

Introduction

These guidelines have been developed to:

- Raise awareness throughout the Little Athletics community about the issues associated with exercising and/or competing in hot and humid conditions.
- Provide information so that event organisers, coaches, officials, parents and the general Little Athletics community can take common sense steps to minimise the extra risks that arise when exercising in hot or humid weather.
- Help event organisers, coaches and officials to decide whether an event or training should be modified or cancelled and when it is safe to compete or train in the heat.

It is the responsibility of event organisers, Little Athletics centre personnel, coaches, parents/guardians and other relevant individuals to read and understand these guidelines and seek further clarification from Little Athletics NSW as required.

Young Children and Hot Weather

Young children are especially at risk in hot weather. Prior to puberty, a child's sweating mechanism, which is essential for effective cooling of the body, is poorly developed. Also, a child's ratio between weight and surface area is such that the body absorbs heat rapidly. Sensible measures, as outlined in these guidelines, need to be taken to protect Little Athletes from over-exertion in hot weather.

What is a Heat Illness?

A heat illness in sport may present itself in a variety of forms including heat exhaustion and the more severe heat stroke.

Signs

Some common signs of heat illness that may be seen in Little Athletes are listed below in order of increasing seriousness/severity:

- Dizziness (light headedness).
- Complaining of being hot and appearing distressed.
- Appearing exhausted or weak (fatigued); needing help to stand.
- Stumbling, unsteady, clumsy, falling.
- Collapse – unable to stand; and usually accompanied by some degree of confusion / drowsiness.
- Collapse - altered consciousness ranging from confusion, drowsiness through to unconsciousness.

NOTE: Some of these signs are also seen in children who have pushed themselves and are distressed at the end of their event, but are not due to a heat illness.

Treatment of a Heat Illness

Participants who show any signs of a heat illness should be stopped and removed from the activity immediately.

- Lay the person down to rest in a cool shaded area with some air circulation.
- Raise the legs and pelvis if possible.
- Remove excess clothing.
- Cool the person by wetting, misting or spraying the skin with water and fanning vigorously.
- Apply ice packs to the neck, armpits and groin.
- Give them cool water if they are conscious.

If the person does not quickly recover and remains seriously ill, confused, vomiting or shows signs of altered consciousness call an ambulance immediately and seek medical help. Continue cooling the person.

NOTE: On advice from the medical officer to the appropriate referee or manager, an athlete may be removed from an event if they appear to be suffering from a heat illness.

Risk Factors

The risk factors for heat illness that have been identified as relevant to Little Athletics activities are:

- Ambient temperature/humidity.
- The type of event and more particularly the number of events competed in at a carnival.
- Two-day (versus one-day) carnivals.
- A lack of adequate fluid intake on the day.
- Direct sun exposure on the day.
- Medical issues such as an illness and specific at-risk diseases (diabetes and cystic fibrosis).
- The type of track; there is a trend towards a higher risk of heat illness on a synthetic track compared to a grass track.

Management of Hot Weather Conditions at Little Athletics Activities

Heat illness can occur across all events and at temperature levels well below those considered to be a risk. Heat exhaustion has occurred at Little Athletics carnivals in events from 100m to 3000m, in walks and in field events. This reality highlights the importance at any carnival of pursuing a range of risk minimisation strategies.

1. Education

Opportunities should be taken to educate athletes and parents/guardians about the importance of sun safety, avoiding dehydration and managing hot weather conditions. Such messages should be regularly reinforced.

2. Preparation

It is recommended that if hot weather is likely to occur that parents/guardians should ensure that athletes are sufficiently hydrated in the lead up to the activity and proactive measures are taken to cope with the anticipated conditions. These may include:

- Packing sufficient drinks and making them readily available.
- Taking iced or frozen drinks to the activity.
- Taking ice packs that can be held or massaged against the skin for a cooling effect.
- Packing towels and face washers that can be soaked with water during the day and draped around shoulders and necks.
- Taking personal spray bottles and/or battery-operated fans.
- Taking umbrellas and other shade structures in case there is not adequate shade at the venue.

3. Shade

Carnival organisers must ensure that shade is provided at all field events, marshalling and finish areas. It should also be provided in other areas where participants, staff, officials and volunteers could potentially be waiting for long periods of time unprotected from the sun.

In hot weather, where possible, athletes who have been marshaled should be kept in the shade as long as possible prior to their events, and returned to the shade if there are any unexpected delays.

On hot days, parents/guardians should ensure that athletes stay out of the sun and rest as much as possible while not competing.

4. Drinks

Younger children (<11-13yrs) generally do not appreciate what feeling thirsty is. Older children (13-17yrs) usually do appreciate thirst, but this may not result in an appropriate response on the day under the stress of competition.

Body fluids are lost through sweat, so young athletes should be encouraged to drink plenty of fluids before, during and after exercise. More fluids than normal will need to be consumed by participants in hot weather due to their increased sweating rate. Parents/guardians must take a major role in the monitoring of fluid intake, ensuring enough fluid intake and encouraging the child's involvement in managing the issue for themselves. Young athletes should be taught to drink BEFORE they get thirsty, rather than when they get thirsty but also need to take care not to over-hydrate. The aim should be to drink enough to replace lost fluids, but not more than that. Parents/guardians should ensure that athletes take adequate fluids out with them to an event.

Carnival organizers should ensure that:

- There is a number of water stations in and around the competition area. They should be at all field events, marshalling areas and the finish line.
- Additional water is provided so as to allow participants to wet their face, clothes and hair to assist the cooling process. E.g. Spray bottles, buckets and sponges, etc.

5. Attire

- All athletes should wear sun safe attire. Clothing should be light-coloured, light weight, loose fitting and well-ventilated to allow easy evaporation of sweat from the skin. It should also provide adequate protection from the sun. Whilst exposed to the sun (except when competing) a well-ventilated broad brim hat should be worn.
- All officials and volunteers must be seen to be setting a sun smart example. During activities, they are encouraged to wear collared shirts, hats and sunglasses.

6. Sunscreen

Parents/guardians are responsible for ensuring that their child applies sufficient amounts of sunscreen to protect them whilst they are involved in a Little Athletics activity.

Sunscreen should also be provided and located in and around the competition arena.

7. Public Announcements

It is recommended that during competition, public announcements be regularly made reminding those at the event to keep drinking water, apply sunscreen and remain in the shade wherever possible.

8. Other

In hot weather the following individuals may be at increased risk of heat related illness, and appropriate precautions should be implemented, and their condition monitored on a frequent basis. The group includes those that:

- Are not fit or who are overweight
- Are not used to hot weather or had sufficient time to acclimatize to such weather
- Have recently been ill. Athletes who have experienced a high temperature, infection, diarrhoea or vomiting should not participate and should be taken home.
- Have a medical condition that that may predispose them to heat illness such as cystic fibrosis or diabetes.

In hot weather, parents and guardians of athletes at increased risk should carefully consider whether or not it is appropriate for the athlete to be participating in exercise.

Cancellation or Postponement

a) Little Athletics NSW Carnivals and Events:

The following guidelines are not binding, but Little Athletics NSW reminds all parties that they must act responsibly. It must be taken into account that children are especially at risk in the heat and are at a greater risk of suffering from heat illness. A common sense approach is encouraged with consideration of the comfort and well-being of all individuals including participants, officials and spectators.

- Venues hosting Little Athletics NSW carnivals/activities must have equipment that measures both ambient temperatures and humidity levels.
- In warm weather temperature readings should be taken at 15-minute intervals, at the same location each time. Readings should be taken in the shade.
- Once the ambient temperature reaches 26-30 degrees Celsius and 60% humidity, public announcements should be frequent, and plenty of water and shade should be made available to the athletes and officials.
- Thought should be given to the timing of at-risk events. At 31-34 degrees Celsius and when humidity exceeds 50%, consideration should be given to postponing distance events until it becomes cooler.
- If the ambient temperature and the relative humidity reach the levels in the table below, activities are to be cancelled or postponed until temperature/humidity fall below the levels listed. Little Athletics NSW will not only take athletes into account but also the officials, volunteers and spectators.

Ambient Temperature Celsius	Relative Humidity %	Risk of Thermal Injury	Heat Index
30	84	EXTREME, POSTPONE UNTIL COOLER CONDITIONS APPLY OR FALL BELOW THE LEVELS LISTED	38.8
31	74		38.8
32	65		38.7
33	58		38.8
33.1	57		38.7
33.2	56		38.6
33.3	56		38.8
33.4	55		38.7
33.5	54		38.6
33.6	54		38.9
33.7	53		38.7
33.8	52		38.6
33.9	52		38.9
34	51		38.7
34.1	50		38.6
34.2	50		38.8
34.3	49		38.7
34.4	49		38.9
34.5	48		38.8
34.6	47		38.7
34.7	47		38.9
34.8	46		38.8
34.9	45		38.6
35	45		38.8
35.1	44		38.7
35.2	44		38.9
35.3	43		38.8
35.4	42		38.6
35.5	42		38.8
35.6	41		38.7
35.7	41		38.9
35.8	40		38.7
35.9	40		38.9

Ambient Temperature Celsius	Relative Humidity %	Risk of Thermal Injury	Heat Index
36	39	EXTREME, POSTPONE UNTIL COOLER CONDITIONS APPLY OR FALL BELOW THE LEVELS LISTED	38.8
36.1	38		38.7
36.2	38		38.8
36.3	37		38.7
36.4	37		38.9
36.5	36		38.7
36.6	36		38.9
36.7	36		38.9
36.8	34		38.6
36.9	34		38.8
37	33		38.7
37.1	33		38.9
37.2	32		38.7
37.3	32		38.9
37.4	31		38.7
37.5	31		38.9
37.6	30		38.8
37.7	30		38.9
37.8	29		38.8
37.9	29		38.9
38	28		38.8
38.1	27		38.6
38.2	27		38.8
38.3	26		38.7
38.4	26		38.8
38.5	25		38.7
38.6	25		38.8
38.7	24		38.7
38.8	24		38.8
38.9	23		38.7
39	23		38.8

- Postponement or cancellation of events may be appropriate even in circumstances falling outside these recommendations. The Association recognises that heat illness can be a risk at temperature levels below the proposed cut-offs and that unusual “heat wave” conditions or variations from the average temperature for the time of year present a greater danger of heat illness.

b) Centre Competition and Training

- It is recommended that all Little Athletics venues have equipment that measures ambient temperatures.
- In hot weather it is recommended that temperature readings be taken at 15-minute intervals, at the same location each time. Readings should be taken in the shade.
- Once the ambient temperature reaches 26 degrees Celsius public announcements should be frequent, and plenty of water and shade should be made available to the athletes and officials.
- Thought should be given to the timing of at-risk events. At 31-35 degrees Celsius, consideration should be given to postponing distance events until it becomes cooler.
- It is recommended that if the ambient temperature reaches 38 degrees in dry heat and 36 degrees when the weather is humid that activity is cancelled or ceased until conditions are cooler. Remember not only to take athletes into account but also the officials, volunteers and spectators.
- Postponement or cancellation of events may be appropriate even in circumstances falling outside these recommendations. It must be remembered that heat illness can be a risk at temperature levels below the proposed cut-offs.
- Unusual “heat wave” conditions or variations from the average temperature for the time of year present a greater danger of heat illness.

More Information

Contact Little Athletics NSW, Locked Bag 85, Parramatta, NSW, 2124; Ph: 02 9633 4511 or 1800 451 295; Fax: 02 9633 2821; Email: admin@lansw.com.au; Web: littleathletics.com.au.

References and Further Reading

- Australian Red Cross, First Aid Handbook, February 2009
- Sports Medicine Australia, ‘Beat the Heat – Playing and Exercising Safely in Hot Weather – Fact Sheet’, 2008
- Sports Medicine Australia, Preventing Heat Illness in Sport Policy
- Sports Medicine Australia, ‘Hot Weather Guidelines for sporting clubs and associations and the physically active’
- Sports Medicine Australia – South Australian Branch, ‘Hot Weather Guidelines’
- Sports Medicine Australia – UV Exposure and Heat Illness Guide