APPLE & Gordie Center
faculty & staff are here to help!

Michelle  Susie  Joe  Debra  Holly

Jill
APPLE Goal:

prevent misuse of alcohol, tobacco, and other drugs (ATOD) through:

• Education
• Empowering teams
• Post-training coaching
• Networking

APPLE founders Dr. Susan Grossman & Dr. Joe Gieck
@APPLEathletics
#APPLEathletics2019

WiFi Password: APPLE

Listed on the inside of your booklets.

APPLE_athletics
Conference Presentation Slides

www.APPLEathletics.org
NCAA National Study on Substance Use Habits of College Student-Athletes
June 2018
Compared to all college students in 2017, student-athletes are LESS likely to use...

% of Student-athletes who NEVER used...

- Amphetamines: 98%
- LSD: 97.1%
- Cigarettes: 83.7%
- Marijuana: 65.7%

Sources: 2017 NCAA National Study of Substance Use Habits of College Student-Athletes & 2017 National College Health Assessment
Compared to all college students in 2017, student-athletes are equally likely to use...

% of Student-athletes who NEVER used...

- Heroin: 99.6
- Meth: 99.5
- Anabolic Steroids: 99.1
- Ecstasy/Molly: 96.1
- Cocaine: 94.5
- Vaping: 86
- Alcohol: 19.8

Sources: 2017 NCAA National Study of Substance Use Habits of College Student-Athletes & 2017 National College Health Assessment
Compared to all college students in 2017, student-athletes are **MORE** likely to use...

**% of Student-athletes who NEVER used...**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Percent of Student-athletes who NEVER used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spit tobacco</td>
<td>81.8</td>
</tr>
<tr>
<td>Hookah</td>
<td>77.2</td>
</tr>
<tr>
<td>Cigars</td>
<td>74.8</td>
</tr>
</tbody>
</table>

Sources: 2017 NCAA National Study of Substance Use Habits of College Student-Athletes & 2017 National College Health Assessment
DII Student-Athletes
Percent who used alcohol in past year

NCAA National Study of Substance Use Habits of College Student-Athletes, 2009, 2013, 2017
Low-risk drinking has INCREASED significantly among DII student-athletes.

Totals include those who did not drink OR had <4 drinks at a time (women) <5 drinks at a time (men)

DII Student-Athlete Marijuana Use in Past Year

NCAA National Study of Substance Use Habits of College Student-Athletes, 2005, 2009, 2013, 2017. *For 2017, marijuana use was reported by specific methods, whereas in previous years it was reported as a general substance category. Therefore, the percentage of marijuana use for 2017 includes those who reported “inhaling” or “ingesting” marijuana.
Which DII WOMEN’s sports have the lowest rates of alcohol use in the past 12 months?

- Softball (28% didn’t use)
- Basketball (36% didn’t use)
- Track (40% didn’t use)

2017 NCAA National Study of Substance Use Habits of College Student-Athletes
Which DII MEN’s sports have the lowest rates of alcohol use in the past 12 months?

- Football (30% didn’t use)
- Basketball (34% didn’t use)
- Track (44% didn’t use)

2017 NCAA National Study of Substance Use Habits of College Student-Athletes
Top Reasons DII Student-Athletes Don’t Drink:

#1: No desire to experience effects
Don’t want to hurt athletic performance
Concerned about how it may affect health
Don’t want to hurt my academic performance
Against beliefs/values
Most DII student-athletes’ alcohol use does NOT interfere with their sport.

98% didn’t show up late or miss a practice or competition.

93% didn’t perform poorly in a practice or competition.
DII Student-Athletes who NEVER Use During Competition Season

- Alcohol: 58% No use in past year, 29.7% Did not use in season
- Marijuana: 92% No use in past year, 13.9% Did not use in season

2017 NCAA National Study of Substance Use Habits of College Student-Athletes
Compared to other student drinkers, student-athletes who drink...

• Consume more alcohol

• Drink more frequently

• Have more negative consequences including
  ▪ Driving under the influence
  ▪ Unsafe sexual behaviors
  ▪ Criminal offenses

## Student-Athlete Experiences

<table>
<thead>
<tr>
<th>Experience</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least one form of hazing while in college.</td>
<td>74%</td>
</tr>
<tr>
<td>Hazed by participating in drinking games</td>
<td>47%</td>
</tr>
<tr>
<td>Hazed by having to drink large amounts of alcohol to the point of getting sick or passing out</td>
<td>23%</td>
</tr>
<tr>
<td>Believed coaches and/or advisors were aware of the activities.</td>
<td>25%</td>
</tr>
</tbody>
</table>

Responses of 11,000+ students on 53 campuses.

In your team, discuss how much you personally agree or disagree with this statement.

“Alcohol and other drug use can be the difference between a winning and a losing season.”
Alcohol & Athletic Performance
NCAA Resources

THE NCAA'S CENTER FOR EXCELLENCE FOCUSING ON STUDENT-ATHLETE HEALTH AND SAFETY

SUBSTANCE ABUSE PREVENTION AND INTERVENTION
An Athletics Tool Kit

ALCOHOL AND ATHLETIC PERFORMANCE
Alcohol Negatively Impacts Body Composition

Increases body fat +

Often mixed with high-calorie drinks and high-calorie foods =

Overall weight gain
Alcohol Decreases Aerobic Performance

- Blood flow to muscles and organs decreases.
- Energy available for muscles to perform is reduced.

Cartoon: Athletes discussing running distance with one saying, "How far have we gone? Ten miles? Ten kilometers? 20 klicks?" and the other saying, "Almost to the end of the driveway!"

Lung distance running.

Source: theAwkwardYeti.com
Alcohol Dehydrates

Up to 3% body weight loss within 4 hours of drinking

- fluid loss
- chance of heat cramps, exhaustion and stroke
- temperature tolerance
- reverses heat acclimation training

Berning, J. (1996)
Shirreffs & Maughan (2006)
How many cups of water may an athlete need to rehydrate after 5 standard alcoholic drinks?

Athletes + Rehydration

12+ cups of fluid per day

1 alcoholic drink = at least 1 additional cup of fluid

5 alcoholic drinks = 17+ cups of fluid
Alcohol Inhibits Absorption of Key Nutrients

...needed for:

• Converting food into fuel
• Healthy red blood and nerve cells
• Making new oxygen-carrying cells
• Energy metabolism and endurance
Why does alcohol matter?
The body spends energy metabolizing alcohol, not making more glucose.

So What?
Can lead to severe hypoglycemia 6 to 36 hours after heavy drinking.

27% of student-athletes report to practice with low blood glucose levels (not all due to alcohol use)

American Athletic Institute: www.americanathleticinstitute.org
Alcohol Impairs Motor Skills

- Decreases strength, power and sprint performance for up to three days (72 hours)
- Decreases HGH secretion by up to 70%
- Reaction time can be affected up to 12 hours after drinking

Kuhn, Swartzwelder & Wilson (2000) *Pumped: Straight facts for athletes about drugs, supplements and training*
American Athletic Institute: [www.americanathleticinstitute.org](http://www.americanathleticinstitute.org)
Alcohol Disrupts Sleep & Learning

Reduces time spent in deep, restful sleep.

Impedes memory formation

Disrupts muscle repair

How well can game plans be learned?

American Athletic Institute: www.americanathleticinstitute.org
Alcohol Slows Recovery

Alcohol delays muscle repair

Drinking after competition hinders recovery

Risk of injury is doubled:

Injury rate for non-drinkers 23.5%
Injury rate for drinkers 54.8%


American Athletic Institute: www.americanathleticinstitute.org
#1 Day of the Week for Injuries:


American Athletic Institute: www.americanathleticinstitute.org
Alcohol Increases Risk of Illness

Drinking *depresses* immune function.

Athletes who drink *get sick* more often.

American Athletic Institute: www.americanathleticinstitute.org
41% of student-athletes had at least one hangover in the past year (half of all who reported drinking).

**EFFECTS of a hangover:**
- Increased heart rate
- Decreased left ventricular performance
- Increased blood pressure
- Decreased endurance
- Dehydration
Getting drunk 1 time can negate up to how many days of training effects?

Due to lost physiological conditioning including:
- Heart rate
- Ventilation
- Muscle enzymes

ALCOHOL AND ATHLETES: A Comparative Case Study of Enzymatic Activity, Training Effect and Alcohol Ingestion on an Elite Level Athlete, John Greig Underwood
American Athletic Institute
MARIJUANA’S IMPACT ON PERFORMANCE

Break out session tomorrow @ 2:30 pm
Lingering Impact

Can last several days beyond initial use

- Respiratory system
- Cardiovascular system
- Cognition
- Psychomotor performance
- Perception
- Motivation
- Mental health
- Immune System
Respiratory Systems

Muscles deprived of optimal energy level
More quickly fatigued
Decreased performance
Cardiovascular System

- heart rate
- blood pressure

↓

- efficiency in oxygen distribution
- stamina
- endurance

Can affect ability to regulate body temperature
Cognitive and Psychomotor Performance

Skill impairment may last up to 36 hours

- Slowed reflexes
- Disrupted balance and posture
- Increased risk of injury

- Increased time needed to learn (up to 5 hours after use)
- Reduced ability to problem-solve
Brain is not fully developed until about age 25:

Impacts:
- Reasoning
- Impulse control
- Planning
- Decision-making

Source: H Scott Swartzwelder, Clinical Professor of Psychiatry and Psychology and Neuroscience, Duke University. Research supported by NIAAA and the U.S. Department of Veterans Affairs

- Caused changes in normal brain structure development
- Greater impact on thinking skills
- Effects remained after drug use stopped

4 year study of 3,800 adolescents, starting at age 13

Teenagers using cannabis are causing long-lasting damage to their developing brains, a Canadian study suggests.

Regular heavy marijuana use by teens can lead to an IQ drop of up to 8 points³
Lingering Impacts of Chronic Cannabis Use in Adolescence

Even after a month of abstinence, users had decreased:

- Visual perception
- Psychomotor speed
- Control over inhibition
- Attention
- Abstract reasoning
- Memory
- Executive functioning

Jill Schlabig Williams, NIDA Notes, Vol. 18, #5
Alcohol and Team Success
Abstaining from alcohol use while in season can increase the likelihood of having a successful season.

Keller (2013)
Alcohol and Performance Potential

The lingering effects of alcohol hangovers reduces athletic performance by up to 11.4% in elite athletes (e.g., national teams)

Impacts are higher for college student-athletes.

Source: American Athletic Institute: www.americanathleticsinstitute.org
“The Hangover Effect Or Disturbed Recovery Process”
What Is Acceptable Performance?

Full Capacity: 100%

Acceptable Performance: 90%

Is 80% Capacity Acceptable?

What would a 15% performance INCREASE look like for your team?

For your individual performance?
 PTS: 160
 Opp: 133
 Rush: 1158
 Opp: 854
 Pass: 1443
 Opp: 1001

Football 4-2
5-1

All-American
10-2

Source: American Athletic Institute: www.americanathleticinstitute.org
NCAAS
Six 1-Run Losses

Softball 24-31
28-27

Source: American Athletic Institute: www.americanathleticinstitute.org
Test Your Knowledge!
Prizes!

On your phone or other device, go to kahoot.it

Enter GAME PIN
544366
Create a nickname
Enter the answer on your device by matching color/shape.
Accuracy AND speed count!
Kahoot.it

Which of these is NOT a standard drink?

- 12 oz beer
- 5 oz glass of wine
- 1.5 oz shot of liquor
- 24 oz. alcoholic energy drink
Prizes for top student-athlete AND top administrator score!

Save your screen image!

GAME PIN

544366