Framing the Issues

APPLE
Promoting Student-Athlete Wellness and Substance Abuse Prevention

2017
APPLE TRAINING INSTITUTE
CHARLOTTESVILLE, VA
NASHVILLE, TN

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APPLE Training Institute Staff

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Educational Partners

- NCAA
- University of Virginia
- Drug Free Sport
- TEAM
- UNCG Institute to Promote Athlete Health and Wellness
- myPlaybook
Follow APPLE!

@APPLEathletics
#APPLE2017
APPLE Goals

- educate
- empower &
- support teams

in preventing alcohol, tobacco and other drug (ATOD) use/abuse

Drs. Susan Grossman & Joe Gieck
Student-Athlete Substance Use
Compared to all college students, student-athletes are LESS likely to use...
(no use in past 12 months)

Percentage of Athletes who did NOT use in the past year...

Sources: 2013 NCAA National Study of Substance Use Habits of College Student-Athletes & 2012 Monitoring the Future Survey
Compared to all college students, student-athletes are EQUALLY likely to use…

(in past 12 months):

Alcohol
(19.5% did not use in past year)

Anabolic Steroids
(99.5% did not use in past year)

Sources: 2013 NCAA National Study of Substance Use Habits of College Student-Athletes & 2012 Monitoring the Future Survey
Heavy drinking is down significantly among student-athletes.

Excessive Drinking Trend
(4+ Drinks/ 5+ Drinks)

2013 NCAA National Study of Substance Use Habits of College Student-Athletes
Which MEN’s sports have the highest rates of HAZARDOUS alcohol use (typically have 10+ drinks in a row)?

3. Swimming (21%)
2. Lacrosse (30%)
1. Ice Hockey (42%)
Which WOMEN’s sports have the highest rates of HAZARDOUS alcohol use (typically have 10+ drinks in a row)?

3. Softball (5%)
2. Field Hockey (6%)
1. Lacrosse (8%)
Compared to other students, 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 Negative Consequences in Past 12 Months

- 63% had a hangover
- 51% were nauseated or vomited at least once
- 30% had a memory loss (black out)
- 30% did something they later regretted
- 23% got into a fight/argument at least once
Student-Athletes Who NEVER Use in Competition Season

Includes 71.8% who don’t use at all

Includes 19.3% who don’t drink at all

2013 NCAA National Study of Substance Use Habits of College Student-Athletes
Student-Athlete Use of Marijuana

2013 NCAA National Study of Substance Use Habits of College Student-Athletes

% of SA

- Never use: 71.8%
- Only use out of season: 19.1%
- Use in & out of season: 8.5%
- Only use in season: 0.6%
Top Reasons Student-Athletes Don’t Drink

- No desire to experience effects
- Don’t want to hurt *athletic performance*
- Against beliefs/values
- Concerned what it might do to health
Most student-athletes’ alcohol use does NOT interfere with their sport

94.3% didn’t show up late or miss a practice or game.

84.0% didn’t perform poorly in a practice or game.

2013 NCAA National Study of Substance Use Habits of College Student-Athletes
Alcohol and other drug use can be the difference between a winning and a losing season.

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

Be prepared to defend why you agree or disagree.
Alcohol & Athletic Performance
NCAA Resources

For the Athlete: Alcohol and Athletic Performance

THE HANGOVER

HANGOVER FREQUENCY

- 15.3% 10+ times
- 7.4% 6-9 times
- 14.8% 3-5 times
- 11.5% Twice
- 14.3% Once
- 36.7% Never

EFFECTS OF A HANGOVER

- Increased heart rate
- Decreased left ventricular performance
- Increased blood pressure
- Decreased endurance performance
- Dehydration

2013 NCAA National Study of Substance Use Habits of College Student-Athletes
Alcohol Decreases Aerobic Performance

- blood flow to muscles/organs
- energy/fuel available for muscles to perform
Alcohol Dehydrates

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

↑ fluid loss
↓ Temperature tolerance
↔ Reverses heat acclimation training
↑ chances of heat cramps, exhaustion and stroke

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

Athletes and Rehydration

- 12+ cups of fluid/day.

- 1 alcoholic drink requires at least 1 cup of fluid

- 5 alcoholic drinks requires 17+ cups of fluid

Alcohol Impairs Motor Skills

- Decreases strength, power and sprint performance for **up to three days** (72 hours)
- Decreases HGH secretion by up 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)
Negatively Affects Body Composition

- Increased body fat
- Often mixed with high-calorie drinks and high-calorie foods

→ Overall weight gain
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

Firth & Manzo, For the Athlete: Alcohol & Athletic Performance (2004)
Low Blood Sugar

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

Why?
Body spends energy metabolizing alcohol, not making more glucose

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

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

Depresses immune function

Athletes who drink get sick more often.

American Athletic Institute: www.americanathleticinstitute.org
Slows Recovery

- Delays muscle repair
- Risk of injury is doubled
  - Injury rate for drinkers **54.8%**
  - Injury rate for non-drinkers **23.5%**
- Drinking alcohol after competition hinders recovery


American Athletic Institute: www.americanathleticinstitute.org
Slows Recovery

#1 Day of the Week for Injuries?

Monday


American Athletic Institute: www.americanathleticinstitute.org
Disrupts Sleep & Learning

- Reduces time spent in deep, restful sleep.
- Impedes memory formation
- Disrupts muscle repair

How well can game plans be learned?

Kuhn, Swartzwelder & Wilson (2000) *Pumped: Straight facts for athletes about drugs, supplements and training*
Getting drunk 1 time can negate up to how many days of training effects?

14

Due to lost physiological conditioning including:
- Heart rate
- Ventilation
- Muscle enzymes
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.americanathleticinstitute.org
“The Hangover Effect Or Disturbed Recovery Process”
What Is Acceptable Performance?

- Full Capacity - 100%
- Acceptable performance 90%
- 88.6% = Reduced Capacity

Is 80% Capacity Acceptable?

Source: American Athletic Institute: [www.americanathleticinstitute.org](http://www.americanathleticinstitute.org)  
“The Hangover Effect Or Disturbed Recovery Process”
Alcohol and Team Success

Abstaining from alcohol use **in season** can increase the likelihood of having a successful season.

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

For your individual performance?

Keller (2013)
28-27  NCAAS
Softball 24-31

Six 1 Run Losses

Source: American Athletic Institute: www.americanathleticinstitute.org
Test your knowledge!

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

GAME PIN: