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Athletes and Energy Drinks

By: Matt Lundin, Ed.D, AT, ATC

Energy drinks have been making their way into the mainstream sports arena in the past few years. The popular drinks are sponsoring major events and are being portrayed positively in athletics. In 2008, the National Federation of State High School Association presented their recommendations for fluid replacements. These recommendations included water and sports drinks such as Gatorade and Powerade, but did not include any of the energy drinks for rehydration (Seifert, Schaechter, Hershorin, & Lipshcultz, 2011). Energy drinks fall under the nutritional supplement category and therefore are not regulated by the Food and Drug Administration (FDA). There are no labeling laws for the supplement industry and no true listing of ingredients. The main ingredient in an energy drink is caffeine. A second ingredient that is in most energy drinks is taurine, which is an FDA approved supplement for poultry feed. Caffeine is a nervous system stimulant that produces coronary and cerebral vasoconstriction (reduction of blood flow), and relaxes smooth muscle tissue, while exciting skeletal muscles. Large amounts of caffeine increases urine flow and sweat production promoting dehydration. While most individuals can tolerate moderate ingestion of caffeine, those who are taking large quantities of caffeine (greater than 400mg) can suffer from seizures, mania, strokes, and sudden death. There is a greater potential for adverse effects on individuals with seizure disorders, diabetes, cardiac abnormalities, or mood and behavioral disorders (such as ADD or ADHD) (Seifert et al., 2011).

Many popular caffeinated products contain high amounts of caffeine in servings: NoDoze—200mg, Coffee—100mg, Mountain Dew—55mg, typical energy drink—up to 400mg per serving. In 2008, approximately half of the reported caffeine overdoses in the U.S. were for the under 19 age group (2378). Germany has tracked caffeine effects and overdoses since 2002. Their reported side effects of caffeine included: liver damage, kidney failure, respiratory disorders, agitation, seizures, psychotic episodes, rhabdomyolysis, heart failure and death (Seifert et al., 2011). Considering these reported effects of caffeine in energy drinks, the following countries have imposed bans on most, if not all types, of energy drinks: Australia, Denmark, Germany, Turkey, and Uruguay. In the US, the Virginia High School Athletic Association banned the consumption of all energy drinks, as well as numerous school districts across the country. The NCAA has banned the use of energy drinks since 2003 and has caffeine listed on their banned substance list for drug testing.

For more information on energy drinks and nutritional supplements, please contact your school's certified athletic trainer.

References

[Seifert, S. M., Schaechter, J. L., Hershorin, E. R., & Lipshcultz, S. E. \(2011\). Health effects of energy drinks on children, adolescents, and young adults. *Pediatrics*, 127\(3\).](#)

Sports Enhancement and Injury Reduction Programs Summer 2013

EXPLOSIVE SPEED & POWER (ESP)

- For athletes in grades 9-12, collegiate and professional athletes.
- Utilizes Olympic lifts and core body strengthening techniques to improve power and strength.
- Proper running mechanics/ground based speed drills, plyometric jumping techniques and flexibility exercises are practiced to improve speed, agility, vertical jump and flexibility.

When: June 10—July 18 (Make-up week July 22-25)

Morning: 10:00—11:50 a.m.
3x/wk, (M/T/TH)
4x/wk, (M/T/W/TH)

Afternoon: 12:30-2:20 p.m.,
3x/wk, (M/T/TH)
12:30-2:20 p.m.,
4x/wk, (M/T/W/TH)

Where: Tippecanoe High School/weight room,
615 E. Kessler-Cowlesville Rd., Tipp City

Cost: 3x/wk, \$170
4x/wk, \$225

EXPLOSIVE SPEED & POWER JR. (ESP Jr.)

- For athletes who will be in grades 7 or 8 next school year.
- Utilizes age-appropriate strengthening activities and emphasizes education on proper form and techniques as well as injury prevention.
- Proper running mechanics/ground based speed drills, plyometric jumping techniques and flexibility exercises are practiced to improve speed, agility, vertical jump and flexibility.

When: June 10—July 19 (Make-up week July 22-26)

11:00 a.m.-12:30 p.m. (M/W/F)

Where: Tippecanoe High School/weight room
615 E. Kessler-Cowlesville Rd., Tipp City

Cost: \$170

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- Comprehensive training program specially designed for female athletes, grade 7-12, collegiate and professional.
- Scientifically proven to reduce knee injuries and improve performance for sports that involve pivoting, cutting or jumping such as soccer, basketball and volleyball.
- Combines dynamic warm-up with plyometric drills, strength training and flexibility exercises.

When: June 10-July 19

Morning: 9:30 a.m.-10:30 a.m.
(M/W/F)

Where: Troy Junior High School
656 Adams St., Troy

Cost: \$95

SPORTS PHYSICALS

Dr. Jeffrey Rayborn, M.D., primary care physician board certified in Sports Medicine, will perform the physicals.

When: Wednesdays—June 19, June 26, July 10, July 17, July 24, July 31,
from 5-7 p.m. (**By appointment only**)

Where: Center for Sports Medicine, 450 N. Hyatt St.,
Suite 102, Tipp City, Ohio 45371

Cost: \$30

For an appointment or further information, please call (937) 667-2614.

To register for all classes call Carefinders at 1-866-608-FIND
or register online with credit card payment at UVMC.com/ESP or UVMC.com/Sportsmetrics