GRSM Grand River Sports Medicine Centre INJURY INFO

THINK THIRST FIRST!
SPORT/ENERGY DRINK REVIEW

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It's HOT, HUMID, and you just finished a hard workout. THIRSTY, you jog over to the local 7-eleven convenience store to buy a sports drink, or energy drink because you are feeling tired. You open the cooler door and are instantly overwhelmed with the numerous sport and energy drinks available. Luckily you have your cell phone, and make a quick call to your local dietitian who tells you to consider the following key points when choosing a sport/energy drink:

SPORT DRINKS vs. ENERGY DRINKS:
Sports Drinks are formulations of carbohydrates and sodium that help restore essential body fluids and minerals during exercise. Most sports drinks contain 4-8% carbohydrates. Other ingredients such as vitamins and protein are sometimes added to sports drinks. Sports drinks are recommended during vigorous exercise (i.e. soccer, hockey, basketball, lacrosse), or activity lasting 60 minutes or longer (i.e. running, cycling, rowing).

In contrast, Energy Drinks such as Red Bull are not formulated to deliver re-hydration., but rather are stated to boost "energy" due to the "ergogenic' effect of the key ingredient - caffeine. Typical energy drinks contain 80mg of caffeine per can. This is about the same amount of caffeine provided by an average strength coffee and twice found in a cup of tea or can of cola. Other common ingredients found in energy drinks include sucrose, B vitamins, amino acids (i.e. taurine), and some herbal supplements such as Ginko biloba, Echinacea, Ginseng , St. John's Wort, and Guarana (a caffeine containing extract from a South American plant). Sugar concentration in energy drinks are often much higher (10-12%) than sports drinks. Thus, energy drinks are unsuitable re-hydration drinks. In summary, a can of energy drink provides as much caffeine as a cup of coffee. Since caffeine has been shown to increase the use of fat as an energy source during endurance exercise, thereby sparing glycogen stores, 1-2 energy drinks 1-2 hours prior to the start of an endurance event may provide performance enhancement similar to coffee. BUYER BEWARE - the herbal supplement industry is unregulated, thus athletes who consume "herbal" energy drinks may be at risk of consuming banned substances.

What Makes an Optimal Sports Drink?

CARBOHYDRATE CONTENT:
Choose a sport drink with 14-17 grams (4-8%) carbohydrate per 250ml to encourage rapid fluid replenishment. Sport beverages such as Gatorade, All-Sport, and Accelerade are ISOTONIC, meaning they have the same solute concentration as your blood and will not draw water into the stomach = less chance of cramping. HYPERTONIC beverages such as juice, energy drinks and pop (26 grams carbohydrate/250ml) are not recommended during exercise as these concentrated beverages may cause cramping and will slow down fluid absorption. Research suggests that certain formulations of sports drinks containing 4-8% carbohydrate, with sodium can offer a hydration advantage over water for exercise over 60 minutes in duration, or activity in extreme weather conditions.

CARBOHYDRATE TYPE:
Listed ingredients such as Sucrose, Fructose, High Fructose Corn Syrup, and Glucose are various types and combinations of simple carbohydrates used in sports drinks that provide readily available energy to working and recovering muscles.

PROTEIN, HERBS, VITAMINS and MINERALS:
No research demonstrates an immediate physiological benefit of adding these nutrients to sport drinks. A well-balanced training diet containing natural (vs. synthetic) sources of protein, vitamins and minerals is recommended.

ELECTROLYTE (Sodium and Potassium) CONTENT:
Electrolytes are essential to allow the body to draw water through its cell membranes. When we sweat, both H2O and electrolytes are depleted. Some athletes (depending on their sport) will lose 500-8,000mg of Sodium during competition or training. It's essential to replenish both fluid + electrolytes during activity. A sports drink that contains 100-110mg of sodium and 30mg of potassium per 250ml enhances the taste of the product, and facilitates fluid absorption.

See Sports Drinks "Myths and Facts" on back→

Leslie Carson, RD, MBA, is a registered dietitian and sports nutritionist. As a member of Canada's National Marathon team (2001), Leslie knows and understands the physical, mental and nutrition demands of high performing athletes.