



Extreme Weather Guidelines

Board Endorsed: Thursday 18th September 2014

Important Disclaimer

The information contained in this guide is general in nature and does **not** constitute medical advice from your doctor or health professional. While all reasonable attempts have been made to ensure the accuracy of the information contained in this guide, Hockey Australia, SunSmart, Smartplay, and associated parties cannot accept responsibility for loss, injury, claim or damage resulting from the use or application of information within this guide.



Table of Contents

1.	Introduction	Page 2
2.	Extreme Weather	Page 2
3.	UV Exposure and Heat Illness	Page 3
	UV Exposure and Heat Illness Checklist	Page 7
4.	Hail	Page 10
5.	Lightning	Page 10
6.	Chill	Page 10
7.	Useful Resources	Page 11
	Appendix A: Extract from Hockey Australia Operations Manual Attachment C HA Tournament Regulation (Outdoor) September 2014	Page 12

1. INTRODUCTION

Hockey Australia has a responsibility to take a positive leadership role in educating and increasing the awareness of its participants towards the dangers of physical activity in the heat and during extreme weather conditions. With this in mind, the Hockey Australia Extreme Weather Guidelines have been developed which reinforce the guidelines produced by Sports Medicine Australia.

It should be noted that these are purely guidelines.

The guidelines should be considered for all participants involved in hockey, including players, officials, umpires, coaches, parents, volunteers, staff and spectators.

State and Territory Associations and Clubs and Associations are strongly encouraged to use Hockey Australia's Extreme Weather Guidelines, Hockey Australia's regulation relating to interruptions to a match at an Australian Championship (as detailed in the Hockey Australia Operations Manual - refer to **Appendix A**), and the educational resources produced by Sports Medicine Australia to develop their own guidelines that incorporate any local competition by-laws or regulations that may be in place in relation to the modification, suspension or cancellation of training activities, competitions or events due to adverse weather conditions.

2. EXTREME WEATHER

Extreme weather may be defined as weather that threatens the immediate or long-term safety of individuals, as a result of rain, hail, lightening, wind chill or heat.

The risk is determined in conjunction with Sport Medicine Australia's Guidelines as well as the Bureau of Meteorology's forecast conditions.

Weather Condition	Extreme weather determinant
Ambient temperature	> 36 degrees Celsius
Wet bulb globe temperature (shade)	> 30
Apparent temperature (wind chill)	< 2 degrees Celsius
Wind speed	> 40km per hour
Rainfall	> 80mm within 24 hours

Notes:

Wind may create additional hazards in regard to trees, branches or other materials becoming projectiles.

Rain also needs to be considered in relation to its impact on the safety of the playing surface.

3. UV EXPOSURE AND HEAT ILLNESS

The sun's UV is both the major cause of skin cancer and an important source of vitamin D. It is recommended that sport and recreation settings take a balanced approach to UV exposure that reflects the varying levels of UV throughout the year and across Australia.

Overexposure to UV can cause skin damage (including tanning and sunburn), eye damage and skin cancer. The good news is that skin cancer is largely preventable. Sport and recreation providers can reduce the risk associated with UV overexposure by implementing some simple preventative strategies.

Whenever UV levels reach three and above, sun (UV) protection is needed. During this time, use a combination of five sun protection measures:

1. **Slip** on sun-protective clothing – that covers as much skin as possible.
2. **Slop** on SPF30+ sunscreen and lip balm – make sure it is broad spectrum and water-resistant. Apply sunscreen 20 minutes before going outdoors and every two hours afterwards.
3. **Slap** on a hat – that protects your face, head, neck and ears.
4. **Seek** shade.
5. **Slide** on some sunglasses – make sure they meet the Australian standard.

Even if you cannot utilise some of these points when playing, ensure that you follow them in off-field activities.

You can easily find the daily UV alert by checking the newspaper or looking on the SunSmart www.sunsmart.com.au or Bureau of Meteorology www.bom.gov.au websites.

For further information relating to UV exposure and heat illness visit www.smartplay.com.au.

Heat Illness

Heat illness can occur when a participant exercises vigorously in hot conditions. It may also occur with prolonged exposure to hot weather, even if activity is low intensity. In cool weather, heat illness can also present when exercising at high intensity.

Heat illness in sport presents as **heat exhaustion** (more common) or **heat stroke** (rare but life threatening). Symptoms may include light-headedness, dizziness, nausea, obvious fatigue or loss of skill and coordination, unsteadiness, cessation of sweating, confusion, aggressive or irrational behaviour, collapse or ashen grey pale skin.

Responses to heat vary; it is not possible to provide overall recommendations about limiting conditions in hot weather. However, heat illness can be prevented by knowing the risk factors and applying prevention strategies to minimise risk. Factors that increase the risk of heat illness include:

- high exercise intensity (e.g. exercising close to your personal capacity)
- lack of fitness (e.g. exercising at an intensity or duration beyond your current capacity)
- previous history of heat illness or heat intolerance
- age – junior and veteran participants are at higher risk due to their age

- illness and medical conditions (e.g. current or recent infectious illness or chronic health disorders at any age)
- high air temperature and high humidity (see Heat Illness Chart below)
- low air flow or movement (no wind)
- prolonged exposure to hot conditions, heavy clothing and protective clothing (e.g. padding)
- lack of acclimatisation to being active in warm and humid conditions
- dehydration (inadequate water intake before exercise and during activity longer than 60 minutes)
- radiant heat from surfaces such as black asphalt, concrete or black rubberised synthetic surfaces can intensify hot conditions.

Children and Heat Stress

Children sweat less and get less evaporative cooling than adults. In warm and hot weather they have greater difficulty getting rid of heat; they look flushed, and feel hotter and more stressed than adults. Overweight children are particularly disadvantaged exercising in warm weather.

Children seem to be effective at “listening to their bodies” and regulating their physical activity. For this reason, children should always be allowed to exercise at their preferred intensity. They should never be urged to exercise harder or compelled to play strenuous sport in warm weather. If children appear distressed or complain of feeling unwell, they should stop exercising.

In warm weather wet sponging will make children feel more comfortable.

Drinks should be provided for children playing sport.

Heat Illness Chart

The **Heat Illness Chart** is a guide to the relationship between ambient temperature and the risk of heat illness. When observing this chart consider:

- there are not clear demarcations in risk between temperature ranges
- stress increases with rising air temperature and relative humidity
- at low ambient temperatures the body can cope with higher humidity than at high ambient temperatures
- stress increases with relative humidity as it becomes more difficult to regulate body temperature due to a decrease in the evaporation of sweat (a mechanism used to keep the body cool in the heat and while exercising)
- individual risk factors including acclimatisation to location conditions.

Ambient Temperature

Easily understood, most useful on hot, dry days.

Ambient Temperature °C	Relative Humidity	Risk of Heat Illness	Recommended management for sports activities
15-20		Low	Heat illness can occur in running. Caution over-motivation.
21-25	Exceeds 70%	Low – Moderate	Increase vigilance. Caution over-motivation.
26-30	Exceeds 60%	Moderate - High	Moderate early pre-season training. Reduce intensity and duration of play/training. Take more breaks.
31-35	Exceeds 50%	High - Very High	Uncomfortable for most people. Limit intensity, take more breaks. Limit duration to less than 60 minutes.
36 and above	Exceeds 30%	Extreme	Very stressful for most people. Postpone to cooler conditions (or cooler part of the day) or cancel.

WBGT

Further guidance might be gained from the Wet Bulb Globe Temperature (WBGT) index. The WBGT is particularly useful for hot, humid days.

WBGT	Risk of Heat Illness	Recommended management for sports activities
Less than 20	Low	Heat illness can occur in running. Caution over-motivation.
21-25	Moderate - High	Increase vigilance. Caution over-motivation. Moderate early pre-season training. Take more breaks.
26-29	High – Very High	Limit intensity, take more breaks. Limit duration to less than 60 minutes per session.
30 and above	Extreme	Consider postponement to a cooler part of the day or cancellation (allow swimming).

Check local weather conditions

The Bureau of Meteorology provides information on local weather conditions and observations including temperature, UV, wind speed and thermal comfort. Weather warning, including heat waves, fire and storms can be viewed at www.bom.gov.au and should be considered as part of any club's safety plan. The provision of safety personnel able to identify, treat and manage heat illness is also an important part of this planning.

UV EXPOSURE AND HEAT ILLNESS CHECKLIST

1. Schedules, fixtures, rule modifications and cancellation policy

- Where possible, training, events and competitions are scheduled to minimise exposure to UV levels of three and above and avoid high temperatures.
- Cancellation of training, events or competition occurs when high-risk conditions are forecast.

Where it is not possible to avoid peak UV and heat periods, the following interim steps are taken to minimise the risk of overexposure to UV and heat illness:

- The duration of the match, warm-up, training or other activity is reduced and has limited intensity where applicable.
- Scheduling of activities to start earlier in the morning or later in the evening thus avoiding high-risk UV exposure times.
- Increase and/or extend the number of rest breaks and opportunities to seek shade and refreshments.
- Rotate officials out of the sun more frequently than usual. Be aware that older volunteers maybe at an increased risk of heat illness.
- Increase the number of player rotations within a match.
- Hold activity at an alternative venue or reschedule wherever possible.
- Officials, coaches and senior members are to act as role models by wearing sun-protective clothing and hats, applying sunscreen and seeking shade wherever possible.

2. Shade

- Conduct an assessment of the existing shade available at outdoor venues. Identify whether the shade is appropriate or needs improvement.
- Utilise shade available from buildings, trees and other structures where possible. These can be used for player interchanges, between activities or as spectator areas. Ensure that these identified areas provide shade when matches are played.
- Provide areas of rest in shaded areas for spectators and individuals when not actively participating or playing. This may include the interchange bench and off-field officials.
- Where necessary, interchange and presentation ceremony areas are to be protected by shade.
- Participants and officials rotate to cooler, shaded areas.
- Ensure when there is insufficient natural or built shade, temporary shade structures are provided and/or participants and spectators notified to bring their own temporary shade structures; such as umbrellas.

UV EXPOSURE AND HEAT ILLNESS CHECKLIST (continued)

3. Clothing

- Officials, volunteers, and players must ensure that when off-field that sun protection is addressed such as wearing a wide brimmed hat and sunglasses.
- Ensure that playing uniform and other parts of clothing are loose fitting and lightweight where possible.
- Participants without appropriate protective clothing should not permitted to spend extended periods exposed to UV levels of three and above.

4. Sunscreen

- SPF 30+ broad spectrum, water resistant sunscreen is promoted and/or provided to participants.
- Sunscreen is stored below 30°C and replaced once it is past the use-by-date.
- Participants are encouraged to apply sunscreen 20 minutes before training or playing and to reapply every two hours.
- For best protection, participants are encouraged to apply a generous amount of sunscreen (the equivalent of one teaspoon per limb).

5. Air Flow

- Air flow is maximised at training and competition venues, specifically indoor hockey venues (e.g. doors and windows are opened or marquee walls removed).
- Spaces with air-conditioning or fans are made available in high risk conditions.

6. Hydration

- All participants (including players, coaches and officials) are required to bring their own clearly labelled drink bottle.
- Cool clean water is available to all participants.
- All those involved are aware that they need to be well hydrated before participating in physical activity.
- Flexible drink breaks are provided in hot or humid conditions.
- Individuals are permitted to drink between breaks at their own discretion.

UV EXPOSURE AND HEAT ILLNESS CHECKLIST (continued)

7. Education and Information

- The UV exposure and heat illness guidelines are displayed in a prominent location (e.g. website or noticeboard).
- The times when UV protection is required (as indicated by a newspaper and/or the SunSmart website) and the Sports Medicine Australia heat illness chart are displayed in a prominent location.
- Links to SunSmart www.sunsmart.com.au and Smartplay www.smartplay.com.au are included on our website.
- Participants are notified at the beginning of September that UV levels will generally be three and above between 10am - 3pm and sun (UV) protection measures need to be implemented.
- Participants are notified at the start of May that sun (UV) protection measures are no longer required unless UV index levels reach three and above.
- UV protection and heat illness prevention messages are included in event programs and newsletters.
- Announcements and/or notifications are made to remind all involved of key UV and heat illness prevention measures.
- Clubs or Officials are responsible for identifying what the UV level is going to be and remind athletes at the training or match the precautions to be taken.

8. First aid

- The first aid kit includes a supply of SPF 30+ broad spectrum, water resistant sunscreen.
- Trained first aid personnel or sports trainers are present at training and events to manage sunburn and heat illness.
- Contact details of the closest medical assistance are displayed in a prominent location (e.g. first aid room or canteen).
- Any participant feeling discomfort or distress is monitored and evaluated by trained safety personnel.
- Ice, fans and water spray bottles are available as cooling aids.

9. Individual risk factors

- Information on participants' medical conditions and medical history is collected (according to privacy legislation).
- A record of injuries (including heat illness) is kept.
- Age, fitness, skin characteristics, acclimatisation, gender and medical conditions are considered when making decisions.
- If in doubt, an individual is advised to see a medical professional for clearance to participate.

4. HAIL

All hailstorms present some risk to players in an open playing field, and the size and intensity of the storm can change dramatically in a short period of time.

All play should be suspended during hail storms so that players and officials can seek suitable shelter.

It is important to also be aware of any significant temperature drop, rainfall and increased wind that may be associated with the hail conditions.

Play should be restarted after the hail has stopped falling, with particular attention being given to the amount of ice on the playing surface (size and thickness of layer). In some cases it may be unsafe to resume play immediately due to an ice covered surface. Deferral of the restart to allow melting (or manual clearing in parts) should be considered in extreme circumstances.

5. LIGHTNING

Lightning is the visible part of an electrical discharge. Thunder is the resulting sound from the rapid expansion of the air after this electrical discharge. Sound follows light at 0.34 km/sec. Check the forecast and watch the sky. Darkening skies, flashes or lightning, or increasing wind may indicate an approaching storm.

Lightning safety tips:

- Use the **30/30 Lightning Rule**. If the time between the lightning flash and the thunder sound is less than 30 SECONDS then play should be suspended, and not resumed until 30 MINUTES after the last thunder (30 seconds relates to 10 Kilometres away).
- Find safe shelter. Sturdy buildings are the safest place to be during lightning storms. Avoid sheds, picnic shelters, metal coaching boxes & goals. Staying in a car with windows closed also offers some protection.

Note: Thunder is not usually heard 24-32 kilometres from the lightning strike.

6. CHILL

Extreme weather can produce two chill risks: the absolute air temperature and the wind chill factor. Of these, wind chill in winter sports is the more significant risk.

Apparent Temperature (**AT**) is an adjustment to the actual air (ambient) temperature based on the perceived effect of the extra elements such as humidity and wind. **AT** is valid over a wide range of temperatures, and it includes the chilling effect of the wind at lower temperatures.

Minus 2°C (AT) is the point where play should be suspended for wind chill factor.

When using the **AT** as a wind chill indicator, the model assumes an appropriately dressed adult for those conditions. If clothing were to get wet, the cooling effect would be greater than that predicted by the model, and the chance of hypothermia would be greater than indicated by the **AT**. In wet, windy conditions, someone wearing inadequate clothing can become hypothermic in quite mild conditions. The risk also increases for children.

7. USEFUL RESOURCES

[UV Exposure and Heat Illness Guide](#)

[Hot Weather Guidelines: for sporting clubs and associations and the physically active](#)

[Beat the Heat: playing and exercising safely in hot weather](#)

[SunSmart](#)

[Smartplay](#)

[Bureau of Meteorology](#)

APPENDIX A

EXTRACT FROM HOCKEY AUSTRALIA OPERATIONS MANUAL – ATTACHMENT C: HA TOURNAMENT REGULATIONS (OUTDOOR) SEPTEMBER 2014

11 INTERRUPTIONS OF A MATCH

11.1 If a match is interrupted by the umpires (e.g. because of weather or field of play conditions) or by the Technical Officials (e.g. because of thunderstorm with lightning), the continuation of this match is dependent upon the following features;

- a. The match should only be continued should it be able to be completed within 2 hours of the match commencement time.
- b. If the match is still in the first half and cannot be resumed, a 0-0 draw will be the result.
- c. If the match has progressed into the second half, the score at the point that the match was abandoned will stand.
- d. Appendix 3 shall apply to all pool ranking inquires.
- e. In the event of a semi-final or final being abandoned pre or post half time, the team finishing higher at the end of the pool round shall be deemed to be the winner.

11.2 In the case of wet or dangerous weather conditions (rain, hail, lightening, thunder etc.), the following shall be adhered to;

- a. The Tournament Director has the full power to delay or suspend a match should the playing conditions be such that harm to the participants is likely.
- b. Where lightning is present, the Tournament Director will continually monitor the conditions and exercise the necessary precautions, or in the event of uncertainty, apply the 30 second rule in determining if a match is to be suspended or abandoned. (The 30 second rule is where there is less time than 30 seconds between a strike of lightning and thunder) A five minute window is to be observed following the last occurrence of a strike outside the 30 second rule to ensure a safe environment for the resumption of play.

11.3 In the case of extreme heat conditions, the following shall be adhered to;

- a. Where the ambient temperature is between 31 – 35 degrees Celsius, with humidity exceeding 50% - the Tournament Director can consult with the team managers to instigate a drinks break at the 17.5 minute mark in each half.
- b. Where the ambient temperature is in excess of 36 degrees Celsius, with humidity exceeding 30% - the Tournament Director can consult with the team managers to postpone and reschedule matches to cooler periods of the day.
- c. The www.bom.gov.au website is considered a reliable source of information should venue specific detail not be available.

11.4 In the case of weather conditions that may lead to personal danger in travelling to an Australian Championship, Hockey Australia will communicate closely with all stakeholders with current information.

Hockey Australia will seek guidance from the host state, hotels, airline companies and the Bureau of Meteorology in determining if it is safe to travel into a region for a pending Australian Championship.

Decisions regarding the commencement and continuation of an Australian Championship will be made in consultation with the host state, Tournament Director and Hockey Australia Competitions Manager.