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Athletes and social drug use...

THE PARTY is OVER

By John Underwood, President and Founder, American Athletic Institute



Social drug use among athletes is prevalent and the problem is complex. Athletes may be more likely to abuse alcohol than their non-athlete counterparts and are more likely to suffer behavioral and psychosocial consequences as a result of their drug use. They are also more prone to heavy episodic drinking (HED) (five or more drinks).

For decades, the media have regularly reported incidents involving high level athletes and their use of alcohol and marijuana. Although some athletes have demonstrated that treatment and rehabilitation can be successful, too often, alcohol use among athletes ends in tragedy or with negative behavioral issues. Discussions centered around performance-debilitating effects of social drugs have been limited to

athletes who end up in legal trouble or injury or death. Little effort has been made to impact athlete choices concerning social drug use.

Unfortunately, the consequences of alcohol use begin today with younger athletes, particularly to athletes who eventually progress to abusing alcohol through chronic overuse or HED (five or more drinks at one sitting for men and women). Many junior coaches have had an unfortunate amount of experience with team cohesion and athletic relationships divided by alcohol use, resulting in less-than-optimal performance due to decreased interest and diminished team commitment. Others have had to deal with tragedies such as arrests, accidents and other alcohol-related injuries and deaths

Alcohol and athletes at a glance

Below is a recap of points made on the nature and magnitude of alcohol use among junior and elite athletes and how best to approach the problem.

- An increasing number of junior and elite athletes HED (binge drink), with fewer athletes reporting moderate intake. Female and male athletes drink at the same rates. HED

rates (five or more drinks) are nearly the same.

- Athletes drink alcohol as frequently and as intensely as non-athletes, with the difference between male athletes and non-athletes greater than that between female athletes and non-athletes. Athletes in contact sports report greater alcohol use. Athletes in team sports report greater use than individual sports.
- Drinking usually starts by middle or high school, most often by middle school.
- Drinking rates only continue in one direction, i.e., up and up and up.
- The physiological effects of alcohol are mostly related to intermittent use with regard to lost training effect and diminished athletic performance.
- Additional harm from alcohol use by athletes is behavioral, legal, academic, and social, all of which can lead to sport eligibility and participation problems. Therefore, education and prevention efforts should focus not only on the physiological negative impact, but also on the academic, behavioral, legal, social, and sports-participation consequences of alcohol use.



- Athletes who drink do not necessarily experience more legal or behavioral consequences than other students who drink, but athletes are often more visible, and their problems often lead to highly publicized consequences.
- Educational and preventive interventions should be initiated and led by student-athletes and be sport specific. Athletic directors and coaches should provide the proper environment, enforcement, and sanctions. Random or mandatory drug testing is probably not helpful, but deserves further study.
- Multiple educational approaches to address alcohol may be necessary for various athletes because no preferred approach exists.

Alcohol remains the most used and abused drug in America. Unfortunately, many of the users and abusers are high school students. According to American Athletic Institute (AAI) Surveys, 80+% of high school students in grades 9-12 indicate they have had at least one drink of alcohol during their lifetime. Results from the same survey indicate 52% reported having at least one drink in the last 30 days and 37% consumed five or more drinks in a row during the last 30 days.

Many national studies have reported that high school student-athletes drink alcohol at about the same rate as other high school students, while some studies report slightly higher use by student-athletes. The latest AAI survey indicates 58.5% of high school student-athletes in grade 12 drank during the past year.

There are many reasons why student-athletes choose not to drink alcohol. Among those reasons are the values taught by their parents, the positive influence of their coaches and teammates, the possible negative effects on athletic performance, and the possibilities of penalties/sanctions if they are caught.

More than any other group of adolescents, we have a compelling reason for athletes not to drink: health and performance. Alcohol, a metabolic poison has only negative effects on all physiological

parameters. This can be our initial rationale for non-use. The following are some of the additional benefits for student-athletes who choose not to drink alcohol:

- Academic or athletic performance will not be hampered.
- The risk of breaking school rules or the law is greatly reduced.
- Serious and life threatening problems related to being alcohol impaired such as drunk driving, sexual decision-making, injury, arrest and death are eliminated or reduced.
- There is no risk of becoming addicted to alcohol.
- The ability to develop appropriate life skills such as stress management, problem-solving, conflict resolution, interacting with others, and goal setting is enhanced.

Most young people would only be influenced by the first two benefits, as they are more tangible and more immediate. The latter three fall into the category of 'not me.'

Elite level sport and social drug use

The National Collegiate Athletic Association (NCAA) is, in reality, the development system for the United States and many other nations' elite post-high school athlete populations. Many of Canada's top junior athletes continue their education and athletic careers in the United States. The NCAA has documented the use of social drugs by athletes for more than a decade. Despite efforts to discourage use and abuse of these substances, these rates have remained constant and significant. It is quite apparent that elite athletes use these performance debilitating drugs (PDDs) with great frequency and at levels that certainly impair many physiological parameters and systems that contribute to optimal performance.

The AAI has conducted studies over the past decade on elite athlete populations with the purpose of formulating an educational strategy to deter such use. It is also interesting to note that less than 5% of high school athletes compete at the NCAA level. NCAA athletes are elite populations.

To understand the magnitude of elite athlete use and abuse of social drugs, the data is listed below:

ALCOHOL:

- 82.2% of athletes drink 3-5, 6-9, 10 OR MORE drinks when they drink.
- 84% of athletes drink 1-2X, 3-4X or 5X or > in a normal week.

of drinking occasions in typical week (7 days)

- None: 15.1%
- 1-2X: 69.4%
- 3-4X: 13.2%
- 5X >: 2.4%

of drinks usually one sitting

- 1-2 drinks: 17.8%
- 3-5 drinks: 38.9%
- 6-9 drinks: 29.8%
- 10 or more drinks: 13.5%
- 68.7% drink 3-5 or 6-9 drinks
- 82.2% total use with (- effect)

Competitive season vs. off-season and alcohol use

- I do not use during the competitive season: 18.0%
- Less use during the competitive season: 65.0%
- No difference between competitive or off-season: 15.9%
- More use during competitive season: 1.1%

Do you drink at the following times?

- Before practice: 1.2%
- After practice: 31.3%
- After competition: 66.4%

**Data from NCAA Substance Use Survey*

The second aspect of this problem is to examine the dynamics of these athlete populations by sport. Below are the use rates associated with NCAA athletes for men's and women's teams.

NCAA male athletes reporting ALCOHOL use:

Baseball:	83 .4
Basketball:	74 .1
Football:	76 .2
Tennis:	79 .1
Track and field:	68 .8
Fencing:	86 .6
Golf:	82 .8
Gymnastics:	83 .0
Ice hockey:	92 .8
Lacrosse:	89 .4

Rifle:	75 .0
Skiing:	95 .6
Soccer:	83 .9
Swimming:	84 .7
Water polo:	91 .9
Wrestling:	85 .4

NCAA female athletes reporting ALCOHOL use:

Basketball:	71 .5
Softball:	85 .3
Swimming:	88 .1
Tennis:	83 .9
Track and field:	71 .3
Fencing:	80 .0
Golf:	83 .7
Gymnastics:	77 .5
Ice hockey:	87 .2
Lacrosse:	93 .4
Skiing:	91 .3
Soccer:	86 .9
Volleyball:	77 .5
Field hockey:	88 .2

NCAA female athletes reporting MARIJUANA use:

Basketball:	21 .1
Softball:	28 .8
Swimming:	29 .7
Tennis:	20 .2
Track and field:	16 .4
Fencing:	10 .0
Field hockey:	37 .6
Golf:	20 .9
Gymnastics:	13 .5
Ice hockey:	28 .0
Lacrosse:	42 .4
Skiing:	60 .8
Soccer:	32 .4
Volleyball:	22 .4

NCAA male athletes reporting MARIJUANA use:

Baseball:	26 .9
Basketball:	23 .6
Football:	27 .3
Tennis:	27 .4
Track and field:	17 .3
Fencing:	35 .7
Golf:	26 .4
Gymnastics:	31 .9
Ice hockey:	28 .1
Lacrosse:	47 .9
Rifle:	45 .8
Skiing:	40 .9
Soccer:	32 .7
Swimming:	37 .8
Water polo:	57 .5
Wrestling:	30 .4

**NCAA Substance Use Survey*

The unfortunate societal influences which today's athletes face concerning the use and abuse of such substances such as alcohol and marijuana are stacked against not using.

Sport venues and sport spectacle have become the major advertising spotlight for the alcohol industry. Athlete use has been glamorized and is part of the culture within many programs. Sponsorships adorn stadiums and logos appear in tandem with the Olympic rings.

The age at which use commences is staggering. The first time use of alcohol (consumption of one entire alcoholic beverage) in the United States is now 11.9 years for boys and 13.1 years for girls. The age at which there is a pattern to such use is now 15.9 years. The average teen drinker today has five drinking episodes per month. What would lead anyone to believe that an athlete would be less likely to partake in such use. In fact, athletes use with greater frequency and at greater levels than their non-athlete counterparts. This begins between tenth and eleventh grade.

What can be done?

Certainly there have been physiological studies conducted in the past to examine the negative effects of alcohol on athletic performance and, thus far, there are no verifiable positive effects of alcohol use on high level physical performance. In fact, it is quite well documented that alcohol inhibits nearly every physiological system simultaneously. This information unfortunately has been gathered in inferior talent populations (e.g., graduate students or low-level athletes, under sub-maximal levels of exercise) that do not support application or acceptance in elite populations. Perhaps, this is the reason that our elite athletes have failed to take into consideration the magnitude of debilitating effects and the implications of sub-optimal performance. A second major area of concern has been sport governing bodies that tolerate not only the use of alcohol by athletes, but abuse. Perhaps sponsorship, subsidization, national investment and national pride should require a total commitment from athletes to be at their best all the time.

In interviews conducted on national team and Olympic team athletes, the AAI examined sub-par performances attributed to alcohol use prior to competition and found that the average loss in performance from seasonal median performance was 11.4%. When we consider the significance of even 1% in the outcomes to performance and competition at national or Olympic level, this is a problem for all of elite sport to face and confront.

I recently was asked to share our Pure Performance program with the Canadian Women's National Hockey Team. Realizing that personal decisions effect group outcomes, Mel Davidson, ChPC, had me present this information in Lake Placid, NY during the Four Nations Cup. I asked those athletes to think of how many games during their careers they have lost by one goal margins. I asked them what was the determining factor in those losses. I discussed with them, in detail, what has been referred to as the 1% factor. The 1% factor is not about training methods or strategies. It is simply the

“The problem of social drug use by athletes at any age or level of sport is unacceptable. It has gone unchecked and unfronted for far too long.”



most overlooked aspect of reaching the elite level in anything –LIFESTYLE. It is something we do not often measure or teach.

Are there elite athletes and Olympians that fail to live a life conducive to optimal performance? We can all think of some talented individuals who failed when it counted the most because their lifestyle came back to haunt them. Reminds me of one of our posters designed to challenge poor athlete lifestyle decisions: “The biggest reason for failure in life or in sport, is giving up what you want most, for what you want at the moment.”

The reaction was positive and this discussion led to an invitation for the same program to be shown to Ontario’s National Coaching Institute, during their recent tenth anniversary in Toronto. That reaction was also very positive, so this article will share the strategies we are using in the US to deal with a problem that has gone unchallenged in many programs for decades.

Chemical health standards

First chemical health standards for athlete behavior have been established concerning the use and abuse of social drugs. Consequence beliefs are a significant factor in young athletes or top athletes using or not using such substances. If no standards are set, discussed or agreed to you have already seen where it goes. We have written new chemical health standards for high school and NCAA student athletes in the form of Codes of Conduct which include the knowledge, understanding and agreement to these standards in order to retain membership in such programs. These standards have been shared with our National Federation of High School Athletics Association which has membership of more than eight million athletes, nationwide, and the NCAA. We have also had discussions with the United States Olympic Committee and professional sport including the NFL and NBA. These materials have also been shared with the Department of Justice and Department of Education as well as the United States Military – another population not at their best and reeling with related behavioral issues. It is no mystery that many top level athletes have serious issues with alcohol and marijuana.

Educate coaches, athlete parents, athletes, support personnel

It is hard to imagine that, while we have exhausted efforts to impact performance enhancing drug use, we have barely scratched the surface to impact performance debilitating drug use, which is rampant in many sports. We have developed an education-based, comprehensive prevention and intervention program. These programs have been tailored for all levels of sport including youth sport, predated use.

Identify athletes using and help them

A process to help identify those using these social drugs within teams as well as a process to help them was established based on the restorative justice model. This process includes educational, corrective and restorative measures in order to influence changes in lifestyle behaviors related to social drug use.

Research

- Pilot studies have been conducted on elite athletes and normative data gathered within elite training groups and teams, including national and Olympic teams, to begin to understand the basis for the magnitude of this problem in the athlete population.
- All related and pertinent scientific and medical research applying to optimal mental and physical performance, including brain science, sleep science, recovery and restorative science has been added to the educational program.
- Coaching education programs have adopted these programs as components and licensure.
- The junior athlete (middle school/ high school) program is called “The Life of an Athlete,” and the elite program for NCAA, National, Olympic, and professional athletes is titled “Pure Performance.”
- These programs have been widely endorsed by educational and governmental agencies and have been presented in some of the major sport institutes in Europe as well.
- The program has been shown at National Sport Federation annual meetings and national coaching clinics.

Research-based findings:

Proven scientific facts:

- Alcohol increases the time for recovery of androgenic training hormones (up to 96 hours-4 days)
- Alcohol’s diuretic effect diminishes water soluble vitamins required for hormone catalytic/conversion actions
- HGH (Human Growth Hormone) release is reduced up to 70% during the sleeping hours when release is at peak levels
- Alcohol greatly increases the release of Cortisol (the stress hormone). Cortisol negates training effect
- Alcohol decreases the protein synthesis for muscle fiber repair
- Alcohol can impair the blood glucose system for up to 36 hours
- Alcohol reduces the immune system capability – athletes who drink get sick more often.
- Drinkers are twice as likely to become injured as non-drinkers
- Alcohol reduces performance potential by up to 11.4% in elite athletes and perhaps by as much as 15-30% in junior athletes
- Alcohol voids the REM sleep time, reducing the CNS restorative/recovery ability
- Alcohol impairs reaction time up to 24 hours after consumption
- Alcohol negatively affects heart lungs and muscle performance (<VO₂ >Lactate < Ventilation >H.R.)
- Heavy episodic drinking results in projected losses of up to 14 days of training effect

Summary

Alcohol is a metabolic poison that crosses all barriers and affects all systems of the human physiology simultaneously

Time for change

The problem of social drug use by athletes at any age or level of sport is unacceptable. It has gone unchecked and unchallenged for far too long. It is time for leaders in sport federations, national governing bodies and clubs and teams, coaches and parents to challenge the culture that has negatively affected so many athletes for generations.

For more information on the nationwide initiative to deter social drug choice by athletes visit: americanathleticinstitute.org 