

Exercise Hydration

Athlete Scenario

For my practices and games, I bring a water bottle and drink when I get thirsty. Practices can last 3-4 hours and I tend to sweat a lot. After I finish, I am physically spent and don't feel completely recovered before my next event. Sometimes I grab a sports drink for the ride home, but usually I just drink water. When, what, and how much should I drink to improve my energy, performance, and recovery?

Benefits of Hydration

- Delay physical fatigue and maintain performance
- Maintain mental sharpness
- Maintain agility and reaction time
- Reduce stress on the heart
- Improve body heat regulation (possibly preventing heat-related illnesses)
- Speed up recovery from training and competition

Sweat Loss Considerations

- Avoid comparing your sweat rate and hydration practices to teammates. Fluid needs during exercise are specific to the athlete and influenced by genetics, gender, age, environmental conditions, exercise intensity, fitness level, altitude, and heat acclimatization.
- Gauge your hydration status by monitoring urine color and amount – clear to pale yellow urine is ideal; dark, and/or low amounts of urine indicate dehydration.
- Evaporation of sweat during exercise cools your body. Dehydration can reduce sweat output and inhibit your body from cooling itself.
- Electrolytes found in many beverages and foods help your body retain fluid and stimulate thirst. Sodium and potassium are the most critical electrolytes, but calcium, magnesium and chloride play a role in hydration as well.



Tips to Take With You

1. Replace fluids early and often during and after activity, particularly in hot environments.
2. Good sources of fluid include water, sports drinks, 100% juices, soups, smoothies, fruits and vegetables.
3. Monitor urine color prior to training to ensure good hydration status—clear to pale yellow is optimal.
4. Fluid needs are highly individualized; a sports registered dietitian nutritionist (RDN) can help you calculate your sweat rate and develop a personalized hydration schedule that meets your needs.

Contact SCAN

www.scandpg.org
800.249.2875

Pre-Exercise Hydration

- Begin activity well-hydrated by consuming fluids from liquids and foods during the day. Include high-water and electrolyte-containing foods in your meals:
 - Soups, broths, vegetable juices, 100% fruit juices, & fruit smoothies
 - Fruits and vegetables such as oranges, apples, berries, melons, pineapple, & cucumbers
 - Salty snacks such as pretzels, popcorn, pickles, jerky, & trail mix

Hydration Maintenance During Exercise

- For short duration (<60 min) or low-to-moderate intensity activity, water is the preferred choice.
- For longer (>60 min) and/or intense activity, or multiple events on the same day, sports drinks may be better options, since carbohydrates replenish energy and electrolytes promote hydration.
- Replacing electrolytes is especially important during hot/humid conditions as they help retain fluid.
- Determine your individual fluid needs by calculating your sweat rate in different training conditions.
 - Weigh yourself before and after practice (or 1 hour of intense activity).
 - Replace up to 16 oz. of fluid for every pound you lose per hour.
- It is challenging to match your fluid intake with how much you sweat, so aim to drink slightly beyond your thirst during activity.
- Experiment during training to identify the volumes and types of fluids that help you perform at your peak.
- Drinking cold fluids in the heat may help reduce core temperature.
- Refer to the SCAN Eating During Exercise fact sheet for more information.

Recovery Hydration

- Include fluids, electrolytes, carbohydrates, and lean protein in your post-workout nutrition plan.
- Aim to drink ~20 fl. oz. for every pound lost.
- See the SCAN Eating for Recovery fact sheet for more information.

Written by SCAN registered dietitian nutritionists (RDN) to provide nutrition guidance. The key to optimal meal planning is individualization. For personalized nutrition plans contact a SCAN sports dietitian or Board Certified Specialist in Sports Dietetics (CSSD) by accessing "Find a SCAN Dietitian" at www.scandpg.org

Calculating Fluid Needs Before Activity (2-4 hours prior)

Body Weight	fl.oz.
<100 lbs	8-12
100-119 lbs	8-14
120-139 lbs	8-18
140-159 lbs	10-20
160-179 lbs	12-22
180-199 lbs	12-26
200-219 lbs	14-28
220-239 lbs	16-30
240+ lbs	16-32

Calculating Fluid Replacement During Activity

Pounds Lost	Suggested fl. oz. within 30 minutes
0-0.5	Maintain Current Hydration Plan
0.5-1.0	8-16
1.0-1.5	16-24
1.5-2.0	24-32
2.0-3.0	>32
3.0+	Consult a Sports RDN

Calculating Fluid Replacement Post-Exercise

Pounds Lost	Suggested fl. oz. within 30 minutes
0-1	18-22
1-2	22-44
2-3	44-64
3+	Consult a Sports RDN