

## Statewide Interscholastic Testing Programs for Performance-Enhancing Drugs on the Decline: How We Got Here

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### Use of Steroid in High School

National surveys indicate that 1%-4% of high school students report use of anabolic steroids [1]. Steroids have a variety of benefits in regard to athletic improvement. They are used to increase muscle size and strength as well reduce body fat. Additionally, they provide quicker recovery between workouts which allows athletes quicker recovery after strenuous exercise. This quick recovery allows them to work out longer, harder, and more often [2]. Steroids come in two forms; injectable and oral. The most popular of the injectable types include Deca-Durabolin, Depo-Testosterone, and Equipoise while of the oral steroids; Andadrol, Dianabol and Winstrol are the most widely used by teenage athletes. Both injectable and oral steroids can have serious side effects. Some of these side effects include acne, swelling, development of sexual characteristics of the opposite gender, mood swings, aggressive behavior, increase in poor cholesterol levels, and stunted growth. Perhaps even more troubling is the fact that oral based steroids produce liver toxicity and can damage other internal organs [2]. Despite these severe side effects, teenage athletes have continued a steady progressive movement toward their use with the hope of improving their abilities. In 2006, New Jersey became the first state to mandate testing of performance-enhancing drugs (PED's) for high school athletes; soon after, Florida, Illinois, and Texas followed suit [3]. The impetus to test high school athletes may have been tied to highly publicized cases like the 2003 steroid-linked suicide of Taylor Hooten or the more recent discovery of the distribution of performance enhancing drugs to two high school seniors as a part of the Biogenesis scandal [4]. Additionally, in 1995 the U.S. Supreme court ruled that drug testing high school athletes was constitutional which paved the way for PED testing to commence. The leaders of participating high school associations use the findings of the aforementioned national survey along with their stated concern of fostering fair play and protecting the health of their youth to justify drug testing of athletes. Given the deactivation of the statewide PED testing program in Florida, and most recently in Texas, this paper looks to illuminate the issues that hamper effective interscholastic PED testing.

### High Cost of Drug Testing Programs, Few Positive Tests

Conducting a testing program in high schools for PED's can be relatively expensive, given that each drug test costs between \$100-\$200. The statewide programs in IL and NJ cost each of these states around \$100,000 annually to test ~ 600-650 athletes [1, 5]. The larger-scaled program in Texas, which was conducted for 8 years until it was recently disbanded, cost a total of \$10 million over that time period. In terms of positive tests, for the 2013-2014 school years, only two positive tests were registered in Texas out of 2,633 tested samples. Similarly, three

positive tests out of 495 tested samples were found in New Jersey. These rates of positive tests are well below the rates of PED use reported in empirical studies. The low rates of positive drug tests reported for all four statewide programs can likely be explained by structural deficiencies of the drug testing programs. Using the Texas testing program as an example, Don Hooten, President of the Taylor Hooton Foundation, laments the fact that the state only tested for a limited number of drugs. He points out that an athlete could easily find a drug that is not tested for and use it. Additionally, according to Dr. Don Catlin, who founded the UCLA Olympic Analytical Laboratory in 1982, the tests in these high school testing programs are not unannounced; instead "the kids know when the testing is going to be done"[4]. Similarly, in New Jersey, only those athletes competing in state championship competition are subject to PED testing [1]. Therefore, those athletes competing in state competitions know when and where testing will occur and those not competing in state championships know they will not be tested at all. This seems to add validity to the argument and that random, "out of competition" testing should be performed as well. Moreover, in terms of sample collection, none of the statewide programs have been able to secure the rights such that third party administrators can be present during the "voiding process" which makes it much easier for an athlete to provide an exogenous sample. An overarching problem that all statewide high school drug testing programs possess is that the high school associations often play an active role at multiple stages of the testing process. Members of high school associations often take on roles like deciding who is tested and where and when those athletes are tested, as well as roles during notification of positive test results, assessment of penalties, and decisions on appeals. In order to improve the credibility of the high school drug testing programs for all stakeholders, it is recommended that as many phases of the testing program as possible be put under the direct control of third party administrators. Frank Shorter, the 1972 Olympic marathon champion and current advocate for clean sport, argued at the Chicago Humanities Festival in 2010 that it is an inherent conflict of interest for governing bodies of sport to both "promote and police" their sport. Instead, independence between drug testing organizations and sport governing bodies was a guiding principle when the United States Anti-Doping Agency commenced operationally in 2000 [6-11].

### What Does Research Tell Us About the Effectiveness of Testing for Performance Enhancing Drugs in American High Schools?

Officials in high school leagues commonly believe that drug testing athletes is a deterrent. In 2009 [7], Bob Baly, Assistant Director of NJSIAA stated that the goal of its athlete drug testing program was "to

prevent them from using.” There is some evidence to support the idea that a drug testing program can be a deterrent to use of performance enhancing drugs. A survey of high school athletes (n=252) in Southern California conducted by Green [8] found that 60% of high school athletes felt that drug testing reduces anabolic steroid use. Additionally, 62% of respondents felt that drug testing would catch people who are using anabolic steroids. Moreover, 65% of the high school athletes indicated that drug testing made them want to avoid anabolic steroid use. In contrast though, Goldberg et al. [7], in probably the best study done to date on the topic, used a prospective, randomly controlled trial to examine the potential deterrent effects of drug testing on high school athletes. Although some deterrent effects were reported as a result of drug testing, there were no effects on past substance abuse and some substance abuse mediators actually worsened. Therefore, as the authors noted, it is unclear if drug testing athletes is an effective deterrent and thus more research into its validity is needed.

## Conclusion

Despite pockets of public outcry for comprehensive steroid testing in the United States, testing programs are scattered at best. Many issues hamper effective interscholastic testing nationally. Despite the best intentions, the current statewide interscholastic PED testing programs have a variety of issues. To begin with, conducting a testing program in high schools for PEDs can be relatively expensive. This expense is coupled with the fact that the rates of positive tests are well below the rates of PED use reported in empirical studies. The low rates of positive drug tests reported for statewide programs can likely be explained in part by examining structural deficiencies of the drug testing programs. These structural deficiencies include testing for the wrong or limited numbers of drugs, not conducting unannounced random tests, not testing out of competition, and sample collection procedures that are not consistent with best practices. Moreover, an overarching issue is that state high school association personnel play active roles in the drug testing process instead of allowing independent contractors to fulfill those roles. Don Hooten, whose son Taylor’s suicide in 2003 was the impetus for much of the current testing movement, has been one of the primary advocates for testing over the last decade. Recently, even he has come to the conclusion that the current form of interscholastic

PED testing is not effective and that even advanced testing methods will struggle to keep up with a savvy, motivated athlete. As evidenced through the long lineage of PED usage in sport, athletes seeking an edge through some sort of artificial means will most likely always be prominent. This prominence will most likely be popular with all levels of competitive sport including professional, intercollegiate, and interscholastic. It is up to society as to what they are willing to accept and more importantly pay in regards to safeguarding fair play through testing. An alternative approach, now endorsed by Hooten, focuses on education as a more legitimate way to stem interscholastic PED use. He ascertains that a new, concerted effort should be made to create a comprehensive drug education program to reach high school student athletes [4].

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