can take it; I mean, whatever they can do, I will do because, Senator, they idolize these men so much that they will feel no restrictions in their own minds about using these kinds of things for their own championship games.

But this is all so unscientific. We don't really know for sure what these drugs do and we don't really know what the side effects are. I read Dr. Hanley's testimony to this committee and he doesn't really know if the so-called addictive drugs do contribute to improved performance or they don't. They only have a number of different tests that have been run, which are inconclusive.

Senator BAYH. In your testimony you suggest that we ought to test for drugs?

Mr. CONNOLLY. I am sure of it. I am sure of it. We may open a Pandora's box in a way because it is possible we may find that they do enhance athletic performance, particularly steroids, but at least we will know what the dangerous dosages are, or we may find that they in fact don't. Because I don't really know whether they do or don't, but most athletes are convinced they do, and I was convinced enough that they did something that I took them for 8 years. It is only in retrospect now that I am beginning to question it, but the fellows that are into it today are taking them in heavy dosages and

they think they work and they may injure themselves dangerously, especially women.

Senator BAYH. Is testing a better policy than abstinence?

Mr. CONNOLLY. Excuse me?

Senator BAYH. Abstinence, a prohibition?

Mr. CONNOLLY. You can say that, you can say don't take it, and you can bring up the moral issue, but it hasn't worked. They do take it, and those are the realities. You can frighten people by doing spot checks and you can cut down the incidence, and that should be done, but at the same time, for the sake of those that will take it, I think we have an obligation to find out what is happening with the human organism when we are taking these substances. I mean, we say to people, don't smoke, but they keep smoking. We say don't drink alcohol, but they keep drinking alcohol. We are doing intensive research into those areas to let people know what they may do to themselves, but there is no intensive research in this country about what these drugs may do to young men and women in sports; no really effective research.

Senator BAYH. How do you conduct research since you admit there may be some significant side effects? How do you draw a sample?

Mr. CONNOLLY. That is the problem. You either cheat, the way some countries are doing, or, you give athletes the drugs without telling them whether they were actually taking these drugs or they were taking placebos, and you find out. You find out that way.

Senator BAYH. You say that prohibition, abstinence, hasn't worked. Now, only in certain kinds of competition have we really even sought to examine for the use of drugs.

Mr. CONNOLLY. That is right.

Senator BAYH. Without getting moralistic about it, but as someone who has competed yourself, is it a fair assessment that if we really wanted to test sufficiently, we could test everybody? Is that a fair statement?

Mr. CONNOLLY. From what I have read, I understand the tests are somewhat difficult to run. They take so long and are so expensive that they are not being administered anyway. They do spot testing instead of testing everybody and they test them in some championship competitions but not in all competitions. You can't do it in all competitions.

I believe that until we know more about what they actually do, these drugs, we have to have prohibitions, and we have to test and we have to try to protect people from hurting themselves in sports.

Senator BAYH. What is the policy at Santa Monica high school relative to the use of drugs and the effort to try to ascertain what the young men or women are using?

Mr. CONNOLLY. There is no way they can determine if a young man is actually using them unless he is seen physically doing it by the coach, and then he would be suspended from the team. That applies to smoking as well, or the use of alcohol and the use of these drugs which are prohibited by organizations like the IOC and the IAA; if they know the athlete is using these drugs and can catch him at it and prove it, they suspend him from the team, but that is very difficult to do. They don't run any unrinanalysis as far as I know in any high school competitions.

But it seems that the idols of these athletes are ones to work on more than on these kids, at least as far as testing right now.

Senator BAYH. I think you are a unique specimen; and an exceptional witness, as far as being able to testify on both sides of this coin. Here is a man who held the world's record without taking drugs, and who holds the world record using drugs. You are a champion.

Is being the best in the field as a human being enough? Is that what we are trying to accomplish athletically, or must we artificially through medical stimulation increase the capacity percent in order to really accomplish our goals? You know, what should our goal be? Where do the moral and ethical concerns fit into the picture?

Mr. CONNOLLY. That is really a most difficult question to answer and it is something that is within yourself. When I look at mankind I believe all men in a spiritual sense are equal, but in a physiological sense, men are not equal. We are all the same in that spiritual quality that makes us men, whether we are 6 foot 6 or whether we are black or whether we are white, or whether we are crippled or whether we are deaf, and we will accept the fact that we are all equally men, but when you start striving for some sort of physical accomplishment, we are not equal. There will always be someone a little bigger, a little stronger, and I know that very well because I was born and had a birth injury and I went through a whole athletic career with a disadvantage with a left arm that was 3 inches shorter than my right. And I wanted to be the best in what I did, and fortunately I was able to do it with my so-called natural qualities without any outside assistance from any substances or whatever, but when the time came that I felt I was going to relinquish that position that I held within my own mind as being the best in the world, to someone who is using something that I had access to and that I could use too, I used it. So there is something that drives a man to certain levels of accomplishment, certain heights, and as long as what he is doing to himself is not injuring his fellow man, he will do it, and I did it, but when I felt that I might destroy myself with amphetamines, I couldn't do it, but I found no mental restrictions on my part in using steroids.

Senator BAYH. Unfortunately I can't look at this solely from the standpoint of an Olympic champion—I have to try to look at this from the perspective of national policy and it is awfully difficult. None of us can really pass a moral judgment on others. We all ought to play by the same set of rules. It seems to me to be unfair to say the Russians can do something and the Americans can't. That I understand, but I am asking a more basic question. What should the rules be? In fairness, we ought to all play with the same set of rules. But in order to satisfy mankind's quest for excellence, is it necessary that the human machine be revved up with all of the modern additives, or should the goal be that we satisfy our quest for excellence by saying, we are going to use what God has given us?

Mr. CONNOLLY. I don't think we can do that. I don't think we do that now, or did it even before drugs. It may be a little simplistic, but we don't come into this world with anywhere near equal machines. Someone whose vision is a little defective will need glasses. Someone whose ankles are a little weak, he will need tape on his legs. And it just goes on and on. You find something else that will bring you up a little closer to the next guy. Someone may naturally produce more

male hormones and so you find he has an advantage over you—his muscles are bigger, stronger—and if you find something to bring you up to his level, you take it, the same as another athlete might wear glasses in order to see the finish line.

It is a very difficult question to answer. I am more concerned about the damage that can be done by indiscriminate application of these things. I mean, by putting on the wrong lenses, you could ruin your eyes for life but we have scientific men who have done research and are not going to let you do that to your eyes, but here we are taking drugs to enhance our physical abilities in sports, that could damage us and we have no research. So I am very concerned about that.

I am not condoning it, because it is a question that needs much further investigation, but I am not convinced that they actually do all that they are purported to do, anyway, Senator. Dr. Hanley may be right and research may prove that the detriment in taking these drugs is far greater than the benefits, but we don't know that yet, and at this time the youngsters are convinced the benefits outweigh the risks.

Senator BAYH. You mentioned that you had no noticeable side effects yourself. Have you in your association with some of your competitors, your friends, become familiar with any side effects that we should know about?

Mr. CONNOLLY. I haven't seen any of the dramatic side effects they tried to scare us with, but I have heard, after talking with a few athletes who used them, their skin may break out or they may have painful joints, which perhaps are a result of a high percentage of uric acid in the system, which these steroids can cause, but I haven't seen any. One athlete told me—and this is just a humorous anecdote to point out the psychology of athletes—he said, maybe when I am 45 years old, my wife will turn to me while we are watching television some night and I will shrivel up to a raisin and fall on the floor, but I don't care. You see, Senator, he wanted that record, and this is what you are dealing with.

But I can't sit here and enumerate a list of cases where people really felt they were damaged by taking anabolic steroids.

The ones that take amphetamines, I personally feel they are hurting themselves gravely, but they keep doing it; professional and amateur athletes alike.

Senator BAYH. Well, you have been very kind and made a significant first-hand contribution to our record. I appreciate what you had to say. I want to apologize again for the significant inconvenience to which you have been subjected. I thank you very much for helping us.

Mr. CONNOLLY. It has been a pleasure to be here. Thank you, Senator.

[Mr. Connolly's prepared statement is as follows:]

PREPARED STATEMENT OF HAROLD CONNOLLY

On July 9, 1972 I weighed 250 lbs. Today I weigh 203. The difference in body weight, I am sure, is due in considerable measure to the fact that I stopped taking anabolic steroids. From July 10, 1972, the day after the Olympic tryouts in the Hammer Throw, I have not taken any drugs whatsoever, but for the eight years prior to that I would have to refer to myself as