

HYDRATION GUIDELINES FOR ATHLETES DURING HOT SUMMER WORKOUTS

Sources- Frappier Acceleration Sports Nutrition -Guidelines for Hot Workouts- Nanna L. Meyer, PH.D. Acceleration Sports Nutritionist

Summer, in Cincinnati, is typically hot, sometimes very hot and humid. Intense exercise at temperatures greater than 80°F, particularly in combination with humidity greater than 40%, can lead to a rapid rise in the body's core temperature and therefore a risk of exertional heat illnesses. This typically occurs during pre-season training and is caused by multiple factors: hot/humid environment, poor fitness level, excessive body fat/weight, dehydration, inadequate clothing, and abuse of dietary supplements.

Fluid the Transporter

Water makes up approximately **60% of the human body**. Thus, to complete critical functions during exercise, your body requires water. Water delivers nutrients to cells and removes waste product. Water hydrates cells and replenishes nutrients. Water cools the body through sweating. Dehydration results in **decreased performance** and can lead to serious health issues. Therefore, it is important to recognize the signs and symptoms of dehydration to be able to maintain optimal performance. Signs and symptoms include: Fatigue, decreased mental concentration Muscle cramps, headaches Decreased appetite, weight fluctuation Thirst, dry skin, brittle hair. The **best way** to maintain fluid balance throughout the day is to monitor the color of your urine, which should resemble diluted lemonade.

Training Camp Strategies (Late Summer)

1) Become heat acclimated: In a hot climate train at lower intensities for 1-2 weeks. Start each training session with low intensity and build slowly. Increase training load slowly each day of the week.

2) Maintain daily fluid balance: Measure your weight each morning after the first workout. Fluctuations of 2-3% body weight or greater may indicate that fluid loss is greater than fluid replacement. Increased fluid intake is required to regain fluid balance.

3) Drink sensibly and avoid under- and over-hydration: Optimize rather than maximize fluid intake. Avoid starting your workouts thirsty. Watch your urine color, it should resemble diluted lemonade.

4) Choose a variety of fluids with your meals and snacks: Water, low-fat and skim milk, juice or diluted juices are good options. Avoid drinking large amounts of soda and other carbonated and caffeine-containing fluids. Limit your intake to one 8-12 oz. serving per day. Fluids contained in fruit, vegetables, soups, pasta, rice, oatmeal, potatoes, and dairy products also count towards your daily fluid intake.

Use these guidelines for exercise:

Before: Drink 12-20 oz. of water 1-2 hours before exercise, including 8 oz. during warm-up. During: Drink 7-10oz. every 15-20 minutes during exercise. After: Drink 24oz. after exercise for each pound lost.

More individual guidelines need to be based on

1) Your hourly sweat loss during exercise and 2) your total fluid loss after your workout.

Typical sweat loss rate for high school soccer players

Doing pre-season workouts with a temperature of 75-78°F and moderate humidity are:

Female soccer player: 16-24 oz. /hour

Male soccer player: 32-40 oz. /hour

Fluid replacement during exercise equals 100% replacement.

Fluid replacement after exercise equals 150% replacement.

Ideal Composition of Hydrating Fluids:

Water or carbohydrate-containing drink Carbohydrate:

– Compositions: 5-8%

– Amount: 14-15g/8 oz.

– Type: Glucose, glucose polymers, mixture of sugars (glucose, sucrose, maltodextrine)

Sodium: 110mg/8 oz. and Potassium: 30mg/8 oz.

In Summary

Good hydration is composed of: Non-exercise days- Drinking a minimum of 40-48 oz. of water throughout the day.

Exercise days- Drinking adequate water and sports drinks, before, during, and after exercise as described in the box above.

Hot and humid days- Adjust fluid intake for weather conditions, monitor your weight and urine color. Drinking nutritious fluids such as milk and juice.

Drinking minimal fluids with a dehydration potential such as soda and coffee.

Remember that thirst is unreliable to determine fluid needs. Therefore, athletes must drink before feeling thirsty.

The best way to maintain fluid balance throughout the day is to monitor the color of your urine, which should resemble diluted lemonade.

Make sure you got adequate sleep and rest each night.

For more information call (513) 474-4525 or Email: Greg@AccelerationTraining.com