Hydration Guidelines for Performing Artists

Fluid and Function

Water is one of the most basic human needs, essential for allowing our bodies to perform at their best. Even a little dehydration (1-2% of body weight) can lead to poor physical performance. We lose electrolytes through sweat during exercise, particularly sodium and potassium, key elements of energy production.

Read on to learn more about what and how much to drink and how to monitor your own hydration status, as well as the risks and problems associated with dehydration and increased core temperature, which can lead to significant problems, ranging from uncomfortable to deadly.

How much do you know about hydration? Test yourself with this online quiz from WebMD (follow the QR code or enter the weblink):

www.webmd.com /fitness-exercise/ rm-quiz-know-about-hydration

Dehydration Woes

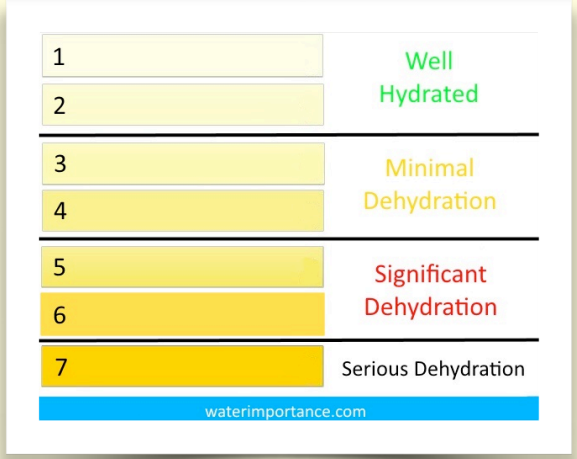
Signs and problems associated with dehydration include:

Increased:	Decreased:
• Thirst	• Blood volume
• Muscle cramping	• Muscle performance
• GI Distress	• Endurance
• Heart rate	• Ability to sweat
• Core temperature	

Limit your intake of coffee, soda and especially alcohol, as they lead to increased dehydration.

Urine Trouble?

The darker - and smellier - your pee, the more dehydrated you are! Look at the color of your stream, not in the bowl (toilet water dilutes the color). Illness, some foods and vitamin use will artificially change the color/scent temporarily.



What do you Drink?

Water

Always a great choice for daily hydration, low intensity/short duration activity, cool temperatures, and off season/recovery

Sports drinks

A good addition for high intensity/long duration (≥ 1 hour) activities, hot/cold weather, performance days, phases of poor nutrition or after illness

A sport drink with low amounts (under 8%) of added carbohydrates, sodium, and a variety of sugars (such as glucose, sucrose, fructose, and maltodextrin) enhances absorption in the intestines, and can help improve the flavor and desire to drink enough to rehydrate fully with activity.

Eating small amounts of salty snacks may be helpful. Sodium attracts water into our cells, which can help with rehydration, but too much can lead to bloating!

Weight and See

How do you know how much fluid you lose from sweat and urine?

Weigh yourself before and after activity. For every 1 pound you've lost, you should take in 20 to 24 ounces of fluid.

Intake Guidelines

In general, you should be taking in at least half an ounce of fluid per pound of body weight each day. For example, a 150 pound performer should be drinking about 75 oz (9.37 C). This amount increases with physical activity and environmental factors that lead to more sweat loss.

Before activity

Drink 17-20 oz of water or sport drink 2-3 hours before exercise

Drink another 7-10 oz 10-20 minutes before exercise

Check your hydration status/weight

During practice or performance

Drink 7-10 oz of water or sport drink every 10 to 20 minutes

Drink early, and beyond your thirst.

Post-activity Recovery

Re-check your weight

Drink enough to replace any weight lost from exercise. Goal is to be rehydrated within 2 hours.

Sipping pretty

Smaller, more frequent drinks decreases GI distress from too much fluid sloshing in your stomach. Fruit juice, carb gels, and sport drinks with more than 8% carbohydrate content can also cause gastric distress.

Additional Resources:

Manore MM, Meyer NL, Thompson JL. *Sport nutrition for health and performance - 2nd edition*. 2nd ed. Champaign, IL: Human Kinetics Publishers; 2009.

Casa DJ, Armstrong LE, Hillman SK, et al. National Athletic Trainers' Association Position Statement: Fluid Replacement for Athletes. *Journal of Athletic Training*. 2000;35(2):212-224.

Water quiz: How much do you know about hydration? WebMD. http://www.webmd.com/fitness-exercise/rm-quiz-know-about-hydration. Accessed September 9, 2016.

Hydration and Electrolyte replenishment during exercise. Water Health Benefits. http://waterimportance.com/hydration-and-electrolyte-replenishment/. Published December 26, 2014. Accessed September 10, 2016.

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Perspiration Escalation

The more you sweat the more fluid you need to replace!

External factors:
- Outdoor venue
- High humidity
- Hot weather
- Poor A/C or ventilation
- Heavy costumes

Internal factors:
- Activity intensity
- Physical conditioning
- General health
- Age (very young or old
- Female gender

Heat Illness

Heat Cramps

Painful muscle spasms with prolonged activity and excessive loss of sodium

Treatment: Stop activity, replenish electrolytes, gently stretch and massage the muscles.

Heat Syncope

Dizziness from exposure to heat, often after standing a long time, stopping activity, or standing quickly

Heat Exhaustion

Excessive sweating, headache, nausea, dizziness, gradual fainting, difficulty thinking, cold sweaty skin, pale appearance, core temperature 97-104°

Heat Stroke

More severe progression from heat stroke, dry, hot, flushed skin, vomiting, seizures, coma, core temperature over 104°

Rhabdomyolysis

Muscle fibers break down from overuse (especially with high body temperature), severe muscle aches, weakness, and dark urine - leads to kidney failure. People with sickle cell trait are at a higher risk.

Treatment: Check vital signs, rest, find shade, remove heavy clothing, drink fluid with sodium, check hydration through body weight, lower core temperature with ice or cool water immersion or application to body.

Call emergency services if there is nausea, confusion, vomiting, rapid pulse, flushed appearance, visual disturbances, or unsteadiness

Too much of a good thing?

Hyponatremia/water intoxication is caused by drinking too much water compared to fluid losses without taking in enough sodium/electrolytes. Problems include:

- Nausea
- Vomiting
- Headache
- Swollen hands/feet
- Confusion
- Fatigue
- Coma
- Death