

DRUG FREE SPORT® MISSION

The National Center for Drug Free Sport is a team of accessible, world-class experts in partnership with leading sport organizations around the world providing unbiased and customized drug-testing programs and other drug prevention initiatives to ensure fair and safe sport.

DRUG FREE SPORT® VISION

To be the premier provider of customized drug testing and prevention programs for athletes and sport organizations worldwide through innovation, technology, quality, and exceptional staff.

UPCOMING EVENTS

If we will be in your area, please contact us to schedule an educational session or visit!

Harris Stowe State University Education Session: Marijuana
St. Louis, MO
March 21

SCAN Symposium
Portland, OR
April 7-10

NAIA National Convention
Kansas City, MO
April 15-19

PAC-12 Student-Athlete Health Conference 2016
Las Vegas, NV
April 28-30

Big Ten Sports Medicine Meeting
Rosemont, IL
May 3-4

Big 12 Medical Aspects of Sports Committee Meeting
Fort Worth, TX
May 6-7

The Alliance for Intercollegiate Sports Medicine
Clearwater, FL
May 9-11

CPSDA Conference
Kansas City, MO
May 11-14

Sport Exchange Summit 2016
Kansas City, MO
July 12-13

The National Center for Drug Free Sport, Inc®
For INSIGHT questions, comments, or to be added to our mailing list, please contact:
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Drug Free Sport® News

Don't miss Sport Exchange Summit 2016!

July 12-13 in Kansas City

Be a part of the first biennial conference that brings together thought leaders from all aspects of sports business, focusing on those that are "the team behind the team". Sport Exchange Summit 2016 aims to bring together certified athletic trainers, coaches, sport dietitians, sport psychologists, team physicians, administrators, agents, and other personnel to exchange ideas, share best practices, examine trends, and learn about cutting edge developments in sport.

Program Highlights:

Effective Player Development and Engagement presented by Marcus Sedberry
Drug Testing Efficacy from College to the Pros (Expert Panel Discussion)
Marijuana & Legalization presented by Ben Cort and LaTisha Bader, PhD, CC-AASP
Prescription Drug Abuse in Sport presented by Larry Westreich, MD
Professional Issues in Sport Psychology presented by Chris Carr, PhD, CC-AASP
Sports Nutrition for Performance presented by Dave Ellis, RD, CSCS
Supplement Certification Programs and Safety (Expert Panel Discussion)

BOC Certified Athletic Trainers may receive up to 10 Category A CEUs.



Drug Free Sport, Inc. is recognized by the Board of Certification, Inc. to offer continuing education for Certified Athletic Trainers.

For more event details, speaker bios, and the complete program-at-a-glance, please visit www.sportexchangesummit.com.

Collector Spotlight

Bruce Toliver, CEO
Collection Company: Infinity Medical Services (Phoenix, AZ)



A former college and NFL athletic trainer, Bruce began as an independent contractor for Drug Free Sport in 1999 when he performed NCAA and institutional urine collections. As Drug Free Sport continued to grow, Bruce established *Infinity Medical Services* in 2008. *Infinity Medical* quickly went from servicing the Phoenix area to expanding into San Antonio, West Texas, Southern California and Las Vegas. *Infinity Medical* now has 23 certified crew chiefs with approximately 40-45 crew members and services additional areas such as Hawaii, New Mexico and Oregon. Bruce acknowledges that he started working with Drug Free Sport because he supported the company's mission.

"I truly felt I knew what [Frank Uryasz] was trying to accomplish in sport when he started Drug Free Sport."

When not collecting urine or blood samples, Bruce is at home with his wife Ashley (married 21 years) or attending one of his three kids' activities (Brynn - 17, Julia - 15 and Griffin - 13). Bruce is also a Division Chief with the Phoenix Fire Department and in charge of 531 pieces of apparatus and vehicles.

His favorite quote is "Success without integrity is failure!"

An Update on Electronic Cigarettes

Anna Filardo, MS

Information on use, marketing tendencies, and the general anatomy of electronic cigarettes (e-cigarettes) were discussed in the 2015 First Quarter issue of *Insight*. This article serves to provide an update on research related to growing trends in use and potential for harm.

Teen exposure and use of e-cigarettes is growing rapidly, according to a 2015 report from the Center for Substance Abuse Research (CESAR). The number of high-school teens who reported using e-cigarettes in the past 30 days tripled between 2013 and 2014 (4.5% to 13.5%). CESAR also found that non-smoking youth (6th to 12th graders) who used e-cigarettes in their lifetime had at least double the intention to smoke traditional tobacco cigarettes, compared to non-smoking youth who had never been exposed to e-cigarettes. Teens are a prime target as e-cigarette consumers as demonstrated in product marketing, the abundance of "fun" or "tasty" flavorings, and the perception that e-cigarettes are sexy, popular, and a "healthy" alternative to traditional cigarettes.

E-cigarette companies add flavorings to the e-liquid to appeal to youth and their taste buds. The e-liquid fuels the e-cig and is the solution that delivers the nicotine in the product. According to the Centers for Disease Control (CDC), "Nicotine use during adolescence might have lasting adverse consequences for brain development, causes addiction, and might lead to sustained use of tobacco products."

Not only is nicotine dependence stimulated, but alcohol dependence may also develop with chronic inhalation of alcohol-containing e-cigarettes. In addition to the flavorings, nicotine, glycerol, and propylene glycol found in the e-liquid cartridges, ethanol (or alcohol) is frequently used as an effective solvent for the many additives.

The e-liquid is heated and vaporized into the smoke that is inhaled by the e-cigarette user. At any level, the alcohol inhaled from an e-liquid cartridge will enter the brain and begin to alter cerebral functions. In 2015, researchers found that e-liquids containing high levels of alcohol may induce driving impairment. E-cigarette users in this case were largely unaware of the possible impairment.

Labeling of the e-liquid content is largely controversial. Nicotine is not the only harmful substance found in e-liquids, and amounts of nicotine listed on labels are often incorrect. The Salt Lake City Health Department found that 61% of e-cigarettes tested for actual nicotine content differed by at least 10% from what was on the label.

In addition to unlisted chemicals found in e-liquid mixtures, scientists are finding that there are also toxic materials, such as heavy metals (tin, silver, nickel, and aluminum), in the aerosol produced by e-cigarettes (Sarrari, et. al, 2014). Low levels of nicotine were also detected in a study that investigated e-cigarette vapor and second hand smoke, albeit less than produced from conventional tobacco cigarettes (Czogala, 2013).

Sport medicine staff members are encouraged to use this information to educate student-athletes on the researched health hazards of e-cigarettes. In addition, health educators need to focus on and be aware of acute nicotine toxicity and long-term dependence of such a highly addictive substance. *References available upon request. Please email Lara Gray at lgray@drugfreesport.com.*

Collector Spotlight

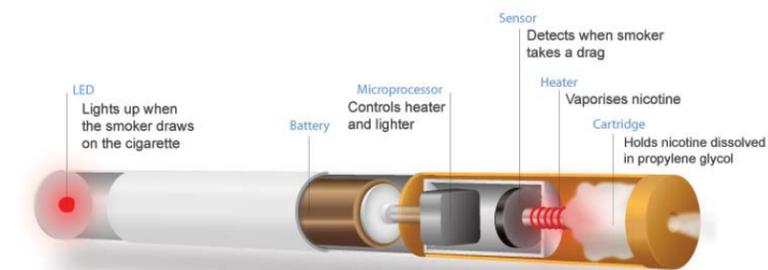


Karen Matters, CEO
Collection Company: Drug Testing Matters (Lebanon, IN)

Karen has been supporting Drug Free Sport's mission since 1999, when she began contracting independently for the company. In 2008, seeing opportunities for expansion, Karen started her own collection agency, *Drug Testing Matters*, to serve a larger drug-testing area and growing client base in the Midwest. *Drug Testing Matters* covers collection services in Indiana, Illinois, Michigan, Ohio, Tennessee, Kentucky, and parts of Missouri. Karen asserts that she not only enjoys the people at Drug Free Sport, but also finds drug-testing and the mission of Drug Free Sport "just as thrilling and inspiring to work for today" as she did when she first started.

Prior to contracting with Drug Free Sport, Karen had the privilege of working the 1996 Summer Olympic Games in Atlanta, GA. She says, "it was the biggest and best party I ever attended." Detailing that "the streets of Atlanta were a sea of people," this is an opportunity she will always cherish.

When she is not performing collections, Karen raises and trains Cavalier King Charles Spaniels. She currently has ten champions in the American Dog Kennel. Her favorite quote is "What you do today will determine your tomorrows".



E-cigarette use among youth is rising as e-cigarette advertising grows

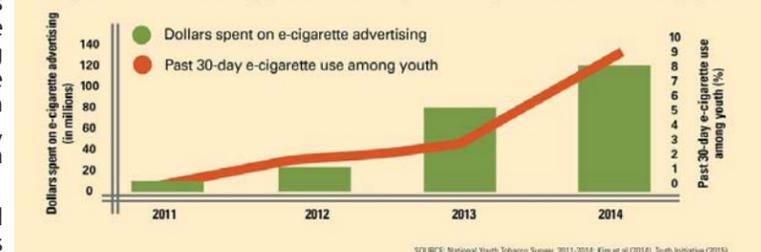


Image source (top): U.S. Dept of Transportation. Image Source (bottom): Centers for Disease Control and Prevention, Natl Centers for Chronic Disease Prevention and Health Promotion

Kratom, A High Risk Supplement

Lara Gray, MS, RDN, CSSD

Imagine if a dietary supplement was being sold online as providing its user with a “legal” and “safe” high. Marketers promoting the supplement as a natural way to alleviate fatigue, pain and depression – even to help combat opioid addiction. Sold as powders, capsules, whole leaves, leaf resins or extracts, or bulk liquids and also called thang, kakuam, thom, ketum, biak, or maeng da leaf—this is kratom.

Box 1.1:

Adverse Side Effects Reported After Consumption of Kratom

- Nausea/Vomiting
- Itching
- Sweating
- Dry mouth
- Constipation
- Increased urination
- Loss of appetite
- Delusions and severe anxiety
- Lethargy
- Respiratory depression
- Tremors
- Psychotic episodes
- Hallucinations and paranoia
- Aggressive or combative behavior

Kratom leaves are closely related to the coffee family and have been used as a stimulant throughout Thailand and other Southeast Asian countries for decades. The leaves are chewed, smoked, brewed into tea, or broken down into powder form. As a botanical, kratom (*Mitragyna speciosa*) is classified as a dietary ingredient under the Food, Drug, and Cosmetic Act. This designation allows the product to be sold as a dietary supplement rather than undergoing product and consumer testing as a pharmaceutical drug. Kratom supplements have shown rapid growth and are being sold through online distributors and local smoke shops.

In December 2015, the FDA issued an “Import Alert” that called for the “detention without physical examination of dietary supplements and bulk dietary ingredients that are or contain mitragyna speciosa or kratom.” The alert detailed that kratom is considered by the FDA as a “new dietary ingredient.” New dietary ingredients are those not marketed prior to the 1994 Dietary Supplement Health and Education Act (DSHEA), and per the legislation require FDA approval before being sold to consumers. FDA approval is dependent on establishing scientific evidence proving that the ingredient is safe for human consumption.

Not only is kratom currently being sold outside established FDA protocol, but research shows considerable issues with toxicity and health concerns associated with consumption. Notably, emergency room visits related to kratom ingestion began putting the substance on the map in 2012. Negative health consequences associated with kratom include hallucinations, paranoia, aggressive behavior, psychotic episodes, respiratory depression, nausea and vomiting. For a full list of adverse effects, please refer to Box 1.1.

The pharmacology of kratom has been described as providing both stimulant and sedative effects, often depending on the strain and dose consumed. The primary chemical constituent, mitragynine, has been identified as having specific opioid-like effects. Another constituent, O-desmethyltramadol, is the main active metabolite of tramadol, a narcotic opioid. Distributors tout kratom as a viable solution to help opioid addicts combat their dependence, yet research and drug rehabilitation programs are finding the substance to be highly addictive with significant withdrawal symptoms. Kratom is not a controlled substance in the United States and is legal in most states, currently appearing on the DEA’s list of “Drugs and Chemicals of Concern.”

While use among athletes is largely unknown, the Drug Free Sport Resource Exchange Center (REC) has received inquiries about kratom in both 2015 and 2016. The concern is that athletes will consider kratom a recreational alternative to street drugs such as marijuana or K2 spice. Due to the stimulant effects, presence of an active opioid metabolite, documented serious health concerns, significant lack of scientific research and unregulated distribution as a dietary supplement, the REC has categorized kratom as a Risk Level III substance.

One of Drug Free Sport’s labs, the Clinical Reference Laboratory (CRL), has also confirmed that the kratom constituent, 7-hydroxymitragynine, can be screened and confirmed from urine samples should sport organizations choose to include it on a testing panel.

It is advised that sports medicine teams discuss the health implications and lack of regulation associated with dietary ingredients such as kratom. For more information on kratom or education resources, please contact Lara Gray at lgray@drugfreesport.com.

References:

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Example of kratom being sold as a supplement from an online distributor. Photo credit: www.getkratom.com; *Ultra Enhanced Maeng Da Kratom Extract*.



Current Topics in Sport Drug Testing & Athlete Health

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