

Heat illness is a range of medical problems that occur when the body is unable to dissipate the heat that it is generated while exercising. Dehydration is a main factor in causing heat illness.

## 1. Types of Heat Illness:

“Heat cramps”

“Heat syncope” (post-race fainting)

“Heat exhaustion”: fatigue, weakness, headache, light-headedness, dizziness, confusion, nausea/vomiting, muscle aches, increased heart rate

“Heat stroke”: severe increased body temperature, decreased level of consciousness (can lead to serious kidney problems and even death)

Dehydration is also associated with bloody diarrhea and bloody urine

## 2. Prevention:

- Appropriate fitness
- Heat acclimatization: 2-3 weeks required for body to adapt to hot environment
- Decrease training intensity/volume if very hot and humid
- Fluids, fluids, fluids!!!

## 3. Fluid Recommendations:

Daily adequate fluids: approx. 2 litres/day (8 cups.)

Before game or event:

- 2 hours prior: 500 ml (2 cups)
- 15 minutes prior: 150-250 ml (1/2 to 1 cup)

During game or event:

- every 15-20 minutes: 150-250 ml (1/2 to 1 cup)
- may need more (especially if hot and humid, high sweat rate)

After game or event:

- weigh yourself and replace your weight loss with fluid (e.g., if you lose 1 kg, then drink at least 1 litre of fluid)
- refuel with carbohydrate

## 4. Type of Fluid:

In general, if event is less than 1 hour, water is adequate.

If game is greater than 1 hour, then fluid should contain some carbohydrate.

-must replace your body stores of glycogen (stored carbohydrate) that your muscles use for endurance exercise

-has been shown to improve endurance athletic performance

Amount of carbohydrate in sports drinks (6-7%, or 60-70 g per litre) is adequate if you follow the fluid recommendations for proper hydration.



## 5. Fluids and Athletic Performance:

Many research studies have shown that athletic performance for endurance activities (e.g. running) will be improved by staying well-hydrated (drinking adequate fluids).

As little as 1-2% dehydration will impair athletic performance.

You cannot rely on sense of thirst as an indicator for need of fluids. This is already too late!



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