

Workshop: Know your Sweat Rate to Know How Much to Drink!

Know the facts on sweat rate:

- Your sweat rate refers to the amount of sweat you lose per hour.
- Calculate your sweat rate to know how much to drink during and after exercise.
- Factors that increase your sweat rate include:
 - being male, heat and humidity, hard workouts, more muscle, fitness level
- You may lose 1-8 cups per hour of exercise

Can you drink too much?

Yes you can. By drinking too much you may run the risk of diluting your blood sodium levels (an electrolyte important for maintaining hydration status). Hyponatremia (drop in blood sodium level) can lead to swelling of the brain and may be deadly.

To know how much fluid to drink during and after workouts, learn to measure & calculate your sweat rate!

Measuring your sweat rate in 3 simple steps:

Step 1: Determine amount of weight lost during workout (sweat lost):

Pre workout weight – post workout weight (same clothing, no shoes, or nude)

162-160 = **2 lb** (4 cups*)

Step 2: Add the amount of fluid consumed during workout:

4 cups + 2 cups = **6 cups**

Step 3: Determine your hourly sweat rate by dividing the total sweat lost by the duration of your workout (in hours):

6 cups / 2 hours = **3 cups/hour**

Measuring Sweat Rate	EXAMPLE	Measuring Sweat Rate	ACTUAL
Pre-workout weight (lbs):	162	Pre-workout weight (lbs):	
Post-workout weight (lbs):	160	Post-workout weight (lbs):	
Weight loss (lbs):	- 2	Weight loss (lbs):	
Weight loss in (cups):	4	Weight loss in (cups):	
Add fluid consumed (cups)	+ 2	Add fluid consumed (cups)	
Total sweat lost in cups	6	Total sweat lost in cups	
Workout duration (hrs):	2	Workout duration (hrs):	
Hourly sweat Rate:	6 ÷ 2	Hourly sweat Rate (cups/hr):	
	3 cups per hour		

*Conversions: 1lb ≅ 16 fl oz ≅ 2 cups

Fluid Replacement Tips for BEST Athletes!

During Exercise

Replace up to 100% of fluid loss during exercise by drinking water or a sport drink. You should avoid losing more than ~1.5% of your body weight during exercise because as your body loses fluid, it will run the risk of compromised performance. The reasons are simple. Think about how the body moves heat from your core to the skin: by increased blood flow leading to sweating or cooling of the body. Once you become dehydrated, through not drinking enough, this process is not well maintained, and the rising heat in your body that cannot escape puts a burden on your heart. Your heart rate increases in an attempt to pump more blood to the skin and away from the muscle, and overall it feels like you are working harder. Soon enough your performance is slacking and you get tired earlier.

After Exercise

Replace between 150-200% of fluid loss after exercise by drinking a sport drink. After exercise, you need almost double the amount of fluid you lost to rehydrate optimally. Use a sport drink after exercise. Sodium and carbohydrates can help absorb more fluid, and both sodium and potassium are important electrolytes to achieve fluid balance after exercise. Plus, you get the carbohydrates to help replace glycogen levels (carbohydrates stored in muscle). Drinking water instead of a sport drink will lead to increased production of urine and your rehydration strategy is less than optimal.

Properly hydrating before, during, and after exercise is a fundamental strategy to optimize performance and recovery. Dehydration during exercise can lead to a performance loss and a delay in the body's ability to quickly reestablish fluid balance after exercise in preparation for your next workout. In fact, it takes the body over 24 hrs to achieve fluid balance after a body weight loss of 3 or more percents.

When to drink a Sport Drink

A sport drink typically contains electrolytes (sodium and potassium among others) and carbohydrates, thus energy. You should choose a sport drink under these circumstances:

- *If your workout is intense*
- *If your workout is long (>45-60 min)*
- *If you have two workouts in one day*
- *If you are out in the heat, cold, or at altitude*
- *During games and tournaments*
- *Before your workout after a sloppy lunch*
- *After your workout, games, tournaments*
- *If you are hungry or thirsty before and during your workout*