

too hot!



Heat Related Illness

Participating in recreation and sport activities provides many benefits for children and can be a fun and enjoyable way to be physically active.

However, when the temperature and humidity rise in the summer months, children can be at risk to develop heat-related illness. This pamphlet provides information about heat-related illnesses for parents, coaches, and organizers of physical activities. It describes the symptoms of the various illnesses, how they can be prevented, and how they should be treated if they occur.



## What causes heat-related illness?

Physical activity increases the amount of heat produced by our muscles. Elevated air temperature and high humidity make it more difficult for us to lose this excess heat and maintain a healthy internal body temperature. Sweating is the primary way our body controls its temperature during physical activity. However, as the humidity rises, sweating becomes less effective.



Children are less able to cope with heat and humidity than adults and have a higher risk for developing heat-related illnesses. This risk increases when children are involved in prolonged, intense physical activity in hot and humid weather.

# What are the signs and symptoms of a heat-related illness and how can it be treated?

It is important that sport and recreation organizers, coaches, volunteers, and parents know how to recognize the signs of a heat-related illness. If recognized early and treated properly, a mild illness can be cured and prevented from progressing to something more severe. Here is a list of heat-related illnesses in order of severity.

## ! Heat Cramps

Heat cramps cause **spasms of the muscles in the legs and abdominal area**. A child who experiences these cramping symptoms needs to drink water or a sport drink, rest in a cool area, and gently stretch and massage the affected muscles.

## !! Heat Syncope

A child who **faints or experiences near-fainting** needs to be placed in a cool shady area immediately and be given water or a sport drink to cool down their body temperature.

## !!! Heat Exhaustion

The symptoms of heat exhaustion include **fatigue, weakness, reduced energy, dizziness, headache, nausea, rapid pulse, and heavy sweating**. Anyone who experiences these symptoms needs to seek medical attention immediately. Immediate treatment includes drinking water or sport drink, getting out of the heat and into a shady area, removing any excess clothing, and placing ice packs or cold wet towels to the neck, armpit, and groin area.

## !!!! Heat Stroke

Anyone experiencing **confusion, disorientation, loss of consciousness, or seizures** is in an emergency state and needs immediate medical attention. This person must be taken to the nearest hospital. Immediate treatment includes removing excess clothing, placing the patient in a pool with cold or ice water, and applying ice packs to the neck, armpit, and groin area.

It is important to note that more severe types of heat-related illness are not always preceded by milder signs and symptoms. All coaches, parents, and event organizers must be alert for all the signs and symptoms and ensure that all participants are properly hydrated.



# How can I prevent and protect against heat-related illness?

The most important and easiest step in preventing heat-related illness is to ensure that children drink plenty of fluids before, during, and after their activities. During exercise, sweating is the most efficient way to lose excess body heat. Being properly hydrated is the first step in preventing heat-related illness.

Children should drink double the recommended amount of water or sport drink **2 to 3 hours before** the activity and then drink the recommended amount again **20 to 30 minutes before** they begin the activity.

The following chart indicates the recommended amount of water or sport drink based on weight.

Recommended amount of water/sport drink to drink every 15–20 minutes during activity:		
Under 40 kg (90 lb) Drink 150 mL (5 oz)	Under 60 kg (130 lb) Drink 250 mL (8 oz)	Over 60 kg (130 lb) Drink 300 mL (10 oz)
		

Coaches should be on the look out for symptoms of dehydration. These include thirst, fatigue, dizziness, loss of energy, and irritability. If a child displays any of these symptoms, they should stop the activity and rest in a shady cool area and be given water or a sport drink to cool down their body temperature.

Replacing fluids after the activity is equally important. As a general rule, if a child notices that their urine is dark yellow (like apple juice) rather than pale yellow (like lemonade), then they are most likely dehydrated and should continue to drink water.



It is important to note that carbonated beverages, fruit juices, and drinks containing caffeine are not suitable and should be avoided. Sport beverages with a carbohydrate content higher than 6 to 8 per cent are also not recommended.





## As an event organizer are there other factors I should consider when planning my event?

There are many other factors that should be taken into consideration when planning an event during the summer months. These include the following.

### Time of Day

The hottest part of the day is typically between 10 am and 6 pm. Events should be planned around this part of the day. Strenuous events are best planned for the mornings before 10 am or for early evenings after 6 pm.

### Clothing

Lightweight, light-coloured, loose-fitting clothes that have the ability to draw sweat away from the skin are recommended. It is recommended that parents ensure that their child has a dry change of clothes. Clothing that has become sweat soaked should be changed after the activity.

### Fitness of Participants

An event organizer should be aware of the level of physical fitness of the participants. Children who are overweight or do not participate in regular physical activity are generally more susceptible to heat-related illnesses.

### Health of Participants

It is critical that you are aware of the overall health of the participants. Children with certain illnesses such as diabetes, episodes of vomiting or diarrhea, fevers, and heart problems may be more vulnerable to heat-related illness. Certain medications such as stimulants (Ritalin, decongestants), antihistamines, and some heart and blood pressure drugs can also increase the risk for illness.

## Provide Shaded Areas

An event organizer should also ensure that shady areas are available for participants and spectators. This can be accomplished through natural means such as coverage provided by a tree or by erecting a marquee/tent or using umbrellas to shield them from the sun. Participants should also be reminded to apply sunscreen and wear a hat when possible.

## Water Bottles

As important as it is to keep the participants hydrated, it is equally important that they have their own water bottles and do not share them with others. Sharing water bottles can lead to the transmission of communicable diseases, which can range from mild to very serious.



A healthy, well  
planned event  
is the road  
to success.



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