

## After Exercise

Immediately after training or competition is the key time to replace fluids. Weigh athletes before and after exercise. Research indicates that for every pound of weight lost, athletes should drink at least 20 oz of fluid to optimize re-hydration. Sports beverages are an excellent choice.

## Managing Two-A-Days

### Stay Cool

- Get in shape and acclimate
- Know the warning signs of dehydration and heat illness
- Don't rely on thirst to drink
- Drink on schedule
- Favor sports drinks
- Monitor body weight
- Watch urine color and caffeine intake
- Key in on meals as an opportunity to increase fluid intake
- Stay cool when you can

*From: Eichner, R.R. (1998). Treatment of Suspected Heat Illness. Int. J. Sports Med. 19:S150-153.*

### Stay Healthy

- Minimize the stresses of life
- Eat a well-balanced diet
- Avoid overtraining
- Sleep well
- Avoid rapid weight loss
- Avoid people with colds
- Keeps hands away from nose and mouth
- Get a flu shot
- Stay hydrated and ingest carbohydrates during exercise

*From: Neiman, D.C. (1998). Immunity in Athletes: Current Issues. Sports Science Exchange 11(2):1-6.*

### Stay Hydrated

- Drink throughout the day
- Drink at least 17-20 oz of fluid 2-3 hours before a practice or a game
- Drink an additional 7-10 oz of fluid 10-20 minutes before competition
- Drink 28-40 oz of fluid per hour of play (at least 7-10 oz every 10-15 min) to replace sweat loss during exercise
- Drink at least 20 oz per pound of weight loss within 2 hours of finishing training or competition
- Optimal to have fluid intake match sweat and urine loss

*From: Casa, D. et al. Journal of Athletic Training 35(2): 212-224, 2000.*

# Two-A-Day Handbook



575 Sioux Point Road  
Dakota Dunes, SD 57049

[www.CNOS.net](http://www.CNOS.net)

605-217-2791

## Tips for Safer Two-A-Days

Injury rates increase during two-a-day workouts whether athletes are in peak physical condition or not. In fact, many athletes don't even make their starting line-up because of injuries during preseason training.

Here are some tips to help ensure athletes stay at their best and prevent heat-related injuries during two-a-days.

### Encourage Athletes to Begin Conditioning Before Two-A-Days

Encourage athletes to begin conditioning in the heat two weeks before official practice begins. This allows athletes' bodies to cool more efficiently by increasing sweat production sooner than when they are not acclimated to the heat.

### Avoid Workouts During Unusually Hot Temperatures

Practice sessions during unusually hot and humid conditions should be limited to very moderate workouts, postponed until cooler times of the day, or brought inside to avoid the heat.

### Make Fluids Part of the Playbook

Before, during, and after competition, be sure to consume adequate amounts of fluid. Athletes can make sure they are properly hydrated by checking their urine color: lighter urine color indicates athletes are better hydrated. The longer the workout session, the more frequently fluids need to be replaced. Research shows that a sports drink containing a 6% carbohydrate solution, like Gatorade, can be absorbed as rapidly as water. But unlike water, a sports drink can provide energy, delay fatigue, and improve performance.

### Signs of Dehydration and Heat Illness

Dehydration can seriously compromise athletic performance and increase the risk of exertional heat injury. That's why it's important to recognize the warning signs.

- Thirst
- Irritability
- Headache
- Weakness
- Dizziness
- Cramps
- Nausea
- Decreased Performance

### Use the Shade

Before practice, warm-up in the shade and be sure to rest in the shade during breaks. Even during rest, exposure to heat can raise body temperature, increase fluid loss, and decrease blood available to the muscles during workouts.

### Recommend Wearing Loose Fitting Clothes

Cotton blend, loose fitting clothing can help promote heat loss. The rule: the less clothing, the better.

### Be Prepared for an Emergency

Always have a cell phone on hand and be familiar with emergency numbers. Also, keep ice and ice towels on hand in case of heat-related emergencies.

## Fluid Guidelines for Two-A-Days

Proper hydration is the best safeguard against heat illness. Remember to have athletes drink before, during, and after training and competition.

### Before Exercise

- 2-3 hours before exercise, drink at least 17-20 oz of water or a sports drink
- 10-20 minutes before exercise, drink another 7-10 oz of water or a sports drink

### What to Drink During Exercise

Drink early—even minimal dehydration compromises performance. In general, every 10-20 minutes drink at least 7-10 oz of water or a sports drink. To maintain hydration, remember to drink beyond thirst. Optimally, drink fluids based on amount of sweat and urine loss.

- Athletes benefit in many situations from drinking a sports drink containing carbohydrates.
- If exercise lasts more than 45-50 minutes or is intense, a sports drink should be provided during the session.
- The carbohydrate concentration in the ideal fluid replacement solution should be in the range of 6%-8% (14-18 g/8 oz). During events when a high rate of fluid intake is necessary to sustain hydration, sports drinks with less than 7% carbohydrate should be used to optimize delivery.
- Fluids with salt (sodium chloride) are beneficial to increasing thirst and voluntary fluid intake as well as offsetting the amount lost in sweat.
- Cool beverages at temperatures of 50°-59° F are recommended.

### What Not to Drink During Exercise

- Fruit juices, carbohydrate gels, sodas, and those sports drinks that have carbohydrate levels greater than 8% are not recommended as the sole beverage.
- Beverages containing caffeine, alcohol, and carbonation are discouraged during exercise because they can dehydrate the body by stimulating excess urine production, or decrease voluntary fluid intake.