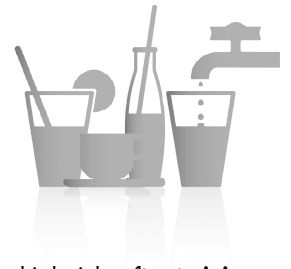


FLUID SELECTION:

Common Questions about Fluid Choices for Sport and Health



The human body is more than 60% fluid. We need to consume 1.5 – 4 or more litres of fluid each day just to replace the fluids we lose through breathing, digestion, and sweating. In addition, athletes will require approximately one litre (or more) of fluid for every hour of training.

Dehydration, resulting from losing more fluids than we consume can negatively affect our health. Constipation, exhaustion, kidney problems, increased appetite, and some types of cancer may be associated with dehydration¹. Insufficient fluid consumption will also jeopardize an athlete's performance in training and competition leading to muscle cramps, poor endurance, elevated heart rate, and possibly heat stroke.

Many concerns arise regarding which are the recommended fluids for health and for sport performances. Here are just a few common questions about choosing suitable beverages for different situations.

Question: *If we need at least 1.5 – 4 litres of fluids daily, which fluids can I count to meet my needs?*

Answer: You can count water, milk, soups, juices, and sport drinks. In fact, count most fluids that you drink in a day towards your overall fluid needs. Even the fluids found within fruits and vegetables will contribute towards your fluid consumption. However, fruit drinks and pop are less effective for hydration. The high sugar content will draw water into the digestive system to dilute the sugar.

Recent research suggests that caffeinated beverages (i.e., coffee and tea) are less dehydrating than what was once believed, and therefore, could be counted towards your total fluid consumption. However, remember that caffeine is a stimulant drug, so moderation is a good thing. Alcohol is also less dehydrating than previously thought. However, alcohol may interfere with metabolism of carbohydrates and protein so it's not a great choice for athletes!

SNAC Sport Nutrition Advisory Committee
Comité consultatif sur la nutrition sportive

Question: *I don't think I can drink milk because it tends to give me gas, cramps, and sometimes diarrhea. What should I replace milk with in my diet?*

Answer: The gastrointestinal symptoms that you described after drinking milk sound like a problem with digesting the milk sugar – lactose. Instead of regular milk you should be able to tolerate lactose-reduced milk (enzymes are added to make the lactose easier to digest). Try a small amount and increase the amount gradually. Alternatively, you could drink a fortified soy or rice beverage. Just make sure these alternative drinks have calcium, vitamin D, and other nutrients added. Also, shake the carton well so that the calcium doesn't sit at the bottom.

Question: *I'm often thirsty. Is it okay to drink lots of juice?*

Answer: Thirst is a sign that you are mildly to moderately dehydrated. Although juice provides fluid that you need, it also contains calories, which you may or may not need. Only you can decide if your body needs the fluid calories found in juice. On the plus side, most juices also contain essential nutrients, such as vitamin C and potassium. You could consider diluting your juice with extra water or sparkling water so that you drink more water and less juice. Regardless, when choosing a juice make sure you are reaching for one that is not sweetened with sugar. "Unsweetened" or "100% juice" should be visible on the label. Avoid fruit drinks, punches, beverages, and cocktails which contain a substantial amount of added sugar. By the way, adding freshly squeezed lemon or lime to water is an effective way to enhance the flavour of plain water.

Question: *I've been told **not to have** a sport drink before, during, or after my soccer games. Is it good advice to avoid sport drinks?*

Answer: There are several situations when a sport drink (i.e., carbohydrate, electrolyte solution) is beneficial for athletes. Sport drinks can help store extra energy when an athlete is **carbohydrate loading** during the days before a competition. Secondly, a sport drink can provide available energy when consumed as part of a snack **before** training or competition. Furthermore, a sport drink **during** exercise helps to maintain your energy, focus, and skill level. And finally,

consuming a sport drink right **after training** can speed up your body's ability to restore energy.

By the way, sport drinks provide more than just energy, they obviously contain fluid which is extremely important for peak performance. As well, the electrolytes (i.e., sodium, potassium) that your body loses during exercise need to be replaced too.

Check out the following tip sheets for more information:

- **Sports Drinks: Their role in hydration for athletic performance** by Heather Petrie
- **Hyponatremia in Athletes** by Bob Murray, John Stofan and E. Randy Eichner, GSSI Sports Science Exchange, Volume 16 (2003), Number 1

Question: *My teammate sometimes drinks an energy beverage before practices and games. Are these energy drinks a healthy choice?*

Answer: Energy drinks have become very popular and are readily available in vending machines as well as corner and grocery stores. However, energy drinks are not a healthy choice. They generally contain too much sugar as well as caffeine and even various herbal ingredients. If you are not used to the effects of caffeine, as most children are not, you may feel anxious, nervous, jittery, and experience an elevated heart rate. Caffeine can also cause insomnia and mild diarrhea. Consumption of energy drinks should be discouraged for athletes, especially young athletes.

Check out the following tip sheets for more information:

- **Energy Drinks: What you need to know** by Heather Petrie
- **Herbal Supplements: Do they work? Are they safe?** by Ellen Coleman and Ron Maughan, GSSI Sports Science Exchange, Volume 13 (2002) Number 4

Water is the largest single component of our diet and body. Without fluids we will not survive for more than about six days¹. Adequate fluid consumption is essential for good health and for sport performance on a daily and long-term basis. We can hydrate our body with a number of fluids from plain water to unsweetened juices, milk, or soy drinks. The emphasis should be towards a variety of healthy beverages.

1. *Nutrition Now*, 4th Edition. Judith E. Brown. Thomson Learning, Inc. 2005

