STUDIES ON THE EFFECTIVENESS OF STUDENT RANDOM DRUG TESTING

Recent studies indicate that random drug testing of students is an effective means to deter student drug use.

Over the past decade there has been a decline in teen substance use but the prevalence of illicit drug use among young people remains high and is a cause of great concern. Recent national studies show that 47 percent of students report having used illicit drugs and 72 percent report having drunk alcohol before leaving high school. The many negative consequences associated with substance use in young people are physical and mental health problems (including fatal overdoses), low academic outcomes, delinquency, and risky sexual behaviors. Many school districts have adopted random drug testing of students as a means of deterring and detecting drug and alcohol use. [FN1]

How common is random drug testing of students?

A study published in the American Journal of Public Health showed how common random drug testing was in school districts as of 2005. The study collected data in the spring of 2005 from "1343 drug prevention coordinators in a nationally representative sample of school districts with schools that have high schools. Of these districts, 14% conducted random drug testing. Almost all districts randomly tested athletes, and 65% randomly tested other students engaged in extracurricular activities; 28% randomly tested all students, exceeding the current sanction of the US Supreme Court." [FN2]

How effective is random drug testing of students?

There are several studies demonstrating the effectiveness of student drug-testing programs in decreasing and deterring student drug use. The most interesting and conclusive studies are those containing data of student drug use prior to implementation of a drug-testing program and thereafter.

The leading studies on student random drug testing are presented here in summary form. The full texts of the studies are in the Exhibits. The studies are presented in chronological order.

1. Saturn and Related Studies - Oregon Health Sciences University, Portland, Oregon - 1999 to 2007.

2. Hunterdon Central Regional High School Study - 1999

3. Mckinney Studies of Indiana High Schools - 2001, 2003, 2004, 2005

4. Institute for Behavior and Health (IBH) Study for the U.S. Department of Education - 2002

5. The University of Michigan Study - 2003

6. National Center for Education Evaluation study on federally funded programs "The Effectiveness of Mandatory- Random Student Drug Testing." - 2010

SATURN AND RELATED STUDIES - OREGON HEALTH SCIENCES UNIVERSITY, PORTLAND, OREGON

1999: Acceptability and potential deterrent effects of drug testing .

The study assessed the use of alcohol and other drugs in male and female athletes. The results included lifetime use of alcohol (76.2% male, 65.3% female), marijuana (29.4% male, 14.8% female) and amphetamines (8.4% male, 7.8% female). Also surveyed by confidential questionnaire, 1299 were students from 28 high schools to determine potential deterrent effects and acceptability of drug testing. Of those surveyed, only a small minority (<9%) said they would use drugs and just 12% claimed they would continue to use alcohol if random drug testing were school policy. Importantly, drug testing received broad support. This preliminary data suggests high acceptability and potential benefit by such programs. [FN3]

1999-2000

A pilot study of two public high schools comparing a school with a student random drug testing program to a school without a student random drug-testing program.

Structure of study: Student athletes at Wahtonka high school were subject to random drug testing, while student athletes at Warrenton high school were not subject to random drug testing; approximately 276 student athletes participated (drug tested=135, not drug tested=141).

Preliminary findings reported:

1. Wahtonka (with testing program) reported a drug-use rate one-quarter that of Warrenton;

2. 5.3% of Wahtonka students (with testing program) said they were using illegal drugs as compared to 19.4% of Warrenton students and Wahtonka student athletes (subject to drug testing) were less than one-third as likely to use performance-enhancing substances as athletes at Warrenton.

3. The school that drug-tested student athletes had a rate of illicit drug use that was about one-fourth that of the control school (a 75% difference). The authors concluded that "A policy of random drug testing surveillance appears to have significantly reduced recent drug use among adolescent athletes." [FN4]

2000-01: Student Athlete Testing Using Random Notification Study (SATURN Study)

A report on the preliminary results of a three-year pilot study begun in the 2000-01 school year. Reported by its coordinator, Linn Goldberg, MD, FACSM of the Oregon Health Sciences

University during the US Department of Education Office of Safe and Drug Free Schools Annual Conference in October 2003. [FN5] The SATURN Study was conducted with support from NIH and NIDA.

Structure of the study: 13 schools participating; 7 conduct random testing of athletes at a 50% random test rate; 5 of the 7 schools conduct testing during the entire school year, 2 schools random test during the athletic season only; student surveys have been conducted for two years; 6 schools do not randomly drug test athletes.

Preliminary findings:

1. There were no decreases in sport-activity participation by students when subjected to a random drug-testing program, in fact, *an 11% increase in participation was found.*

2. A 50% random test rate appears to be an adequate level to deter drug use, since students believed that there was a strong likelihood they would be tested.

3. Heavier alcohol users may decrease their use when subject to random drug testing.

4. Heavier marijuana users may be deterred when subject to testing.

5. Drug testing appears to deter frequent drug users rather than the "experimenters."

2007 - Outcomes of a Prospective Trial of Student-Athlete Drug Testing: The Student Athlete Testing Using Random Notification (SATURN) Study

In a two year prospective randomized controlled study of a single cohort among five intervention high schools with a student drug testing (SDT) policy and six schools with a deferred policy, assessed using voluntary, confidential questionnaires, there were mixed results but still overall a reduction in student drug use. Student athletes were at risk for random testing during the full academic year. Positive test results were reported to parents or guardians, with mandatory counseling. Indices of illicit drug use, with and without alcohol use, were assessed at the beginning and end of each school year for the past month and prior year. [FN6]

The study found that student-athletes from intervention and control schools did not differ in past 1- month use of illicit drug or a combination of drug and alcohol use at any of the four follow-up periods. At the end of the initial school year and after two full school years, student-athletes at SDT schools reported less drug use during the past year ($p < .01$) compared to athletes at the deferred policy schools. Combining past year drug and alcohol use together, student-athletes at SDT schools reported less use at the second and third follow-up assessments ($p < .05$). Paradoxically. SDT athletes across all assessments reported less athletic competence ($p < .001$), less belief authorities were opposed to drug use ($p < .01$), and indicated greater

risk-taking ($p < .05$). At the final assessment, SDT athletes believed less in testing benefits ($p < .05$) and less that testing was a reason not to use drugs ($p < .01$).

Although no deterrent effects were evident for past month use during any of four follow-up periods, prior-year drug use was reduced in two of four follow-up self-reports, and a combination of drug and alcohol use was reduced at two assessments as well. Overall, drug testing was accompanied by an increase in some risk factors for future substance use. They concluded that that more research is needed before SDT is considered an effective deterrent for school-based athletes.

HUNTERDON CENTRAL REGIONAL HIGH SCHOOL STUDY

The results of random drug testing of athletes at Hunterdon Central Regional High School in Flemington, NJ. showed that after two years of testing they experienced a decline in 20 of 28 categories of drug use in the whole student population. Prior to implementing random drug testing in 1997, the school conducted a survey of student drug use. The survey, created by the Rocky Mountain Behavioral Sciences Institute, took students about 35 minutes to complete and covered their history of drug and alcohol use and the frequency and intensity of their current substance use. The survey has built in controls to detect erroneous or exaggerated responses with approximately 40 different consistency checks. [FN7]

The survey, developed under a National Institute on Drug Abuse (NIDA) grant, has been administered to more than 1.5 million students nationally since 1990. The survey asks students about their drug and alcohol use history and the frequency and intensity of their current drug and alcohol use. The survey obtains information on what students say they are doing, what drugs they have tried, what they are using now and how heavily they are involved with drugs.

After conducting the 1997 survey, Hunterdon Central implemented mandatory random drug testing for all student athletes. Approximately half of the student body participated in athletics. Prior to implementing random testing, the school had in place a student counseling and education program and conducted drug searches. In 1999, the survey was conducted again. There had been no changes in the school anti-drug program except the introduction of random testing.

The 1999 survey showed that of the 28 categories of drug use evaluated by the survey, drug use went down in 20 categories. For example, in the highest risk drug use category of "Multi-Drug Users" the rates went down as follows:

9th grade - 57% decrease
10th grade - 100% decrease
11th grade - 14% decrease
12th grade - 52% decrease

The data from the surveys follows:

Patterns of Drug Use Among 9th Graders	**1996-97**	**1999-2000**	**Increase/Decrease**
LEVEL ONE (High Risk)			
Multi-Drug Users	1.4%	0.6%	**Decrease**
Stimulant Users	0.0%	0.0%	Same
Heavy Marijuana Users	0.0%	0.0%	Same

LEVEL TWO (Moderate risk)			
Occasional Drug Users	14.7%	4.7%	**Decrease**
Light Marijuana Users	5.6%	2.4%	**Decrease**
LEVEL THREE (Low-Risk)			
Tried A Drug (no current use)	10/5%	7.6%	**Decrease**
Negligible or No Use	50.3%	71.7%	**Decrease**

Patterns of Drug Use Among 10th Graders

LEVEL ONE (High Risk)			
Multi-drug Users	2.8%	0.0%	**Decrease**
Stimulant Users	4.3%	0.9%	**Decrease**
Heavy Marijuana Users	0.0%	0.0%	Same
LEVEL TWO (Moderate Risk)			
Occasional Drug Users	7.1%	5.2%	**Decrease**
Light Marijuana Users	12.1%	9.5%	**Decrease**
LEVEL THREE (Low Risk)			
Tried A Drug (no current use)	12.8%	12.1%	**Decrease**
Negligible or No Use	41.8%	47.3%	**Decrease**

Patterns of Drug Use Among 11th Graders

LEVEL ONE (High Risk)			
Multi-drug Users	5.1%	4.4%	**Decrease**
Stimulant Users	0.0%	0.7%	Increase
Heavy Marijuana Users	0.7%	0.0%	**Decrease**
LEVEL TWO (Moderate Risk)			
Occasional Drug Users	4.4.%	3.7%	**Decrease**
Light Marijuana Users	12.4%	13.2%	Increase
LEVEL THREE (Low Risk)			
Tried A Drug (no current use)	13.9%	11.0%	**Decrease**
Negligible or No Use	40.1%	37.6%	Increase

Patterns of Drug Use Among 12th Graders

LEVEL ONE (High Risk)			
Multi-drug Users	6.6%	3.2%	**Decrease**
Stimulant Users	0.0%	0.0%	Same
Heavy Marijuana Users	3.8%	2.1%	**Decrease**
LEVEL TWO (Moderate Risk)			
Occasional Drug Users	7.5%	3.2%	**Decrease**
Light Marijuana Users	14.2%	13.7%	**Decrease**
LEVEL THREE (Low Risk)			
Tried A Drug (no current use)	4.7%	12.6%	Increase
Negligible or No Use	30.2%	33.6%	**Decrease**

THE McKINNEY STUDIES OF INDIANA HIGH SCHOOLS - 2001, 2003, 2004, 2005

This series of studies was done by Joseph R. McKinney, J.D., Ed.D. Chair and Professor Department of Educational Leadership, Ball State University, Muncie, IN

The Effectiveness and Legality of Random Drug-Testing Policies, 2001

The 2001 study surveyed seventy-one high school principals, whose schools had conducted random drug testing. The principals were asked to compare drug and alcohol activity during the 1999-2000 school year when drug testing policies were in effect with the 2000-01 school year when schools were not allowed to continue with their random drug testing policies. The reason for the hiatus is that a court in Indiana had ruled that such policies were unconstitutional, a ruling ultimately reversed by that state's highest court. [FN8]

The principals were asked to compare drug and alcohol activity during the 1999-2000 school year when drug-testing policies were in effect with the 2000-2001 school year when schools were not allowed to continue with their random drug-testing policies.

Overview of results:

1. - 85% of the high school principals reported an increase in either drug usage or alcohol usage among their students after the drug-testing program was stopped, compared to the 1999-00 school year (when they had a drug-testing plan implemented).

2. - 80% reported an increase in illicit drug usage during the 2000-01 school year compared to the previous year.

3. - 59% reported an increase in alcohol usage during the 2000-01 school year compared to the previous year.

4. - 78% of the principals reported that there was an increase (compared to the 1999-00 year) in the number of students who came forward and told them that drug and alcohol usage was on the rise since the drug-testing program was stopped.

5. Principals reported a statistically significant number of more students suspended or expelled for drug or alcohol related incidents during the 2000-2001 year than the previous year (with SDT).

7. - 89% of the principals believe that the drug-testing program undermines the effects of peer pressure by providing a legitimate reason to refuse to use illegal drugs and alcohol.

8. - 97% of the principals said their community supported the drug-testing program.

After reviewing the collected statistics, the author of the McKinney Study concluded that

> [r]andom drug testing policies appear to provide a strong tool for schools to use in the battle to reduce alcohol and drug usage among teens .... While the legal debate will

continue over drug testing in schools, this study does show that random drug testing policies are effective in reducing the temptation to use drugs and alcohol. [McKinney Study, *supra,* at 4.]

The Effectiveness of Random Drug Testing Programs: A Statewide Follow-up Study, 2003

This study was a follow-up to the 2002 study. Its purpose was to determine how many schools in Indiana re-implemented random drug-testing programs after suspending those programs in the late summer of 2000. It also investigated the effectiveness of the re-implemented drug-testing programs as compared to the previous school year when random drug testing was suspended. [FN9]

Overview of results:

1. - 94% of principals reported believing that the random drug-testing policy discourages drug and alcohol use among students.

2. - 88% (52) of high school principals responding to the survey reported re-implementation of random drug-testing at their schools.

3. - 73% of the principals reported a decrease in drug usage (compared to the period without a random drug-testing program) among students who are subject to the drug-testing policy.

4. - 25% of principals reported that drug use "remained the same" and 2% (1) reported an increase in drug usage.

5. - 51% of the high school principals reported a decrease in alcohol usage (compared to the period without a random drug-testing program) among students at their school who are subject to the random drug-testing policy.

6. - 45% of principals reported that alcohol use "remained the same" and 4% reported an increase in the use of alcohol.

7. - 26% of principals reported that their drug-testing program did not test for alcohol. Most of these principals responded to the alcohol use question with "remained the same".

8. - 40% of principals responding to the survey reported that fewer students had been suspended from participation in athletic programs for drug use since re-implementation of the random drug-testing program.

Study of High Schools with SDT Programs, 2004

Summary of results: [FN10]

1. - 80% (42/52) of high schools with SDT programs in 2002-03, scored higher than the State average on the State mandated graduation test (grades 10-12).

2. A statistically significant number of High Schools (37/52 - 71%) with SDT programs in 2002-03 had graduation rates higher than the State average test.

3. SDT provides positive effects for students not involved in drug use.

4. The number of expulsions and suspensions due to drugs, alcohol and weapons for SDT high schools showed a 30% reduction. Dr. McKinney also reviewed and summarized Columbus, Indiana survey data on students at two high schools in that community. The high schools have surveyed students regarding alcohol, tobacco and drug use every 2 years since 1995. Evaluation of the SDT programs began in 1999. The Indiana Prevention Resource Center (IPRC) coordinates the student self-reporting questionnaire (ATOD).

Key findings: Comparing 2001 to 2003

1. Participation in athletics, clubs, intra-murals, art programs extracurricular activities: There was no significant difference in the number of students participating in athletics and extracurricular activities when a high school had SDT program compared to no SDT program. In fact, direction was toward increased participation in all grades in 2003.

2. In the past month, students in all four grades (9-12) reported that the frequency of serious arguments involving shouting were significantly down. In the frequency of physical fights, grades 10 and 12 reported fights significantly down.

3. - 90.5% of students stated that they thought SDT is effective in deterring substance abuse.

The Effectiveness of Random Drug Testing Programs 2005

As a follow-up to previous surveys of 65 Indiana high schools with random student-drug testing programs (RSDT), those same high schools were again surveyed in 2005 about the effectiveness of RSDT programs. Information on the costs of such programs was incorporated into the most recent survey, along with questions regarding athletic and extra-curricular participation levels. [FN11]

Summary of results:

1. The majority of respondents reported student drug use decreased with a random testing program.

2. One-half of principals reported increases in activity/athletic program participation.

3. No school experienced reductions in student participation in activities.

4. - 91% of high schools reported a per-test cost of $30.00 or less

5. Schools with random drug-testing programs exceeded the state average for test scores on a state-mandated graduation test as well as exceeding the state average for graduation rates.

INSTITUTE FOR BEHAVIOR AND HEALTH (IBH) STUDY FOR THE U.S. DEPARTMENT OF EDUCATION - 2002

Funded by the United States Department of Education, researchers from the Institute for Behavior and Health surveyed nine geographically diverse schools that had student drug testing programs during the 2001-02 school year. They surveyed 7 public schools and 2 private schools from suburban, rural and urban locations in several states. The programs included random testing and were in existence for an average of 3-4 years. The surveys looked at the program's policies, procedures, history and results. The goal of the study was to capture the initial experiences of these schools to produce a picture of current SDT practices and to identify problems as well as successes. The study findings are presented in two forms. In the Results section, the data from gives a collective picture. In the Appendix of the report, a detailed description of each of the 9 school programs is provided. The programs varied somewhat in the categories of students tested (ranging from athletes only to all extracurricular activities plus student drivers to all students). The consequences of positive tests also varied with only the private schools expelling students after a second positive test. Private schools are not subject to state or federal constitutional considerations and may test all students. [FN12]

Another variation was in the substances that were routinely tested for. Most included the 5 drugs that are the standard core of drug testing (marijuana, cocaine, amphetamine/methamphetamine, opiates and PCP), but there was considerable variation in how many other substances were included. Linked to the variation in substances tested for was the costs. What is most striking in the study's findings are the common elements identified by the programs, to include:

1. All of the student drug testing programs were based upon the purpose of prevention and treatment rather than punishment.

2. In every school surveyed, the program was just one part of a larger, comprehensive initiative to keep students safe from drugs.

3. Formal written policies were established and publicized.

4. Procedures were implemented to prevent fraud, ensure accuracy, and protect the confidentiality of test results.

5. None of the schools reported students with positive drug tests to the police. Instead, counseling and treatment were promoted.

6. The programs' successes were indicated by a reduced number of positive tests, lowered levels of disciplinary problems and, in some cases, self-report survey data.

Despite some schools' concerns about, or direct experience with, legal challenges and objections from particular groups within the community, the programs persisted and appear to have won increasing support from the Community. The lessons learned and advice to other schools strongly emphasize the importance of involving the various stakeholders in the planning process and making sure they understand that the program is intended to help students say no to

drugs.

All the schools retained the programs because drug use was reduced along with the behaviors and problems associated with student drug use. The study also provides information on the costs of drug testing for schools.

The schools assessed effectiveness through a variety of methods, including tracking students who previously had tested positive for drug use, anecdotal evidence, measurable decreases in discipline problems, and student surveys. The study reports that "all of the school officials surveyed strongly supported their entire [student drug testing] programs and all were convinced that their [student drug testing] programs benefitted their entire school communities, including the students."

THE MICHIGAN STUDY

A controversial study was done by University of Michigan researchers correlating student drug use and random-testing programs in schools. The study has been widely criticized by researchers and others. This study did not determine the effectiveness of student random testing programs. It only looked at schools that had drug testing polices and those that did not and did not look specifically at random testing. [FN13]

The study suggests "that drug testing in schools may not provide a panacea for reducing student drug use that some ... had hoped." In the study researchers found that "drug testing (of any kind) was not a significant predictor of student marijuana use in the past 12 months. Neither was drug testing for cause or suspicion." *Id.* at 163. However, the New Jersey Supreme Court states that the Michigan Study has limitations.

> [The Michigan Study] does not differentiate between schools that do intensive, regular random screening and those that test only occasionally. As a result, it does not rule out the possibility that the most vigilant schools do a better job of curbing drug use. Joye v. Hunterdon Cent. Regional High School Bd. of Educ., 826 A.2d 624, 647 (NJ 2003)

NATIONAL CENTER FOR EDUCATION EVALUATION STUDY ON FEDERALLY FUNDED PROGRAMS "THE EFFECTIVENESS OF MANDATORY- RANDOM STUDENT DRUG TESTING." - 2010

This is a recent and very comprehensive study funded by the U.S. Department of Education's (DOE) Institute of Education Sciences (IES) to conduct an experimental evaluation of the student random drug testing programs in 36 high schools within seven districts that received DOE grants for student drug testing in 2006. This report describes the implementation of the programs and their impacts on students concentrating on student-reported substance use but also examining other outcomes. [FN14]

All the school districts were "required to follow a basic set of testing procedures, including administering tests to a minimum of 50 percent of eligible students; testing for a minimum of five substances (marijuana, amphetamines, cocaine, methamphetamines, and opiates); and establishing procedures to maintain the confidentiality of test results. However, within these basic requirements, individual districts determine the following four criteria: (1) the list of competitive extracurricular activities that will be covered by their drug testing policies, (2) the frequency of testing and proportion of eligible (covered) students to be tested during each testing event, (3) any additional substances for which testing will be conducted beyond those required by the grant, and (4) the period of the school year during which eligible students may be subject to testing."

Key findings

1. The students who are subject to random testing reported less use of alcohol, tobacco, and other illicit substances than comparable students in high schools without random testing.

16% of students subject to random drug testing reported using substances covered by their district's random drug testing policy in the past 30 days, compared with 22 % of comparable students in schools without random drug testing (28% difference). Similar patterns were observed on other student-reported substance use measures, but those differences were not statistically significant.

2. Students who are subject to random drug testing were no more less likely to report that they will use illicit substances in the future than comparable students in high schools without random drug testing.

34% of students subject to random drug testing reported that they "definitely will" or "probably will" use substances in the next 12 months, compared with 33 percent of comparable students in schools without random drug testing. The issue here is will it be when school is in session or on vacations? The purpose of testing is to deter drug use while school is in session.

3. Students who are subject to random drug testing report no different perceptions of the consequences of substance use than comparable students in high schools without random drug testing. On two measures of students' perceptions of the positive and negative consequences of using substances, students subject to random drug testing did not report having different perceptions of the consequences of substance use relative to comparable students in high schools without random drug

testing. The lack of statistically significant impacts on students' perceived consequences of substance use in this study differs from prior research suggesting that random drug testing may have unintended negative consequences on these outcomes (Goldberg et al. 2003, 2007).

4. Students in high schools with random drug testing do not have different participation rates in extracurricular activities than comparable students in high schools without random drug testing.

53% of students in treatment schools reported participating in an activity covered by random drug testing, relative to 54 percent of comparable students in high schools without random drug testing.

The study's key findings indicate that:

1. Consistent with the goals of the program, students subject to random drug testing reported less substance use than comparable students in high schools without random drug testing. A similar, though not statistically significant, pattern was observed on other student-reported substance use measures.

2. The random drug testing program had no "spillover effects" on the substance use reported by students who were not subject to testing and had no effect on any group of students' reported intentions to use substances in the future.

3. Contrary to concerns raised about the possible unintentional negative consequences of random drug testing, the random drug testing program had no effect on the proportion of students attitudes toward school or activities and perceived consequences of substance use.

4. It is sometimes claimed that testing programs deter students from participation in co-curricular activities. This study indicates that random drug testing had no effect on the participation rates by students in activities that subjected them to drug testing.

Some have been critical of this study because there was no spillover effect on students who were not subject to random drug testing in schools with testing programs. However, this study was only for only one year of implementation which may be too soon to have this effect.

There was some evidence that impacts of the random drug testing program were related to the ways in which the programs were implemented. Both testing for a larger number of substances and testing for alcohol and tobacco were significantly correlated with lower substance use in the treatment schools relative to the control schools. However, it was not possible to distinguish between these two factors due to the fact that districts that tested for a larger number of substances were also those districts that tested for alcohol or tobacco. Impacts were not significantly related to other implementation characteristics examined.

STUDENT ATTITUDES

Students report that drug testing gives them a reason to say "no" to drugs and still be "cool" with the other students. In a Seventeen Magazine poll, 54 percent of the young people said they would take a drug test "no problem." [FN15] A USA/TODAY poll showed that 70% of adults support testing of students in athletics and co-curricular activities. [FN16] We want students to make choices such as "do I smoke a joint or do I stay on the football team?" Our experience is that students choose the co-curricular activity over the drug.

CONCLUSION

The overwhelming weight of studies demonstrate that student random drug testing is effective to a major or minor degree and that random testing does not deter students from co-curricular activities. One study showed that it actually increased participation.

While drug testing may not be able to deter drug use on school vacations, its purpose is to protect students while they are in school.

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[FN2] Chris Ringwalt, DrPH, et al. Random Drug Testing in US Public School Districts, Am J Public Health. 2008 May; 98(5): 826–828

[FN3] Results of the survey were presented to the American College of Sports Medicine (ACSM) 1999 in Seattle. Research conducted by L. Goldberg, MD, FACSM; D. Elliot, MD, FACSM, E. Moe; K. Kuchl; G. Clarke. See, "Acceptability and Potential Deterrence Effects of Drug Testing," Medicine and Science in Sports and Exercise, 1999:31(5)S123

[FN4] Lynn Goldberg, Diane Elliot, David P. MacKinnon, Esther Moe, Kerry S. Kuehl, Liva Nohre & Chondra M. Lockwood, *Drug Testing Athletes to Prevent Substance Abuse: Background and Pilot Study Results of the SATURN (Student Athlete Testing Using Random Notification) Study,* Journal of Adolescent Health, 32(1)16-25 (Jan.2003). See page 24. In response to the SATURN study, questions were raised about the participation of children in research but the allegations in no way disputed the data collected or the conclusions drawn regarding the effectiveness of the random drug testing program but instead were directed at issues regarding if the consent form had complete descriptions of elements such as randomization, parental notification if a drug test was positive and the longitudinal nature of the study. The critics suggested that other study designs could be developed, though they might be less efficient and provide somewhat less secure conclusions.

[FN5] www.studentdrugtesting.org

[FN6] Lynn Goldberg, Diane Elliot, et. al. Outcomes of a Prospective Trial of Student-Athlete Drug Testing: The Student Athlete Testing Using Random Notification (SATURN) Study; J. Adol. Health 41 (2007) 421-429

[FN7] This study was conducted by David G. Evans, Esq., in his capacity as Executive Director of the Drug Free Schools Coalition. It utilized the data from the American Drug and Alcohol Survey that was conducted at Hunterdon Central Regional High School.

The American Drug and Alcohol Survey is available from RMBSI, Inc., 419 Canyon, Suite 316, Fort Collins, CO 80521, telephone 800-447-6354

The American Drug and Alcohol Survey was published in the Journal of Consulting and Clinical Psychology (1990). The survey has been used in peer-reviewed studies (Oetting 1990) and by schools across the country. It uses multi-item scales to measure drug involvement and has Chronbach Alpha reliabilities on these scales which range from .72 to .97 across five major ethnic groups.

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[FN12] Robert L. DuPont, Teresa G. Campbell & Jacqueline J. Mazza, *Report of a Preliminary Study: Elements of a Successful School-Based Student Drug Testing Program,* July 22, 2002, pages 14-18

[FN13] Ryoko Yamaguchi, Lloyd D. Johnston & Patrick M. O'Malley, *Relationship Between Student Illicit Drug Use and School Drug-Testing Policies,* Journal of School Health, 73 (4), 159-164 (Apr.2003) (Michigan Study)

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Order online at www.edpubs.gov.

[FN15] "Drug Testing: Coming to a School Near You?" Seventeen Magazine, September, 2002, pages 158, 160

[FN16] "High Court OK Vouchers, Drug Testing for Students" USA TODAY, June 28-30, 2002 front page

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