



**Fluid Replacement for Athletes**  
**NATA (National Athletic Trainers Association)**  
**Position Statement**

### **Effects of Dehydration**

Dehydration can affect an athlete's performance in less than an hour of exercise – sooner if the athlete begins the session dehydrated.

Dehydration of just 1-2% of body weight can negatively influence performance.

When dehydration exceeds 2% of body weight, physical work capacity can decrease by as much as 48%.

Dehydration of greater than 3% of body weight increases an athlete's risk of developing an exertional heat illness (heat cramps, heat exhaustion or heat stroke).

Thirst is not a reliable indicator of either dehydration or fluid needs. Thirst mechanisms do not kick in until an athlete has lost 2% of the body weight as sweat.

Athletes typically replace only 1/3 to 2/3 of sweat losses when they use thirst as a guide.

### **Warning Signs of Dehydration**

1. Thirst
2. Irritability
3. Headache
4. Nausea
5. Dizziness
6. Decreased performance
7. Weakness
8. Cramps
9. Dark urine output



### Before Exercise

2-3 hours before drink 17-20 oz of water or sports drink  
10-20 minutes before drink 7-10 oz of water or sports drink

### During Exercise

Every 10-20 minutes drink 7-10 oz of water or sports drink  
Encourage athletes to drink beyond their thirst

### After Exercise

Within 2 hours drink enough to replace any weight loss from exercise  
Approximately 20 oz of water or sports drink per pound of weight loss.  
Within 6 hours drink an additional 25-50% more than weight loss from exercise.

### What Not To Drink During Exercise

Fruit juices, carbohydrate gels and sodas.

Beverages containing caffeine, alcohol and carbonation are discouraged during activity because they can dehydrate the body by stimulating excess urine production.

### Urine Output Color Chart for Hydration Status

## AM I HYDRATED?

Urine Color Chart

|                                      |  |   |
|--------------------------------------|--|---|
| 1                                    |  |   |
| 2                                    |  | If your urine matches the colors 1, 2, or 3, you are properly hydrated. |
| 3                                    |  | Continue to consume fluids at the recommended amounts.                  |
| <hr style="border: 2px solid red;"/> |  |   |
| 4                                    |  | If your urine color is below the <b>RED</b> line, you are               |
| 5                                    |  | <b>DEHYDRATED</b> and at risk for cramping and/or a heat illness!!      |
| 6                                    |  | <b>YOU NEED TO DRINK MORE WATER!</b>                                    |
| 7                                    |  |   |
| 8                                    |  |   |