

Sports Drinks & Hydration, the Myths, the Facts

Introduction

Gatorade, Powerade, Vitamin water, Coconut water, the is list goes on and on. The controversy over Sports drinks vs water has been raging for years. Ever since 1966, when Gatorade was first introduced and used by the University of Florida's football team, sports drinks have become a popular workout drink.

But who needs to use a special "hydration" drink, how much and how frequently do you need to ingest them? Why isn't water enough to replenish lost fluid during exercise? This newsletter will attempt to dispel the myths surrounding the use of "sports drinks" and present the up-to-date scientific facts about their use and effectiveness.

The Need to Replenish Lost Fluid During Exercise

Hydration is critical to athletic performance. Dehydration is one of the most common reasons for early fatigue during exercise. Losing as little as 2 percent of your body weight can decrease your athletic performance by 25%.

Sweating is the body's way of releasing heat from working muscles. When you sweat, along with water loss you lose minerals and electrolytes which are vitally important for body function during exercise.

Most sports drinks are a concoction of water, sugar (carbohydrates), salt (sodium) and other minerals (potassium and magnesium). Sugar, in the form of liquid sugar and/or high fructose corn syrup help maintain blood sugar levels and provide energy for the working muscles. If your blood sugar levels drop the body must rely on muscle glycogen as its energy source and the ability of the body to perform at a high level of intensity will be compromised and it fatigues faster. Sodium, potassium and magnesium are important for muscle contraction and nerve transmission. If these levels drop muscle coordination is affected and muscle cramping will occur.

Numerous scientific studies have shown that the fluid, carbohydrates and electrolytes in sports drinks delay fatigue, enhance physical performance and speed recovery in athletes.

Watch the Weather

In the summer time, when the weather is hot and humid, your fluid loss will be much greater than in the other three seasons so hydrate accordingly. It is advisable to decrease the intensity and duration of your workouts when the temperature is above 21° C $(75^{\circ}$ F).



Did You Know

Water vs Sports Drinks

Not everyone needs to use sports drinks. The rule of thumb is if you are working out for less than an hour, water will do just fine. Sport drinks benefit people who engage in longer bouts of exercise like running, cycling and sport tournaments. Studies have also shown that sport drinks can enhance the physical and mental performance of individuals who engage in team sports that are played for a short duration but high intensity like hockey and basketball.

How Much is Enough

The key to prevent dehydration is to drink enough fluids before, during and after exercise.

<u>Before</u> - two hours before exercise drink 500 ml of cool fluid.

<u>During</u>—drink 125 to 250 ml every 15 to 20 minutes. It is important to drink even before you feel thirsty. Once thirst has set in so has the early stages of dehydration.

After— Weigh yourself before and after your workout to learn how much body fluid you have lost. Over the first two hours post exercise you should attempt to replenish 500 ml of fluid for every pound you have lost.

It is also important to note that you need to replenish your muscles with carbohydrates and protein from foods or sports recovery drinks.



Chocolate Milk vs Sport Drinks as a Recovery Drink

In recent years chocolate milk has become the "go to" recovery drink after exercise. Many sports drinks lack the vitamins, minerals and protein you find in chocolate milk. The right combination of carbohydrates (CHO) and protein after exercise is vitally important to replenish muscle glycogen (energy) stores and to enhance the repairing of damaged muscle tissue and promote muscle growth.

It is recommended that for the best recovery from exercise you need to ingest 1 gram of CHO for each pound of body weight and a 4:1 ratio CHO to Protein within the first 2 hours after a workout. For a 200lb person this would mean they need to ingest 200 grams of CHO and 50 grams of protein. A good rule of thumb is to ingest 1/2 of your needs in the 1st 30 minutes after a workout ,and then the other 1/2 over the next 1&1/2 hours.

Chocolate milk, with its 55 grams of carbohydrates and 17 grams of protein per 500mL serving, gives you the perfect ratio of CHO and protein. As well because chocolate milk is made up of 87% water, it is an excellent choice to replace fluids and rehydrate.

To complete your nutrition needs after a workout, meals such as pasta and chicken or pancakes and eggs are excellent choices. As well, it is important to drink enough fluids (water) through out the day so your urine returns to straw colour.

Chocolate milk is an easily available, affordable and superior recovery drink than many sport drinks on the market.









1% Chocolate Milk		Sport Drinks
55	CHO (g)	32
17	Protein (g)	0
	Electrolytes:	
322	Sodium (mg)	204
898	Potassium (mg)	56
332	Calories	127
5	Fat (g)	0

Hydration and the Older Adult



Dehydration for the older adult is a serious concern. The fluid requirements for older adults are the same as for younger adults. However, older adults tend to drink less than their bodies need for a number of reasons such as a ability to detect thirst, urinary incontinence concerns and certain medications which interfere with the thirst mechanism.

Dehydration in the older adult is associated with increased risk of falls, urinary tract infections, dental disease, bronchopulmonary disorders, kidney stones, cancer, constipation and impaired cognitive function. For the exercising older adult dehydration increases the stress on the heart and increases the risk of a heart attack.

Signs of Dehydration

- 1. Increased thirst
- 2. Dry or sticky mouth
- 3. Light-headedness or headache
- 4. Fatigue
- 5. Impaired mental focus
- 6. Low urine output
- 7. Inability to produce tears
- 8. Dry skin

Summary

It is important that the older adult routinely drink

plenty of fluids throughout the day but they can also get much of their daily requirement through their diet, especially fruits. Drinking fluids prior to,



during and after exercising must become a priority for them and they should be monitored closely for signs of dehydration while they are exercising.