



NUTRITION:

Tips to keep athletes hydrated “Don’t sweat the small stuff”

It is important to stay properly hydrated. Provided are recommendations to avoid both dehydration and over hydration.

ABOUT DEHYDRATION

During exercise sweat losses are great, especially in hot weather conditions. When athletes sweat, water and electrolytes are lost. If the loss is not replenished this could lead to a decrease in performance and potential life-threatening heat-related injuries. Younger athletes are more at risk for dehydration and heat injury.

Signs of dehydration:

- Muscle cramps
- Nausea
- Dizziness
- Weakness
- Inability to concentrate

When fluid balance is achieved, athletic performance will be at its best. Optimal hydration should replace sweat loss.

WHAT DO I NEED TO DRINK?

Many electrolytes are lost along with fluid during exercise. The Institute of Medicine recommends that sodium, potassium, and carbohydrates be included in replacement beverages. An adequate amount of sodium may help to prevent cramping (ACSM 500-700 mg Na/L (20-30 mcg/L) sweat 30-60 mcg/L) and carbohydrates provide extra energy. Although there are many reasons why athletes may cramp, cramping for nutritional reasons is almost always due to a loss of fluid and sodium. This often happens at the end of a long competition or tournament play when an athlete has exercised long hours without optimal hydration.

WATER VS. SPORTS DRINKS (20 OZ. IN AVERAGE BOTTLE)

BEVERAGE	AMOUNT	CARBS	SODIUM	POTASSIUM
Water	8 oz.	0	0	0
Powerade	8 oz.	17g	53mg	32mg
Gatorade	8 oz.	14g	110mg	30mg
G-2	8 oz.	7g	110mg	30mg

Note that the amount of electrolytes in a sports drink is less than the amount in sweat.

MONITORING HYDRATION

There are three easy ways to assess hydration.

1. Sweat rate:

To determine your sweat rate first weigh yourself naked or in typical workout gear. After working out for about an hour, change into dry clothes, wipe off all sweat and weigh yourself again. The difference in body weight is your sweat rate assuming you did not drink or eat during the workout. 1 pound = 16 oz. of sweat. For every pound lost, replace with 16 oz. of fluids within 24 hours.

Weight gain or no loss = over hydration

1 – 3 pounds = very healthy hydration

4 – 5 pounds = concerned about hydration

6 – 8 pounds = very concerned about hydration



MONITORING HYDRATION (cont'd)

2. Specific gravity:

Testing the specific gravity of your urine will also help to assess hydration. Test strips are available at most drug stores. To use the test strip, urinate in a cup, dip the strip in the urine and compare the color on the strip to the colors on the package. Urine specific gravity should be within the range of 1.010-1.020.

3. Urine color

Assessing urine color during exercise is another way to monitor hydration. The picture below serves as a guide in determining if you are in a healthy hydration range.



HOW MUCH HYDRATION DO I NEED?

The amount of fluid and electrolytes needed for exercise depends on many different factors which affect sweat loss including age, gender, clothing, weather, medications, recent heat exposure, intensity and duration of exercise and fitness level. Hydration is especially important to endurance athletes, those athletes who have more than one practice or game in a day, and those who have an increased sweat rate.

BEFORE EXERCISE	When beginning exercise it is important for athletes to be well hydrated. At least 4 hours before physical activity begins, drink a 1/2 cup of fluid for every 40 pounds of body weight (example: if you weigh 150 pounds, you would need about 2 cups of fluid).
DURING EXERCISE	Hydrating during exercise is very important but amounts will differ based on an individual's sweating, duration and intensity of exercise. Hydration should occur during every break. Sports drinks should be used for intense exercise lasting 60 minutes or more. In hot, humid conditions, consider a sports drink for exercise of greater than 30 minutes.
AFTER EXERCISE	Once completing exercise, it is essential to replace what was lost. If a normal diet is followed, one should recover properly, but it is important to add foods high in sodium to replace the sodium lost by sweating. By adding extra sodium into the diet in the recovery phase, thirst is increased and fluid lost is recovered. Fruits and vegetables are hidden sources of fluid.

For more information, call 832-22-SPORT (77678) or visit texaschildrens.org/sportsmed

