
PRACTICAL APPLICATION

International Journal of Sport Nutrition and Exercise Metabolism, 2001, 11, 397-400
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An Interview With Dr. Gary Green About Supplements and Doping Problems From an NCAA Perspective

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Gary, you're a medical doctor based at UCLA. What is your role there, and with the NCAA organization?

I'm a medical doctor; an internist, with a specialty in U.S. primary care sports medicine. I have an appointment as an Associate Professor at UCLA, and I'm involved in running the intercollegiate drug-testing program for the NCAA, which oversees both drug testing and drug education. This is probably the largest drug-testing program in United States, involving about 10,000 drug tests per year.

For the benefit of international readers, can you summarize what the NCAA is and how the system works in terms of organizing sports competition? What control does it have over the training and competition environment of athletes within its system?

NCAA stands for the National Collegiate Athletics Association, which includes about 1,000 schools and about 300,000 athletes, organized into 3 divisions. Most people have heard of Division I schools such as UCLA or Notre Dame—big schools with significant sports programs and resources, and many athletes on scholarships. Division II includes schools where some athletic scholarships may be given, but in Division III schools, sporting competitions are undertaken for the enjoyment of the activity and without athletic scholarships. Each division organizes championships in each of the various collegiate sports.

The NCAA was formed in the early 1900s, basically as a result of a directive from President Teddy Roosevelt to address the problem of the deaths and serious injury occurring in intercollegiate football competitions. This is an interesting fact, since it shows the original intent of the NCAA system was to address safety concerns in sport.

The NCAA has various rules and mandates, which determine the eligibility of college students to compete in collegiate sporting competitions. This can involve issues concerning athlete welfare (e.g., how many hours training can be undertaken), athlete benefits, and protection of athlete grades. One goal is to try to keep a level playing field for competition, but care of the athlete is also important. These regulations used to be uniform through all three divisions, but now each division has its own management council to address its priorities and goals. Nevertheless, in the area of drug testing, most of the rules are the same in all the divisions, at least with every championship being eligible for competition testing, and all penalties being the same.

How do the rules and testing processes regarding doping in NCAA sporting competitions compare with the IOC regulations, both for "in competition" and "out of competition" testing?

The NCAA has had a drug-testing program since 1986. Initially, most of the testing was done at championship events, then after a few years it was expanded to include

“out of competition testing” in Division I and II football and Division I men’s and women’s track and field. Today, every sport is subject to being tested in competition, and we continue to do “random” or “out of competition” testing for the major football and track and field divisions. We also test athletes who have tested positive with other organizations—we treat that as a probable cause. The athletes’ urine samples are collected by an independent contractor group—The Center for Drug Free Sport—and the analyses of the specimens is undertaken at the IOC-accredited UCLA analytical laboratory.

The NCAA doping list is generally similar to the IOC list of prohibited substances, except that we allow pseudoephedrine and some of the over-the-counter cold remedies. When the program started in 1986, we shared the same list as the IOC, but the problem is that we take care of 300,00 athletes from widely different schools and sporting situations. For example, we cover both the athlete who plays in a team from a Division III school in the middle of nowhere with one athletic trainer, and the UCLA team that has a huge budget for education and 10 trainers to monitor athletic practices. It seems unfair to penalize the former athlete with a year ban from playing sport as a result of taking a cold medication. Otherwise, the programs are the same.

In addition to our NCAA testing, each college can conduct its own testing program. From our survey of schools, most of the NCAA Division I schools have a testing program of their own, while this is less prevalent in Division II schools, and nonexistent in Division III schools. The organizational premise of Division III schools is that athletes should be treated the same as every other student. Since there are no athletic scholarships, and no drug testing occurs with regular students, there is no cause for the drug testing of athletes.

What sort of sanctions can you impose for a positive drug test?

A positive test results in the automatic loss of 1 year of eligibility to compete in their collegiate sports career. This is a significant thing, since an NCAA athlete has only 4 years of collegiate eligibility. If there’s a second positive, you’ve lost your entire collegiate eligibility. Our rules, which are being addressed by a taskforce right now, treat every single substance with the same ban—for example, a positive test for testosterone is treated the same as a positive for ephedrine. So in some ways, it’s stricter than the international bodies, which have a 3-month penalty for ephedrine or don’t test for marijuana as we do.

We have an appeal process that is a little different to that conducted by the international bodies. In our case, the drug testing committee hears the case blinded—by removing the identity of the athlete or the school, we try to be as fair as possible. I think it’s a pretty fair and transparent process; all of the statistics are available if anyone wants to see. The common misconception, however, is that the NCAA is a secretive organization, because it doesn’t release the name of people who test positive. However, the reason for this is a U.S. law known as the Buckley Amendment, which prevents you from releasing any information about college students or their transcripts. All we are allowed to release is a statement that says “so and so was declared ineligible by the NCAA.” That could mean they failed their courses, they violated a team rule, or any number of other things. We have come under a lot of criticism because people don’t understand the rules under which we operate.

How does the NCAA anti-doping program compare with programs in the professional sports to which the NCAA program might be a feeder system, such as basketball, baseball, football?

Professional sports such as these have their own anti-doping systems. Some are well regulated while others, like the program in Major League Baseball, are very loose.

This system allowed Mark McGwire to take and admit taking androstenedione, a prohormone banned by the NCAA and IOC anti-doping programs. This can make things difficult for our athletes who see this and want to follow his example.

What is your experience of the use of supplements and sports foods by NCAA athletes, especially prior to any intervention from the NCAA? Does this pose a risk for positive drug tests by your athletes?

There's no question that supplement use represents our biggest problem. It is probably responsible for at least two thirds of our positive drug tests, and it's responsible for three fourths of our appeal calls. We thought we were getting a better handle on positive tests arising from the use of androgenic (prohormone) supplements, which are banned for use in sport but legal to buy over-the-counter in the U.S. However, just when we thought we were making progress in this area, we now find we're losing the battle with ephedrine use. Many supplements and sports drinks are now being manufactured with this stimulant as an ingredient. It is interesting that whereas we see the problems with androgenic supplement use in male athletes, we are seeing ephedrine and stimulant use in female athletes.

What is your assessment of the risk that an NCAA athlete faces of incurring an inadvertent positive drug test arising from the use of supplement and sports foods? In other words, how much is a true case of unknowingly ingesting a banned substance, and how much are supplements being used as an excuse for deliberate use of banned products?

This is a good question. I think we have seen some cases of people using supplements or claiming the use of supplements to mask their use of banned substances such as Nandrolone. We saw a lot of that in the mid 1990s. However, when these cases were heard and athletes found that they still received a penalty, I think it changed the value of using supplements as an excuse.

And are the penalties really applied in these cases?

For several years, we have really publicized that androstenedione and other prohormone compounds are on our banned list. We've put out posters and a lot of literature to make it very clear that this is not going to be accepted as an excuse. In 90% of cases, athletes who appeal against such a positive drug outcome lose their appeal. The only time we overturn a case is when we find that a school has done a terrible job at educating their athletes about supplement use. In this case we have given penalties to the schools and turned them over to the infractions committee because they are not doing an adequate job of drug education.

Do you distinguish between an athlete who takes a supplement that acknowledges on the label that it contain a banned pro-hormone, and the athlete who takes a muscle builder supplement that contains banned substances but does not declare this fact on the label?

That's a tough issue. We have a lot of athletes who claim that their positive drug test was the result of taking a protein powder with an undeclared content of a banned substance. However, to my knowledge we have not yet had a case where the athlete was able to successfully show that their product was contaminated with an androgenic supplement. There is some evidence that such contamination or mislabeling does occur, but our own laboratory research shows that most of the supplements fitting this scenario are based on androgenic compounds, which were already banned. For example, we have found androstenedione supplements containing a contaminant of 19-norandrostenedione. I would judge the case of a positive test arising from the use of an "innocent" supplement to be very rare and hard to prove.

What programs has the NCAA undertaken to educate its athletes and coaches about supplement/sports food use and the risk of a positive doping outcome? What other steps has it undertaken to minimize the risk?

In general, we advise athletes not to take supplements. In particular, we encourage them to seek advice from the team physician, trainer, or our website before taking a supplement, to check that it is safe to take. We don't actually run or control the education programs received by athletes ourselves. With so many different schools with different needs and cultures, it is impossible to provide a single message to suit all situations. But we do support and encourage various education programs. For example, we give schools direction and grants to run programs, then let them go ahead and decide how best to address their own issues. The Center for Drug Free Sport maintains a website for NCAA athletes devoted just to supplements, funded by NCAA.

About a year ago we took a proactive step, and passed legislation that prevents any NCAA school from providing any nutritional supplements to its athletes other than carbohydrate/energy replacement drinks and bars, and carbohydrate-electrolyte drinks/replacement products. Can a kid take creatine in our system? Yes, but the school can no longer provide it. This step was taken because we thought it was sending a confused message: On the one hand we were saying that supplements were risky, and on the other hand schools were handing out creatine and protein powders.

What was the response to this legislation? And do you think it has changed supplement use?

We received hate mail for a long time! People were up in arms! However, this response came from a very small but vocal minority. Most of the NCAA schools overwhelmingly supported the legislation, since it saves them the expense and concern of handing out protein powders, creatine supplements, and such-like. Often, this activity only occurred to compete against other schools that were offering free supplements as an inducement to be part of their program. In many cases, the resources have now been freed up for more beneficial projects or activities. Since the initial fuss, the response has died to a whimper. We expected a lot more.

We haven't actually looked at the impact on supplement use by individual athletes, but we think it has reduced it. Most athletes don't have a lot of money, so it is less likely that they will go out and buy products for themselves, which was the argument beforehand. The policy has been implemented very easily.

To what degree do you think the 1994 DSHEA Act contributes to the problem of the doping risk arising from supplement use?

Well, I'm biased, but I think it's been a terrible act that has really compromised the health and welfare of all people, not only athletes. It's taken away all the regulation and made it a wide-open market place without any control. Many groups that have looked at supplements, including sports products, have found great discrepancies between contents and label information on products. The FDA [Food and Drug Administration] is hamstrung because they can't take action legally unless major problems occur. DSHEA is not going to be repealed; there's too much money and too much lobbying to prevent this from happening. My feeling is if some of these supplements have benefits, they need to be tested properly in scientific trials before people shell out money for their claimed effects. It's up to the supplement industry itself to police itself and come up with some form of certification that is legitimate. I think that would be a good short-term solution.